

K&K Data GPU Hall — Network Reference Design Brief

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09 · Revision PE-P1 · 28 September 2026

Prepared by K&K DATA SERVICE INC. · inquiry@kkdatasvc.com

1 Overview and design basis

This brief presents the reference network deployment for the K&K Data GPU Hall at design development stage: the network architecture, its physical placement in the row, maintenance access, cabling and optics, and the requirements that the network equipment places on the existing facility. Optional configuration topics of the reference design are listed in Section 9.

The reference design serves 90 GPU cabinets (NVIDIA GB300 NVL72, OEM rack envelope 600 × 1200 mm) with 40 network cabinets: 30 unit cabinets placed in the GPU row and 10 central cabinets. Existing power supply, room diffuse cooling, building structure, CDUs and fan walls are inputs. Where they appear in the drawings they are spatial context and are labelled as such; this package does not verify or redesign those systems.

Values carry one of three status marks, used consistently in the brief, the drawings and the technical appendix:

Status	Meaning
FACT	Sourced fact: vendor document or fixed project input
DESIGN	Reference design value or derivation from the reference layout and port table
CONFIRM	To be confirmed with the manufacturer or engineer of record

The accompanying drawing book (30 A3 sheets, N-000-EN to N-951-EN) and the technical appendix carry the same identifiers. The technical appendix holds the equipment, cabinet, port, optics, tray, failure-domain and interface schedules, the summary of all 39,066 port-level link records by class and the complete link listing of leaf group LG01.

2 Reference network architecture

2.1 Compute fabric

The compute fabric is a dual-plane, rail-optimised two-tier leaf–spine network. Each compute tray has four ConnectX-8 NICs. Each 800G OSFP NIC port is split into 2 × 400G: half-port P1/1 connects to plane A and half-port P1/2 to plane B, each to the rail leaf whose rail number equals the NIC number. Each leaf group serves three GPU cabinets (54 trays) with four rail leaves per plane.

Item (per plane)	Value	Status
Compute trays / CX-8 NICs	1,620 / 6,480 (each NIC 1 × 400G into the plane)	FACT
Rail leaves (SN5610)	120 (30 leaf groups × 4 rails); 54 down / 54 up × 400G; 20 spare ports per leaf	DESIGN
Spines (SN5610)	54 (3 cabinets × 18); 120 ports used, 8 spare per spine	DESIGN
Leaf oversubscription	1.0 : 1 (non-blocking)	DESIGN
Leaf → spine uplink capacity	2,592 Tb/s per plane (120 × 54 × 400G)	DESIGN

Plane A

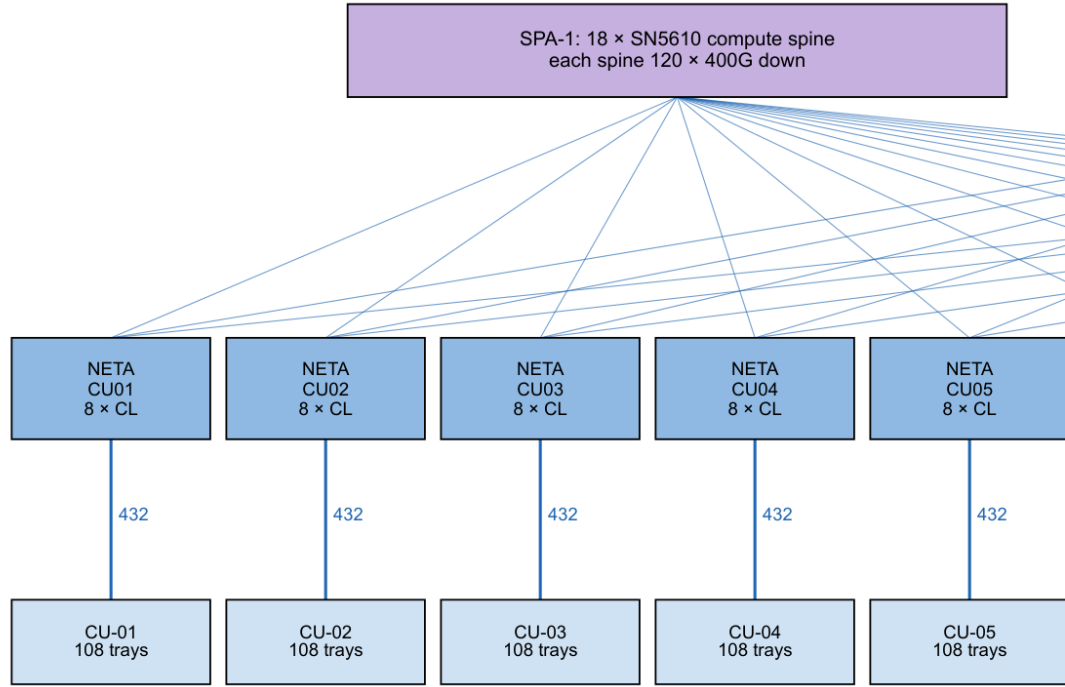


Figure 1. Compute fabric, plane A extract: unit cabinets NETA-CU01 to NETA-CU05 (of 15) and spine cabinet SPA-1 (of 3). Each unit cabinet has 144 x 400G links to each spine cabinet; the figures on the vertical links are the tray NIC → leaf links per unit cabinet (from N-101-EN; plane B is identical with NETB and SPB)

Every leaf has one 400G link to each of the 54 spines of its plane. Plane-A leaves and spines are in NETA and SPA cabinets; plane-B leaves and spines are in NETB and SPB cabinets. Topology and port mapping: N-101-EN and N-102-EN.

2.2 North–south (DPU) network

Each compute tray has one BlueField-3 (B3240) DPU. Its two 400G ports connect to the A-side and B-side north–south (NS) leaves. Each side has 30 NS leaves (SN5610, U2–U5 of the unit cabinets) with 54 downlinks and 28 uplinks (1.929 : 1), and 7 north–south spines (CVS, SN5610). Each CVS uses 120 ports and has 8 spare 400G ports. The spare ports reach the external interfaces EXT-IF-NS-A and EXT-IF-NS-B through a 4U border MPO panel in each CVS cabinet: 56 spare 400G ports per side. Upstream routers, carriers, interface rates and optics beyond this boundary are outside this design (N-111-EN) and are listed as a configuration option in Section 9.

2.3 Out-of-band management

Inside each GPU cabinet, 18 compute trays x 3, 9 NVLink switch trays x 2 and 8 power shelves x 1 give 80 x 1G ports on two OEM SN2201 switches. These switches are GPU cabinet equipment, and their power is within the GPU cabinet TDP. Each OEM SN2201 has 2 x 100G uplinks (MMA1B00-C100D), one to the A-side and one to the B-side OOB aggregation. Each network cabinet has one SN2201 for the management ports of its switches and rack PDUs, with 2 x 100G uplinks to OA-A-4 and OA-B-4. OOB aggregation uses four SN4600C per side; spare 100G ports reach the site management interface EXT-IF-OOB (N-121-EN).

2.4 Network equipment quantities

Equipment	Quantity	Location	Counted in
SN5610 (rail leaf, spine, NS leaf, CVS)	422	30 unit cabinets, 6 spine cabinets, 2 CVS cabinets	Network load
SN4600C (OOB aggregation)	8	OOB-A, OOB-B	Network load
SN2201 (network cabinet management)	40	One per network cabinet	Network load
SN2201 (GPU cabinet OEM)	180	Two per GPU cabinet	GPU cabinet TDP
MPO patch panels 7U / border 4U	30 / 2	Unit cabinets / CVS cabinets	—
Rack PDUs, 3-phase 400Y/230 V	156	40 network cabinets	PDU losses in network load

The link table holds 39,066 records: link IDs L000001–L038990 and 76 added PDU management links (L038991–L039066). The technical appendix summarises all records by class, module, medium and tray and lists every link of leaf group LG01.

3 Physical deployment

GPU and network cabinets stand in a single row between Y2150 and Y3350 (cabinet depth 1,200 mm, fronts facing +Y). Each unit CU-01 to CU-15 contains six GPU cabinets with a plane-A cabinet NETA-CUxx and a plane-B cabinet NETB-CUxx. The central zone between X45,495 and X55,145 holds OOB-A, CVS-A, SPA-1..3, SPB-1..3, CVS-B and OOB-B (N-002-EN, N-201-EN to N-203-EN).

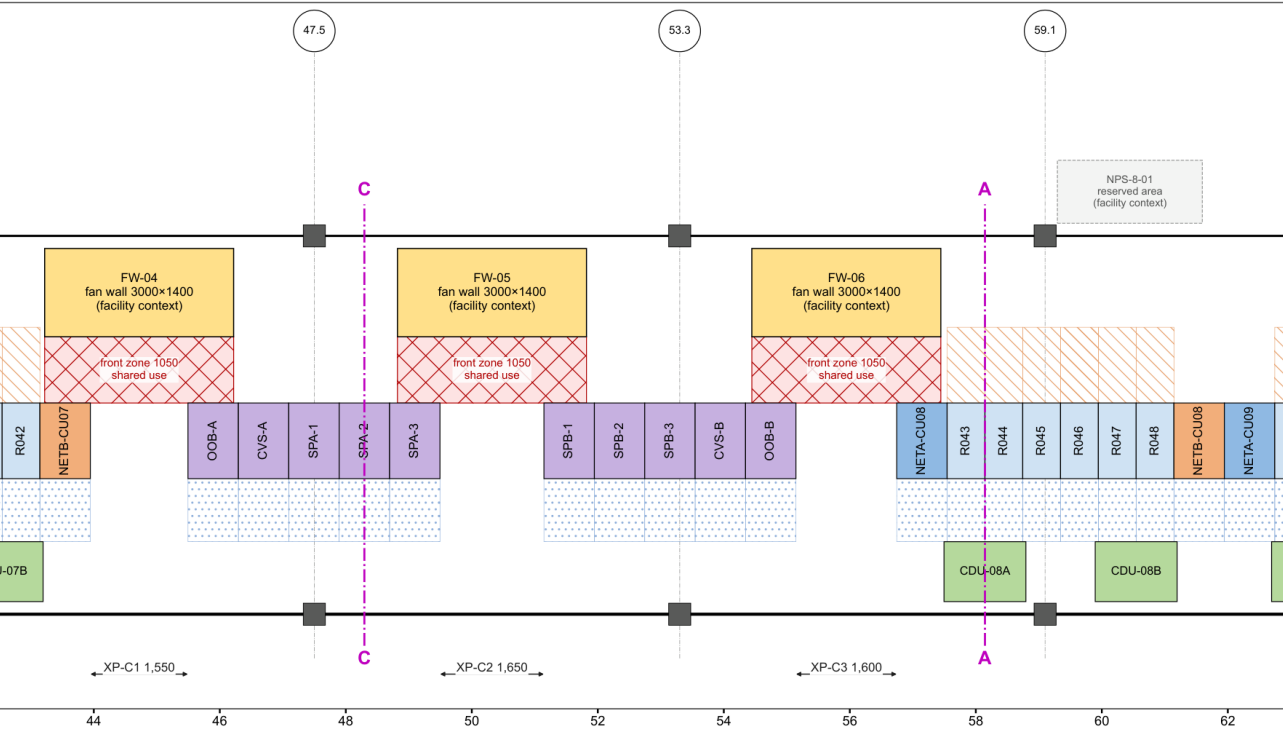


Figure 2. Deployment plan extract, central zone and unit CU-08 (from N-202-EN)

The reference row layout differs from the previous layout: cross aisles are widened by 2,240 mm in total and the row starts at X1155, so that every IT support rail clears the main-beam zone (axis ±160 mm). Cabinet widths, count, order and Y positions are unchanged. This is a difference between two reference row layouts; the building geometry is unchanged (N-204-EN).

Y dimension	From	To	Clear (mm)	Basis
Cabinet front (cold aisle) to fan-wall rear / column-flange line	Y3350	Y5800	2,450	2,650 to the partition axis Y6000
Network cabinet front to fan-wall face, where a fan wall faces	Y3350	Y4400	1,050	Fan wall Y4400–5800, 1,400 deep
Cabinet rear to CDU front (CDU envelope O4)	Y1150	Y2150	1,000	CDU ≤950 deep from Y200
Network cabinet rear to wall zone, where no CDU is behind	Y200	Y2150	1,950	Y200 wall-zone line

Network cabinets are 800 × 1,200 × 2,294 mm, 48U with 46U usable. The cabinet stands on IT support rails whose top is at Z1128, 98 mm above the floor-board top (Z1030); the cabinet height is 2,294 mm and its top is at absolute elevation Z3422. Switches use the NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A, which fits post spacing of 600–800 mm (FACT). The design uses 750 mm between posts with the front post 100 mm behind the front door. The SN5610 is 796 mm deep including fan handles and extends 46 mm behind the rear post, leaving 304 mm at the rear for power cords and fibre bends. The 1,200 mm cabinet depth is not the rail dimension (N-401-EN, N-402-EN).

4 Maintenance access

The network cabinets that face a fan wall have a 1,050 mm front zone. Switch front withdrawal needs 1,000 mm and fan-wall service needs 850 mm. Both activities use the same zone and are scheduled at different times. This applies to 18 network cabinets in front of fan walls FW-01 to FW-09 (N-312-EN, N-951-EN).

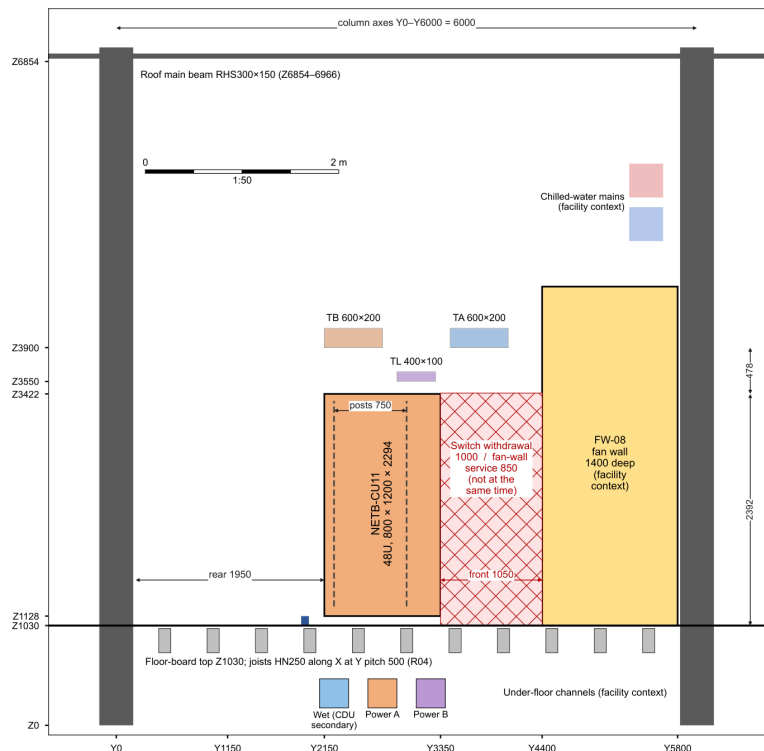


Figure 3. Section B-B through NETB-CU11 and fan wall FW-08 (from N-312-EN)

Access requirements differ by location:

- Network cabinet front: switch withdrawal 1,000 mm. At fan walls, the 1,050 mm zone is shared in time with fan-wall service; elsewhere the cold aisle is 2,450 mm.
- Network cabinet rear: PSUs and fans are replaced from the rear, within the 1,000 mm zone to the CDU front or the 1,950 mm zone to the wall.
- GPU cabinet front: tray withdrawal needs 1,200 mm (Y3350–4550) in the cold aisle. No fan wall faces a GPU cabinet.
- GPU cabinet rear: access within the 1,000 mm zone between cabinet rear (Y2150) and CDU front (Y1150).

Door positions in the external wall and partition are not supplied and are not shown. An earlier door drawing placed doors where they would conflict with four fan-wall or electrical-zone positions; it does not describe the current condition. Current door positions are to be confirmed against the fan-wall and front-zone locations before the layout is confirmed.

5 Cabling, trays and optics

5.1 Selected media

The initial project premise was short copper cables from the GPU cabinets to the switches. The reference design uses optical NIC and DPU uplinks. Each ConnectX-8 port is an 800G flat-top OSFP host port that must be split into two 400G links to switch ports in two different cabinets (NETA and NETB). No validated copper part is listed for this host-800G → 2 × switch-400G direction; the listed Ethernet breakout copper parts run in the opposite direction. Direct routes would be 4.27–7.05 m and cross up to five GPU cabinets. This means that no adoptable validated part is available; it does not mean that copper is physically impossible.

For the BlueField-3 ports, a listed part exists for the switch-800G → 2 × host-400G direction, but 690 of 1,620 trays would exceed 5 m and 660 routes would cross the GPU tray-withdrawal zone. The DPU uplinks therefore also use fibre, giving one medium, one maintenance method and one tray. Selected channel lengths are 5.20–10.07 m for NIC → leaf and 6.09–10.34 m for DPU → leaf, through the TL tray.

Copper remains for cabinet-local 1G management (Cat6A). If the OEM certifies a copper or active-copper part for the host-800G → 2 × 400G direction, units within its certified length and outside the tray-withdrawal zone can be revised together with the module, port and tray-occupancy tables.

5.2 Trays and cable units

Tray	Size (mm)	Y range	Bottom	Carries	Max. occupancy	Cables	Fill	Cable kg/m
TL	400 × 100	Y2900–3300	Z3550	NIC and DPU jumpers, both planes	X2755	540	9.5 %	6.48
TA	600 × 200	Y3450–4050	Z3900	Plane-A trunks and OOB uplinks	X49095	341	25.5 %	39.48
TB	600 × 200	Y2150–2750	Z3900	Plane-B trunks and OOB uplinks	X54745	336	25.4 %	39.42

Plane-A trunks use TA only, plane-B trunks use TB only, and NIC/DPU jumpers use TL. The three trays are separated in Y and do not cross in plan; TA and TB bottoms (Z3900) are 250 mm above the TL top (Z3650). Power channels A (Y2750) and B (Y3250) and the wet channel (Y2250) are below the floor boards (N-501-EN, N-502-EN).

Cable counting units: jumper MPO-12 APC, OD 3.0 mm; trunk 18 × MPO-12 legs / 216 fibres, OD 13.0 mm envelope (product CONFIRM). Bend radius 10 × OD static and 20 × OD during installation; fill limit 40 % of the cross-section area (engineer of record CONFIRM). The design uses 840 trunks and 14,640 MPO-12 legs (N-503-EN).

5.3 Optical modules and reach

Module	Manufacturer statement (FACT)	Design use	Longest channel
MMA4Z00-NS / -FLT	2 × 400G SR4 OSFP, 50 m; reach stated with two patch panels	400G/800G multimode design threshold 45 m	44.35 m
MMA1Z00-NS400	400G SR4 QSFP112, 50 m	BF3 side; 45 m threshold	10.34 m
MMS4X00-NS	2 × 400G DR4 OSFP single-mode, 100 m; two patch panels	Cages whose longer half-port exceeds 45 m	61.40 m (range 43.95–61.40)
MMA1B00-C100D	100G SR4 QSFP28, 100 m on OM4	OOB 100G uplinks, checked against 100 m	63.95 m

All 31,280 optical links are within the reach stated for the selected module, with at most one patch panel per channel. The 45 m design threshold applies to the selected 400G/800G multimode family (manufacturer reach 50 m); its longest channel is 44.35 m. The OS2 single-mode module (100 m) serves channels up to 61.40 m. OM4 100 m applies only to the selected 100G SR4 module on the OOB uplinks (longest 63.95 m); it is not a general OM4 reach for other modules. Both half-ports of a cage use the same module type, so a cage is single-mode when its longer half-port exceeds 45 m; 68 single-mode links are themselves shorter than 45 m.

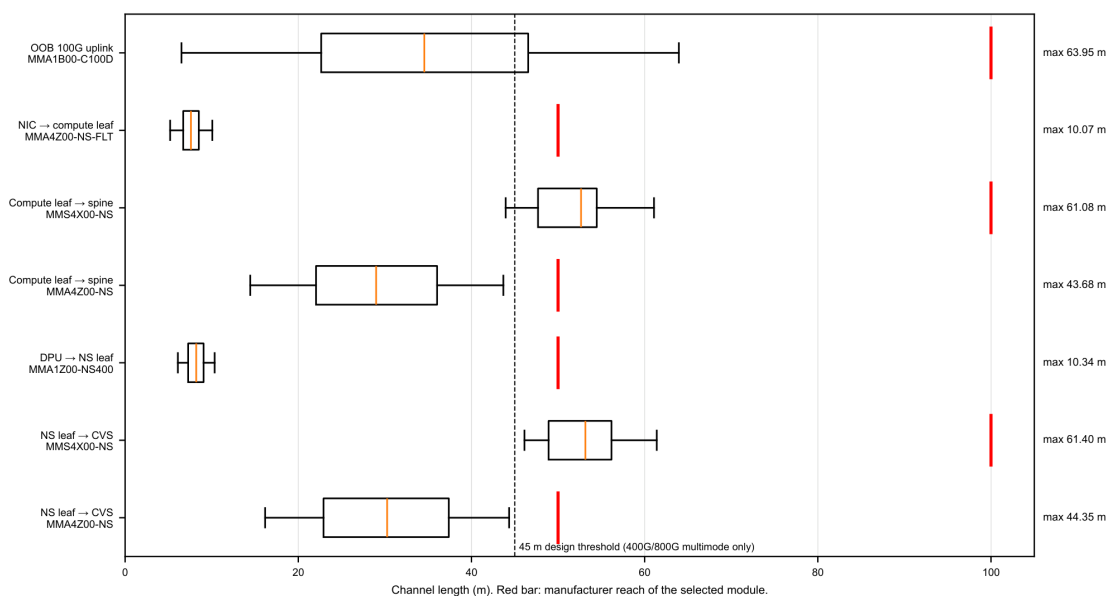


Figure 4. Channel length against selected module reach (from N-902-EN)

The manufacturer pages state no channel insertion-loss budget. The insertion-loss estimates in the link table (OM4 3.0 dB/km, OS2 0.5 dB/km, MPO 0.35 dB per mated pair) are reference values only. The optical loss budget, the actual cable and termination products and field test acceptance remain product conditions (CONFIRM).

6 Network equipment interface demands

The network equipment places the following demands on the existing facility. Facility capacity, protection, cooling capability and structural capacity are inputs to this design; no spare capacity and no expansion capacity are claimed.

Demand	Value	Condition	Status
Network input power, typical / planning	808.0 / 1,010.0 kW	Planning = typical × 1.25 (no published SN5610 maximum)	DESIGN
Heat to room air (planning, incl. PDU losses)	1,012.4 kW	Front-to-rear airflow; all heat to room air	DESIGN
Airflow at 15 K air temperature rise	208,212 m³/h	Sum of the 40 cabinet values	DESIGN
Switch inlet air	≤35 °C	SN5610 manufacturer inlet limit; front-to-rear airflow	FACT
Rack PDUs	156 (32 A: 132; 63 A: 24)	3-phase 400Y/230 V metered, C13/C19 outlets	DESIGN; product CONFIRM
PSU inlets	1,784	C14–C15 cords; 200–240 V device range	DESIGN
Unit cabinet NETA/NETB	18.58 / 23.23 kW; 572 kg	11 switches, 4 PDUs, 42 PSU inlets	DESIGN
Spine cabinet SPA/SPB	36.22 / 45.27 kW; 794 kg	19 switches, 4 PDUs, 74 PSU inlets	DESIGN
Heaviest cabinet (SPA-1)	794 kg; 1.95 kN per foot (2.92 kN with ×1.5)	Four feet on IT support rails; empty cabinet 180 kg	CONFIRM (structure)
Tray loads	Cable up to 39.48 kg/m plus tray 15 kg/m	Hangers from roof purlins, 1.5 m spacing	CONFIRM (structure)

Each SN5610 has four PSUs with at least two operating (FACT): PSU1/PSU2 connect to PDU-A1/A2 and PSU3/PSU4 to PDU-B1/B2. SN4600C and SN2201 connect PSU1 to A1 and PSU2 to B1. The A and B PDUs of each network cabinet are fed from two different existing UPS paths; supply capacity, protection and spare circuits of the existing system are inputs. The network load counts the switches in network cabinets, with power per installed optics, and PDU losses only. GPU-side optical modules (MMA4Z00-NS-FLT 6,480 and MMA1Z00-NS400 3,240) are not counted in network load; whether the GPU cabinet TDP includes them is to be confirmed by the OEM.

7 Consolidated spatial conditions

The conditions below are the spatial and facility coordination reference for this design. Items marked CONFIRM are to be confirmed with the manufacturer or engineer of record.

Ref.	Condition	Drawing	Status
SC-01	1,050 mm front zone at 18 network cabinets facing fan walls: switch withdrawal (1,000) and fan-wall service (850) at different times	N-312-EN, N-951-EN	DESIGN
SC-02	GPU tray withdrawal 1,200 mm in front of every GPU cabinet; no fan wall faces a GPU cabinet	N-311-EN	DESIGN
SC-03	Rear access 1,000 mm to CDU front, or 1,950 mm to the wall zone	N-201-EN to N-203-EN	DESIGN
SC-04	Row adjustment of 2,240 mm in cross aisles relative to the previous layout; building geometry unchanged	N-204-EN	DESIGN
SC-05	Current door positions not supplied; to be checked against fan walls and front zones	N-001-EN	CONFIRM
SC-06	Cabinet 800 × 1,200 × 2,294 mm on rails at Z1128; cabinet top Z3422; rail posts 750 mm	N-401-EN	DESIGN
SC-07	Tray levels TL Z3550, TA/TB Z3900; clear height above cabinet top to roof beam underside more than 3 m	N-502-EN	DESIGN
SC-08	IT support rails, joists, tray hangers and roof purlins: capacity by the structural engineer; the 30 mm floor board is not an equipment support	N-311-EN	CONFIRM
SC-09	Partition penetrations for power branches into the under-floor A/B channels	N-501-EN	CONFIRM
SC-10	Door perforation and blanking panels for front-to-rear airflow	N-401-EN	CONFIRM

8 Reliability target and common causes

The monthly availability figure of 99.999 % is a design target. It corresponds to 24.192, 25.056, 25.920 and 26.784 s for months of 28, 29, 30 and 31 days. It is not a measured achievement, and dual network planes are not a demonstrated service-level guarantee. Topological reachability is not job continuity; convergence time, host failover time and job restart time are measured at commissioning (IST).

Independent elements: plane-A and plane-B leaves, spines, NS leaves, CVS, OOB aggregation, cabinets and the TA/TB trunk trays. Each network cabinet's PDUs A1/A2 and B1/B2 are fed from two UPS paths. In the reference connectivity mapping of network cabinets to the existing UPS paths, the loss of any one of the 13 UPS paths leaves every NIC with both planes. This is a mapping result, not an operating test or a facility guarantee.

Common causes that remain in the reference design:

- One CX-8 NIC carries both half-ports in one OSFP cage. A NIC or cage failure removes that NIC from both planes (physical endpoint loss).
- The TL jumper tray carries the NIC and DPU jumpers of both planes. Loss of the whole TL section of unit CU-08 leaves 432 NICs unreachable on both planes and 108 DPU trays with no path while the hosts remain powered.
- In 27 of 40 network cabinets both UPS paths belong to the same generator segment. Loss of a segment after battery depletion is a risk case that removes both paths.

Event	NICs: one plane unreachable	NICs: both planes unreachable	BF3 trays: no path
One NIC → leaf jumper broken	1	0	0
One CX-8 NIC failed (both half-ports in one cage)	0	1	0
One compute leaf failed	54	0	0
One plane-A network cabinet lost (NETA-CU08)	432	0	0
Entire plane A lost	6,480	0	0
TA cut at X30000	2,160	0	0
TL section of unit CU-08 lost	0	432	108
Any one of 13 UPS paths lost (reference connectivity mapping)	0	0	0

"One plane unreachable" means that the other plane still carries a path; it does not mean zero interruption. The full event table, including spine, NS leaf and generator-segment cases and the commissioning measurements, is on N-801-EN and in the technical appendix (A9).

9 Configuration options

The reference design is defined by the values in Sections 2 to 8. The following topics are optional configuration points of the design; each lists the reference value it starts from. A change to one of them is carried through the module, port, tray-occupancy and interface schedules of the technical appendix.

- Network architecture: rail-optimised in-row leaf with central spine, dual planes, 1:1 compute leaf oversubscription, NS leaf 1.929:1.
- Switch platform and quantities: SN5610, SN4600C and SN2201 as listed; free U and spare ports are reported, not reserved for expansion.
- External north–south interface: number of spare CVS ports used, rate, optics and upstream equipment beyond EXT-IF-NS-A/B.
- Site management interface: upstream network, addressing and security zoning beyond EXT-IF-OOB.
- Media: optical NIC/DPU uplinks; copper for cabinet-local 1G management; copper alternative only with OEM-certified parts.
- Optics and cabling products: module selection, cable and termination products, loss budget and test acceptance.
- Equipment dimensions and interfaces: switch dimensions and mounting, power inputs (PSU inlets, cords, rack PDU requirement), heat, airflow direction and inlet requirements.
- Service and withdrawal envelope of the selected network equipment (front withdrawal, rear PSU and fan access). The shared 1,050 mm front-zone restriction of Section 4 (SC-01) applies to the network cabinets facing fan walls.
- Network service measurement: measurement scope and service accounting for the monthly target, convergence, host failover and job restart.

Facility conditions such as door positions, structure and partition penetrations are spatial conditions of Section 7; they are not configuration options.

10 References and drawing register

10.1 Sources

Reference	Use	Status
Owner scope decisions of 28 September 2026 and fixed project inputs	Scope and fixed quantities	FACT
Current electrical design set (88 pages)	Identity of existing UPS paths feeding network cabinets	FACT (mapping)
R04 building and structure geometry	Axes, columns, joists, IT support rails, roof beams	FACT (geometry)
Port-level connection table and routing	Links, device identities, module selection	DESIGN
NVIDIA SN5000 / SN4000 / SN2201 hardware manuals	Ports, PSUs, power, mass, airflow	FACT
NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A (web page, accessed 28 Sep 2026)	Rail for 600–800 mm post spacing	FACT
NVIDIA MMA4Z00-NS and MMS4X00-NS (web pages, accessed 28 Sep 2026)	50 m multimode and 100 m single-mode reach, stated with two patch panels	FACT
OEM rack envelope (600 × 1200 mm), NVIDIA GB300 NVL72	GPU cabinet envelope, trays, in-rack SN2201	FACT

10.2 Drawing register

Sheet	Title	Scale
N-000-EN	Cover, drawing register and revision	NTS
N-001-EN	Design basis, status key, symbols and abbreviations	NTS
N-002-EN	Hall key plan and unit index	1:200
N-101-EN	Compute fabric: dual-plane rail topology, quantities and oversubscription	NTS
N-102-EN	Compute fabric: rail port mapping, leaf group LG15	NTS
N-103-EN	Compute fabric: independent and shared failure domains	NTS
N-111-EN	North–south (DPU) topology to external interface	NTS
N-121-EN	Out-of-band management hierarchy	NTS
N-201-EN	Deployment plan X 0–36 m	1:100
N-202-EN	Deployment plan X 35–72 m	1:100
N-203-EN	Deployment plan X 71–107 m	1:100
N-204-EN	Reference row adjustment relative to previous layout	1:300
N-301-EN	Typical unit CU-08 detail: plan and X–Z elevation	1:50
N-302-EN	Central spine zone detail: plan and X–Z elevation	1:75
N-303-EN	Far-end unit CU-15 detail: plan and X–Z elevation	1:50
N-311-EN	Section A-A: GPU cabinets and CDU	1:50
N-312-EN	Section B-B: network cabinet and fan wall	1:50
N-313-EN	Section C-C: spine cabinet and trunk entry	1:50
N-401-EN	Network cabinet elevations: unit cabinets NETA/NETB-CU08	1:15
N-402-EN	Network cabinet elevations: SPA-1, CVS-A, OOB-A, SPB-3	1:20
N-403-EN	GPU cabinet network interfaces (OEM reference)	1:15
N-411-EN	Network cabinet schedule (1 of 2)	NTS
N-412-EN	Network cabinet schedule (2 of 2)	NTS
N-501-EN	Pathway plan: fibre trays and under-floor channels	1:150
N-502-EN	Tray sections: maximum and typical occupancy, crossing and drop	1:10 / 1:50
N-503-EN	Cable units, trunk quantities and tray fill	NTS
N-801-EN	Failure domains, service boundaries and commissioning measurements	NTS
N-901-EN	Cable, media and optical module schedule; labelling	NTS
N-902-EN	Channel length against optical module reach	NTS
N-951-EN	Network equipment interface requirements	NTS

10.3 Package contents

File	Content
K&K_Data_Network_Design_Brief_PE-P1.pdf	This brief
K&K_Data_Network_Drawing_Book_PE-P1.pdf	30 A3 drawing sheets, N-000-EN to N-951-EN
K&K_Data_Network_Technical_Appendix_PE-P1.pdf	Technical appendix: equipment, cabinet, port, optics, link, tray, failure-domain and interface schedules; link class summary; complete link listing of leaf group LG01

K&K Data GPU Hall

Network Reference Design — Drawing Book

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09 · Revision PE-P1 · 28 September 2026

Prepared by K&K DATA SERVICE INC. · inquiry@kkdatasvc.com

Sheet	Title	Scale
N-000-EN	Cover, drawing register and revision	NTS
N-001-EN	Design basis, status key, symbols and abbreviations	NTS
N-002-EN	Hall key plan and unit index	1:200
N-101-EN	Compute fabric: dual-plane rail topology, quantities and oversubscription	NTS
N-102-EN	Compute fabric: rail port mapping, leaf group LG15	NTS
N-103-EN	Compute fabric: independent and shared failure domains	NTS
N-111-EN	North–south (DPU) topology to external interface	NTS
N-121-EN	Out-of-band management hierarchy	NTS
N-201-EN	Deployment plan X 0–36 m	1:100
N-202-EN	Deployment plan X 35–72 m	1:100
N-203-EN	Deployment plan X 71–107 m	1:100
N-204-EN	Reference row adjustment relative to previous layout	1:300
N-301-EN	Typical unit CU-08 detail: plan and X–Z elevation	1:50
N-302-EN	Central spine zone detail: plan and X–Z elevation	1:75
N-303-EN	Far-end unit CU-15 detail: plan and X–Z elevation	1:50
N-311-EN	Section A-A: GPU cabinets and CDU	1:50
N-312-EN	Section B-B: network cabinet and fan wall	1:50
N-313-EN	Section C-C: spine cabinet and trunk entry	1:50
N-401-EN	Network cabinet elevations: unit cabinets NETA/NETB-CU08	1:15
N-402-EN	Network cabinet elevations: SPA-1, CVS-A, OOB-A, SPB-3	1:20
N-403-EN	GPU cabinet network interfaces (OEM reference)	1:15
N-411-EN	Network cabinet schedule (1 of 2)	NTS
N-412-EN	Network cabinet schedule (2 of 2)	NTS
N-501-EN	Pathway plan: fibre trays and under-floor channels	1:150
N-502-EN	Tray sections: maximum and typical occupancy, crossing and drop	1:10 / 1:50
N-503-EN	Cable units, trunk quantities and tray fill	NTS
N-801-EN	Failure domains, service boundaries and commissioning measurements	NTS
N-901-EN	Cable, media and optical module schedule; labelling	NTS
N-902-EN	Channel length against optical module reach	NTS
N-951-EN	Network equipment interface requirements	NTS

Revision	Date	Description
PE-P1	28 September 2026	Public edition P1 of the network reference design drawing set at design development stage: 30 sheets, issued with the design brief and the technical appendix.

Notes

- This drawing book presents the reference network deployment, spatial provisions and network equipment interface requirements of the GPU hall at design development stage. Optional configuration topics are listed in Section 9 of the design brief.
- Reference design: rail-optimised in-row leaf with central spine, 90 GPU cabinets (GB300 NVL72) and 40 network cabinets (30 in-row unit cabinets and 10 central cabinets).
- Status key used on every sheet: FACT = sourced fact (vendor document, fixed input); DESIGN = reference design value or derivation; CONFIRM = to be confirmed with the manufacturer or engineer of record.
- Existing power supply, room diffuse cooling, building structure and CDU/fan-wall objects are inputs. Where shown, they are spatial context only and are labelled "facility context".
- The monthly 99.999 % figure is a design target (allowance 24.192 / 25.056 / 25.920 / 26.784 s for 28 / 29 / 30 / 31-day months), not a measured achievement. Dual network planes are not a demonstrated service-level guarantee (N-103-EN, N-801-EN).
- Coordinates: local building grid in mm. X runs along the column axes (0–106,600); Y from the external wall line Y=0 to the partition axis Y=6000; Z from column base (floor-board top Z1030).
- Port-level data: 39,066 link records. The technical appendix gives the link class summary and every link of leaf group LG01.

K&K DATA SERVICE INC. inquiry@kkdatasvc.com Drawing book, 30 A3 sheets	K&K Data GPU Hall — Network Reference Design DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09 Status key FACT / DESIGN / CONFIRM: see N-001-EN	Cover, drawing register and revision Scale NTS	Revision PE-P1 28 September 2026 Units: mm	N-000-EN Sheet 1 of 30
---	---	--	---	--

Source hierarchy, status key, symbols and abbreviations used in this drawing book

Level	Source	Use in this drawing book	Status	Status	Meaning
1	Owner scope decisions (28 Sep 2026) and fixed project inputs	Scope; fixed quantities (90 GPU cabinets, CDUs, fan-wall positions)	FACT	FACT	Sourced fact or fixed input
2	Current electrical design set (88 pages)	Identity of existing UPS paths feeding network cabinets (reference only)	FACT (mapping)	DESIGN	Reference design value or derivation
3	R04 building and structure geometry	Axes, columns, joists, IT support rails, roof beams (geometry only)	FACT (geometry)	CONFIRM	To be confirmed with the manufacturer or engineer of record
4	Port-level connection table and routing	Links, device identities, module selection	DESIGN		
5	NVIDIA SN5000 / SN4000 / SN2201 manuals; optical module pages	Ports, PSU, power, mass, rail kit, module reach	FACT		
6	OEM rack envelope (600 × 1200 mm), NVIDIA GB300 NVL72	GPU cabinet envelope, trays, in-rack SN2201	FACT		

Symbols

	GPU cabinet GB300 NVL72 (600 × 1200)		Column HW350 on axis		Plane-A fibre / source-A power
	Plane-A network cabinet NETA-CUxx (800 × 1200)		Electrical-zone reserved area (facility context)		Plane-B fibre / source-B power
	Plane-B network cabinet NETB-CUxx (800 × 1200)		Rear maintenance zone (1000)		TL jumper tray (NIC/DPU, both planes)
	Central network cabinet SPA/SPB/CVS/OOB		GPU tray withdrawal zone (1200)		Out-of-band management 1G / 100G
	CDU envelope O4, 1300 × 950 (facility context)		Network front zone 1050: switch withdrawal / fan-wall service		External interface (outside this design)
	Fan wall FW, 3000 × 1400 (facility context)		Section cut line		

Abbrev.	Meaning
CL	Compute rail leaf (SN5610)
SP	Compute spine (SN5610)
NS	North–south leaf for DPU (SN5610)
CS / CVS	North–south spine (SN5610) / its cabinet
OA	OOB aggregation switch (SN4600C)
NOOB	Network-cabinet management switch (SN2201)
OSW	GPU-rack OEM management switch (SN2201)
CU	Unit: 6 GPU cabinets with NETA + NETB

Abbrev.	Meaning
LG	Leaf group: 3 GPU cabinets, 4 rails
CT / NVS / PS	Compute tray / NVLink switch tray / power shelf
TL / TA / TB	Jumper tray / plane-A trunk tray / plane-B trunk tray
C2P	Front-to-rear (connector-to-power) airflow
PP / BP	Unit patch panel / border patch panel
HCM	Horizontal cable manager
EOR	Engineer of record

Notes

- Coordinates: local building grid (mm). X along the column-axis chain 0–106,600 (floor boards 80–106,520); Y from the external wall line Y=0; Z from column base, floor-board top Z1030.
- Link IDs L000001–L039066 and device, port, cage and cabinet IDs are the identifiers of the port-level connection table.
- Door positions in the external wall and partition are not supplied and are not shown. They are to be confirmed against fan-wall and front-clearance zones before layout confirmation.
- Sheet numbers N-xxx-EN are used unchanged in the design brief and the technical appendix.

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Design basis, status key, symbols and abbreviations

Scale NTS

Revision PE-P1

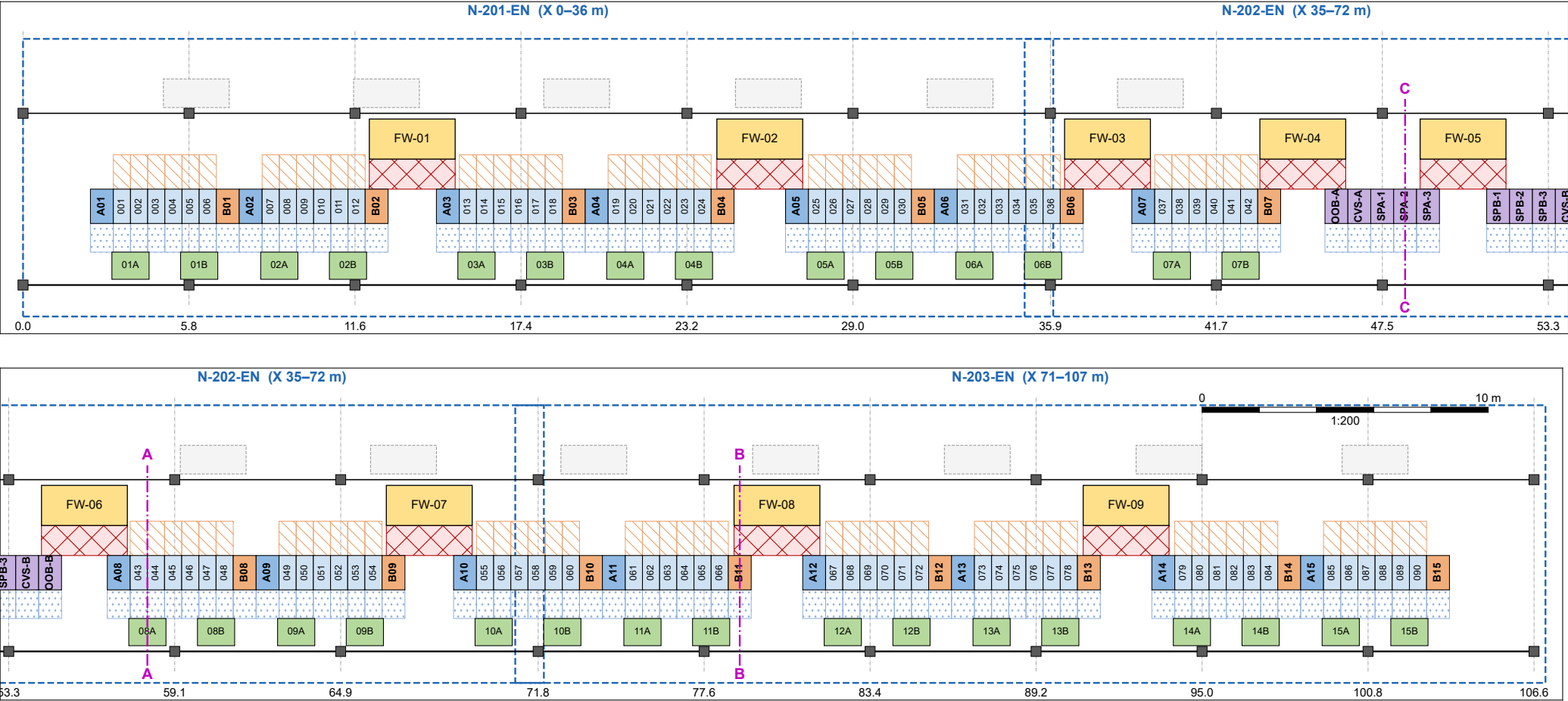
28 September 2026

Units: mm

N-001-EN

Sheet 2 of 30

Whole-hall key plan (1:200, two strips) with the three deployment-plan zones; unit and central-cabinet index. Y=0 external wall line, Y=6000 partition axis; the electrical zone north of Y6000 is facility context.



Axis values in m. Network cabinets: A01 = NETA-CU01, B01 = NETB-CU01; GPU cabinets shown by number (043 = R043); CDUs by unit (08A = CDU-08A).

Unit	GPU cabinets	Leaf groups	X range (mm)	Fan wall at NETA	Fan wall at NETB
CU-01	R001–R006	LG01, LG02	2,355–7,555	—	—
CU-02	R007–R012	LG03, LG04	7,555–12,755	—	FW-01
CU-03	R013–R018	LG05, LG06	14,445–19,645	FW-01	—
CU-04	R019–R024	LG07, LG08	19,645–24,845	—	FW-02
CU-05	R025–R030	LG09, LG10	26,645–31,845	FW-02	—
CU-06	R031–R036	LG11, LG12	31,845–37,045	—	FW-03
CU-07	R037–R042	LG13, LG14	38,745–43,945	FW-03	FW-04
CU-08	R043–R048	LG15, LG16	56,745–61,945	FW-06	—
CU-09	R049–R054	LG17, LG18	61,945–67,145	—	FW-07
CU-10	R055–R060	LG19, LG20	68,845–74,045	FW-07	—
CU-11	R061–R066	LG21, LG22	74,045–79,245	—	FW-08
CU-12	R067–R072	LG23, LG24	81,045–86,245	FW-08	—
CU-13	R073–R078	LG25, LG26	86,245–91,445	—	FW-09
CU-14	R079–R084	LG27, LG28	93,245–98,445	FW-09	—
CU-15	R085–R090	LG29, LG30	98,445–103,645	—	—

Central cabinet	Role	X range (mm)	Fan wall in front
OOB-A	OOB aggregation	45,495–46,295	FW-04
CVS-A	North–south spine	46,295–47,095	—
SPA-1	Compute spine, plane A	47,095–47,895	—
SPA-2	Compute spine, plane A	47,895–48,695	—
SPA-3	Compute spine, plane A	48,695–49,495	FW-05
SPB-1	Compute spine, plane B	51,145–51,945	FW-05
SPB-2	Compute spine, plane B	51,945–52,745	—
SPB-3	Compute spine, plane B	52,745–53,545	—
CVS-B	North–south spine	53,545–54,345	—
OOB-B	OOB aggregation	54,345–55,145	FW-06

- Notes**
- Row content: 90 GPU cabinets, 40 network cabinets (30 unit + 10 central), 30 CDUs and 9 fan walls (facility context).
 - Cross-aisle widening relative to the previous layout totals 2,240 mm (N-204-EN). This is a difference in the reference row layout; the building geometry is unchanged.
 - Every fan wall faces a cross aisle and network cabinets only; GPU cabinet fronts keep the 1,200 mm tray-withdrawal zone.
 - Door positions are not supplied and are not shown.

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Hall key plan and unit index

Scale 1:200

Revision PE-P1

28 September 2026

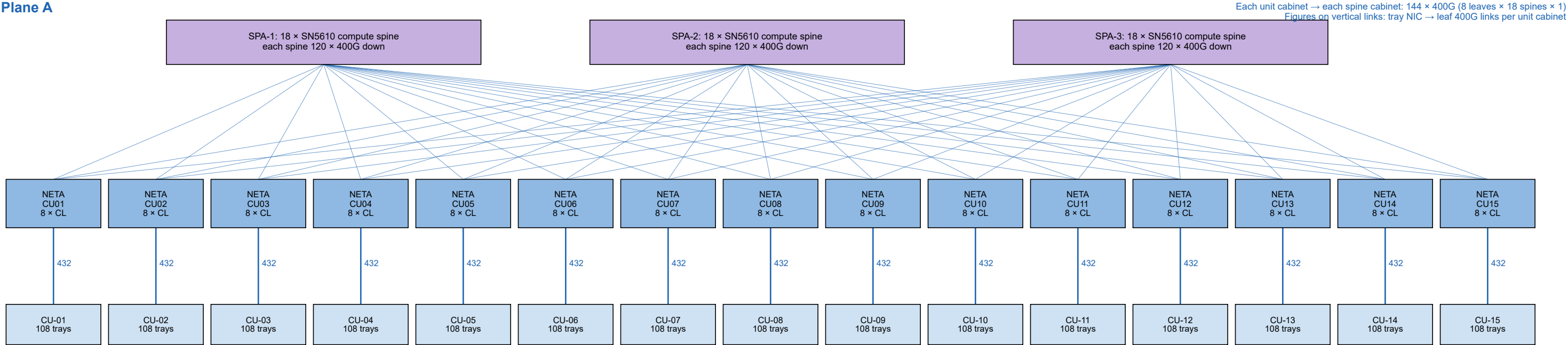
Units: mm

N-002-EN

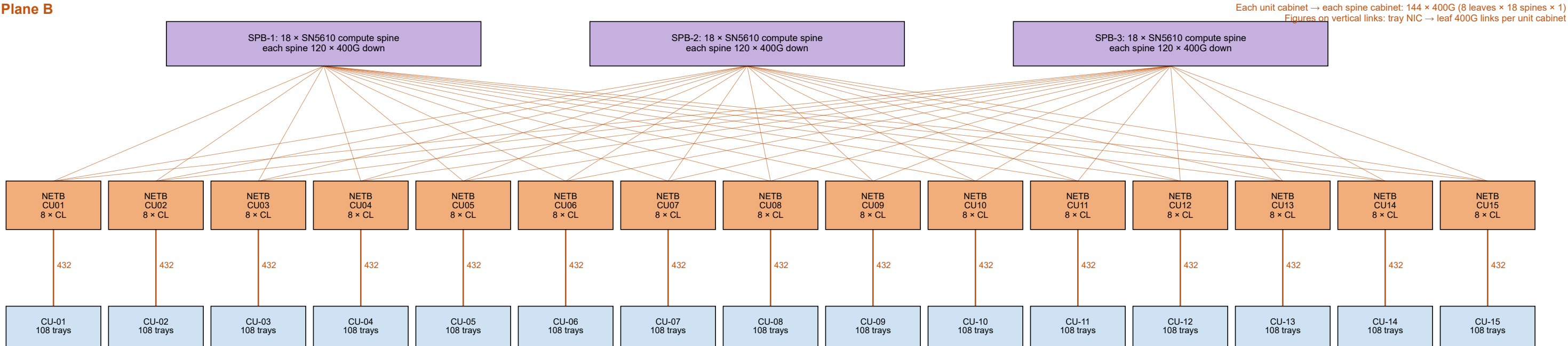
Sheet 3 of 30

Each ConnectX-8 800G port is split into 2 × 400G, one to each plane. Per plane: 120 rail leaves (30 leaf groups × 4 rails) and 54 spines; leaf 54 / 54 down/up (1:1). Values per the fabric summary (technical appendix A1).

Plane A



Plane B



Item	Per plane	Basis	Status
Compute trays / CX-8 NICs	1,620 / 6,480 (each NIC 1 × 400G into this plane)	GB300 NVL72 OEM rack; NVIDIA reference architecture	FACT
Rail leaves (SN5610)	120; down/up 54 / 54; 20 spare ports per leaf	128 × 400G logical ports per switch	DESIGN
Spines (SN5610)	54; 120 ports used, 8 spare per spine	3 cabinets × 18	DESIGN
Leaf oversubscription	1.0:1 (non-blocking)	Downlink / uplink port count	DESIGN
Leaf → spine uplink capacity	2,592 Tb/s per plane	120 × 54 × 400G	DESIGN

Notes

- Links: NIC → leaf 12,960 and leaf → spine 12,960 (both planes).
- Plane A and plane B leaves, spines, cabinets and trunk trays (TA / TB) are separate.
- The two half-ports of one NIC share one OSFP cage: a NIC or cage failure affects both planes for that NIC (N-103-EN).

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Compute fabric: dual-plane rail topology, quantities and oversubscription

Scale NTS

Revision PE-P1

28 September 2026

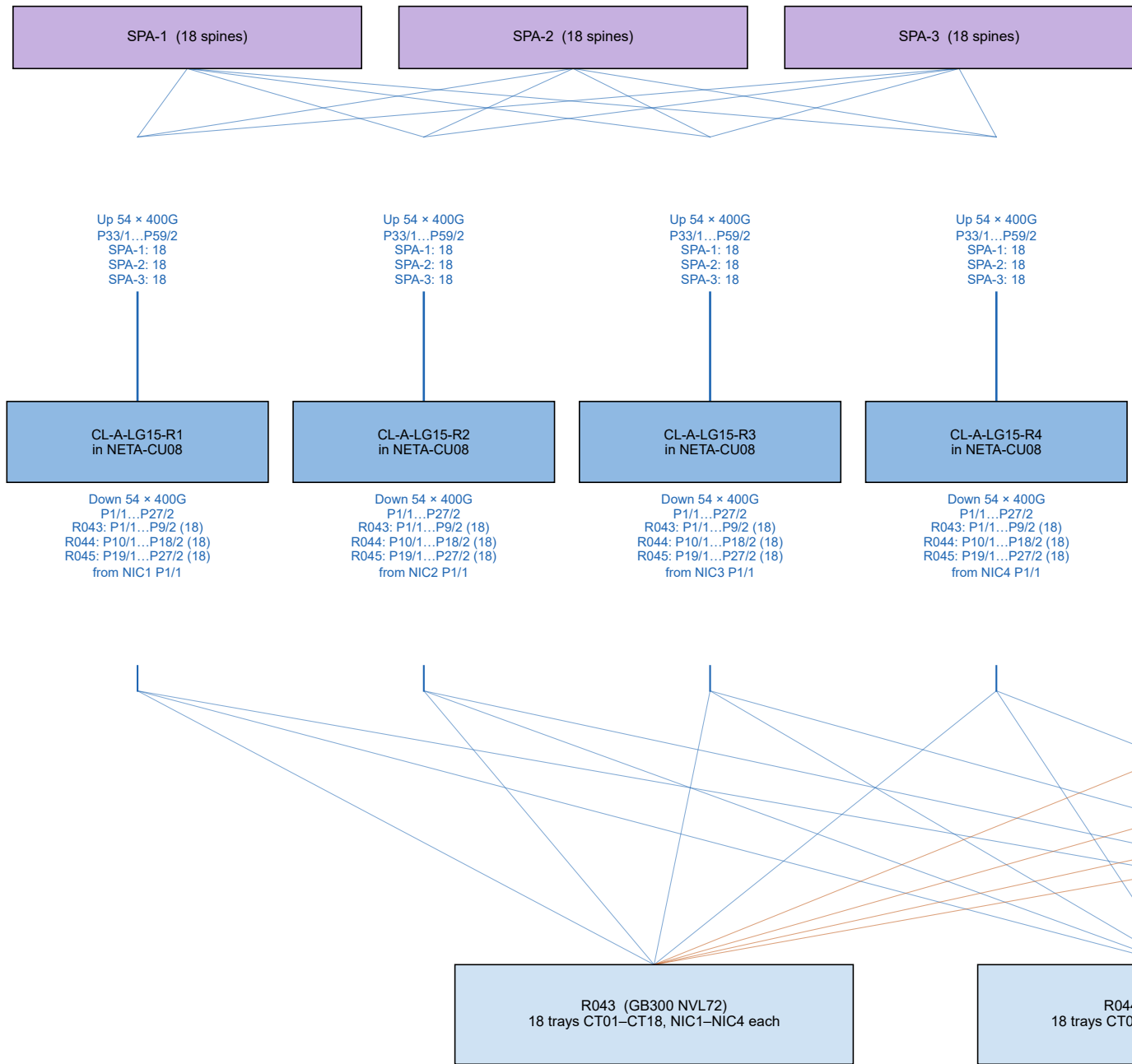
Units: mm

N-101-EN

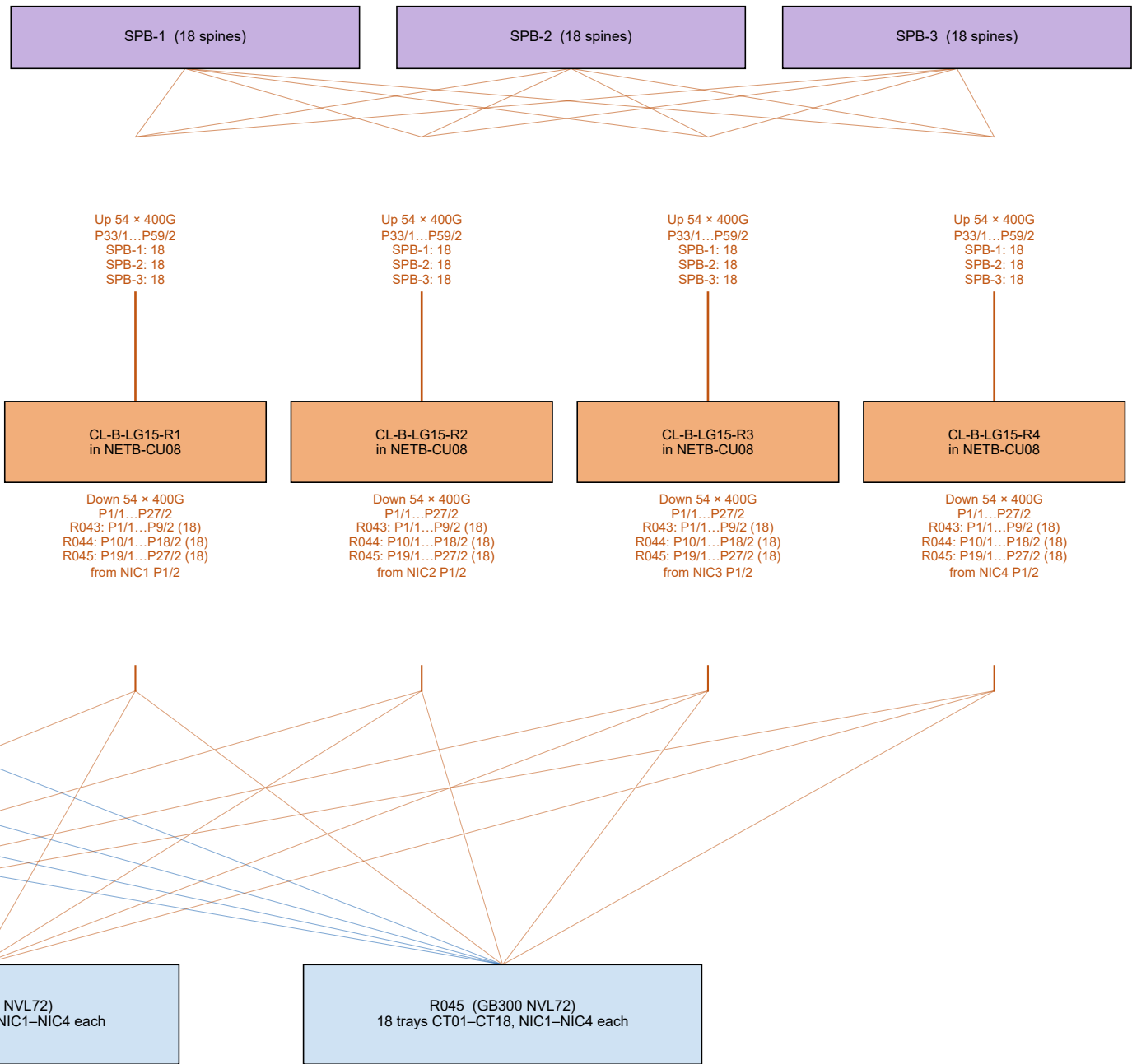
Sheet 4 of 30

Leaf group LG15 (unit CU-08, GPU cabinets R043–R045): tray NIC r → leaf CL-x-LG15-Rr; each leaf 54 downlinks and 54 uplinks, one 400G link to each of the 54 spines of its plane. Port ranges read from the link table.

Plane A



Plane B



Link	End A	End B	Rate	Module A / B	Plane
L007561	R043-CT01:NIC1:P1/1	CL-A-LG15-R1:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	A
L007562	R043-CT01:NIC1:P1/2	CL-B-LG15-R1:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	B
L007563	R043-CT01:NIC2:P1/1	CL-A-LG15-R2:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	A
L007564	R043-CT01:NIC2:P1/2	CL-B-LG15-R2:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	B
L007565	R043-CT01:NIC3:P1/1	CL-A-LG15-R3:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	A
L007566	R043-CT01:NIC3:P1/2	CL-B-LG15-R3:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	B
L007567	R043-CT01:NIC4:P1/1	CL-A-LG15-R4:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	A
L007568	R043-CT01:NIC4:P1/2	CL-B-LG15-R4:P1/1	400G	MMA4Z00-NS-FLT / MMA4Z00-NS	B

Notes

- Each CX-8 NIC OSFP cage (e.g. R043-CT01-NIC1) carries an MMA4Z00-NS-FLT: half-port P1/1 to plane A, P1/2 to plane B.
- On the leaf, the two half-ports of each OSFP cage serve the same plane and rail (same module type per cage, N-901-EN).
- Uplinks: one 400G from each leaf to each spine of its plane; 8 leaves of this group give 432 uplinks.
- Port-level link table: 39,066 records; every link of leaf group LG01 is listed in the technical appendix.

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Compute fabric: rail port mapping, leaf group LG15

Scale NTS

Revision PE-P1

28 September 2026

Units: mm

N-102-EN

Sheet 5 of 30

Independent: plane-A and plane-B devices, cabinets and trunk trays. Shared: the two half-ports of one CX-8 NIC (one OSFP cage), the TL jumper tray, and in 27 of 40 network cabinets the generator segment behind both UPS paths.

Level	Independent	Shared (common cause)
NIC / cage	Half-ports P1/1 and P1/2 go to different planes and different leaves	Both half-ports of one CX-8 NIC use one OSFP cage and module: a NIC or cage failure removes the NIC from both planes (physical endpoint loss)
Leaf / spine	Plane A in NETA and SPA cabinets; plane B in NETB and SPB cabinets	One leaf failure: its 54 endpoints lose one plane
Trays	Plane-A trunks only in TA; plane-B trunks only in TB	TL carries NIC and DPU jumpers of both planes. Loss of the TL section of one unit disconnects that unit from both planes (N-801-EN)
Cabinet power	PDU A1/A2 on UPS path A and B1/B2 on UPS path B (existing UPS paths, input)	27 of 40 network cabinets have both UPS paths in the same generator segment: after battery depletion a segment loss removes both
Generator segments	4 segments (existing facility input)	One segment lost (risk case) affects all UPS paths of that segment

Network cabinet source pairing (existing UPS paths and generator segments; input shown for common-cause identification)

Cabinet	UPS A / B	Segment A / B	Same segment
NETA-CU01	UPS7-01 / UPS7-02	SEG-A / SEG-A	yes
NETB-CU01	UPS7-02 / UPS7-03	SEG-A / SEG-A	yes
NETA-CU02	UPS7-01 / UPS7-02	SEG-A / SEG-A	yes
NETB-CU02	UPS7-02 / UPS7-03	SEG-A / SEG-A	yes
NETA-CU03	UPS7-02 / UPS7-03	SEG-A / SEG-A	yes
NETB-CU03	UPS7-03 / UPS7-04	SEG-A / SEG-B	no
NETA-CU04	UPS7-03 / UPS7-04	SEG-A / SEG-B	no
NETB-CU04	UPS7-04 / UPS7-05	SEG-B / SEG-B	yes
NETA-CU05	UPS7-04 / UPS7-05	SEG-B / SEG-B	yes
NETB-CU05	UPS7-05 / UPS7-06	SEG-B / SEG-B	yes
NETA-CU06	UPS7-05 / UPS7-06	SEG-B / SEG-B	yes
NETB-CU06	UPS7-06 / UPS7-01	SEG-B / SEG-A	no
NETA-CU07	UPS7-06 / UPS7-01	SEG-B / SEG-A	no
NETB-CU07	UPS7-05 / UPS7-06	SEG-B / SEG-B	yes

Cabinet	UPS A / B	Segment A / B	Same segment
OOB-A	UPS7-03 / UPS7-04	SEG-A / SEG-B	no
CVS-A	UPS7-01 / UPS7-02	SEG-A / SEG-A	yes
SPA-1	UPS7-01 / UPS7-02	SEG-A / SEG-A	yes
SPA-2	UPS7-03 / UPS7-04	SEG-A / SEG-B	no
SPA-3	UPS7-05 / UPS7-06	SEG-B / SEG-B	yes
SPB-1	UPS8-01 / UPS8-02	SEG-C / SEG-C	yes
SPB-2	UPS8-03 / UPS8-04	SEG-C / SEG-D	no
SPB-3	UPS8-05 / UPS8-06	SEG-D / SEG-D	yes
CVS-B	UPS8-07 / UPS8-01	SEG-D / SEG-C	no
OOB-B	UPS8-03 / UPS8-04	SEG-C / SEG-D	no
NETA-CU08	UPS8-01 / UPS8-02	SEG-C / SEG-C	yes
NETB-CU08	UPS8-02 / UPS8-03	SEG-C / SEG-C	yes
NETA-CU09	UPS8-01 / UPS8-02	SEG-C / SEG-C	yes
NETB-CU09	UPS8-02 / UPS8-03	SEG-C / SEG-C	yes

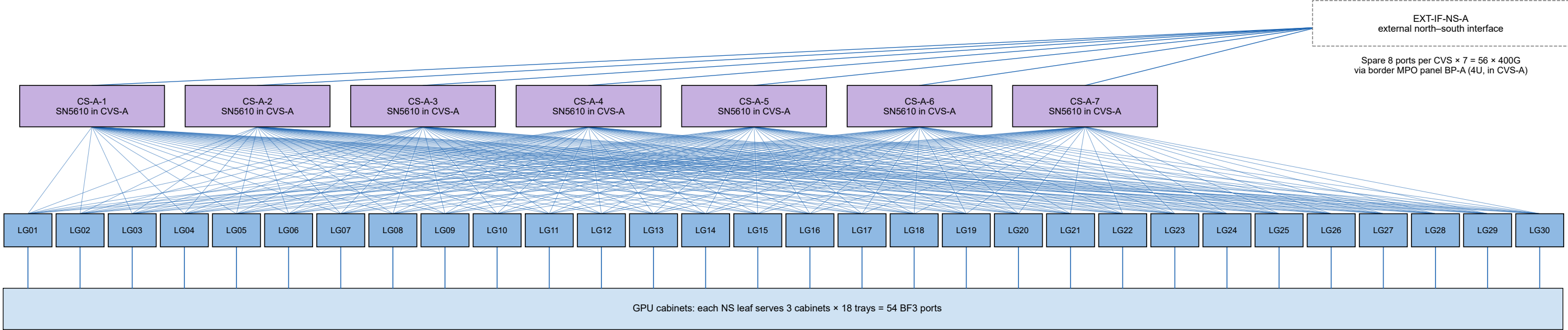
Cabinet	UPS A / B	Segment A / B	Same segment
NETA-CU10	UPS8-02 / UPS8-03	SEG-C / SEG-C	yes
NETB-CU10	UPS8-03 / UPS8-04	SEG-C / SEG-D	no
NETA-CU11	UPS8-03 / UPS8-04	SEG-C / SEG-D	no
NETB-CU11	UPS8-04 / UPS8-05	SEG-D / SEG-D	yes
NETA-CU12	UPS8-04 / UPS8-05	SEG-D / SEG-D	yes
NETB-CU12	UPS8-05 / UPS8-06	SEG-D / SEG-D	yes
NETA-CU13	UPS8-05 / UPS8-06	SEG-D / SEG-D	yes
NETB-CU13	UPS8-06 / UPS8-07	SEG-D / SEG-D	yes
NETA-CU14	UPS8-06 / UPS8-07	SEG-D / SEG-D	yes
NETB-CU14	UPS8-07 / UPS8-01	SEG-D / SEG-C	no
NETA-CU15	UPS8-07 / UPS8-01	SEG-D / SEG-C	no
NETB-CU15	UPS8-01 / UPS8-02	SEG-C / SEG-C	yes

Notes

- 1. Quantified effects of plane, whole-tray and local-cut events are tabulated on N-801-EN.
- 2. Independence of the two PSU inputs is counted at UPS-path level. Two paths in one segment back each other up while utility or generator supply is available; they are not independent at generator-segment level.
- 3. Dual planes provide an alternative network path; they do not by themselves demonstrate a service-level guarantee.

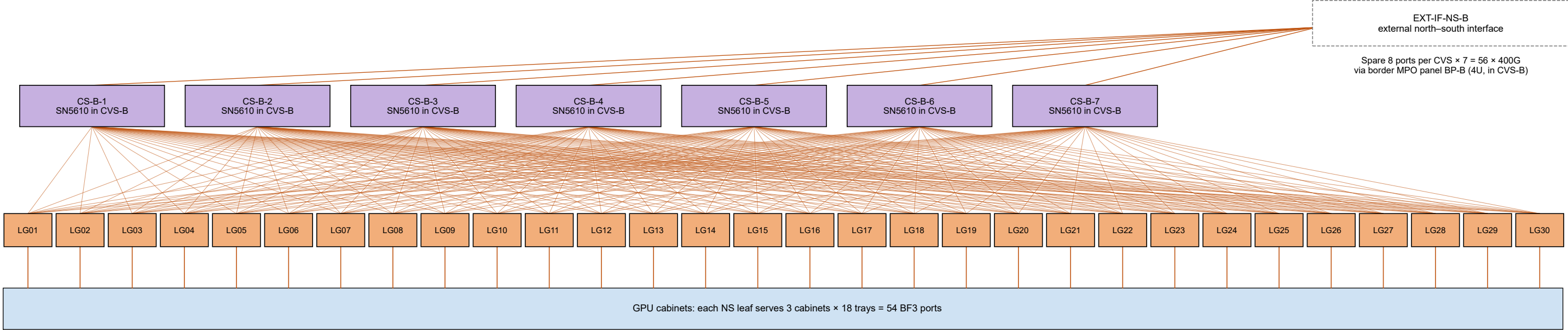
Each tray BlueField-3 (B3240) has two 400G ports, one to the A-side and one to the B-side north–south leaf. NS leaf 54 / 28 down/up (1.929:1) to 7 CVS per side; spare CVS ports reach the external interface via a border patch panel.

A side (NS leaves in NETA-CUxx, U2–U5)



Each NS leaf: 54 BF3 downlinks; uplinks to each of 7 CVS: 4 × 400G, total 28

B side (NS leaves in NETB-CUxx, U2–U5)



Each NS leaf: 54 BF3 downlinks; uplinks to each of 7 CVS: 4 × 400G, total 28

Item	Per side	Note
BF3 ports	1,620 × 400G	One B3240 per tray; two ports to different sides
NS leaves (SN5610)	30; down/up 54 / 28; 1.929:1	46 spare ports per NS leaf
CVS (SN5610)	7; 120 ports used, 8 spare	Spare ports are the external-interface candidates
NS leaf → CVS capacity	336 Tb/s	30 × 28 × 400G

Notes

- Upstream routers, carriers, interface rates and optical modules beyond EXT-IF-NS-A/B are outside this design; no upstream equipment is assumed.
- Configuration option: external bandwidth, number of spare CVS ports used and module type (design brief Section 9).

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

North–south (DPU) topology to external interface

Scale NTS

Revision PE-P1

28 September 2026

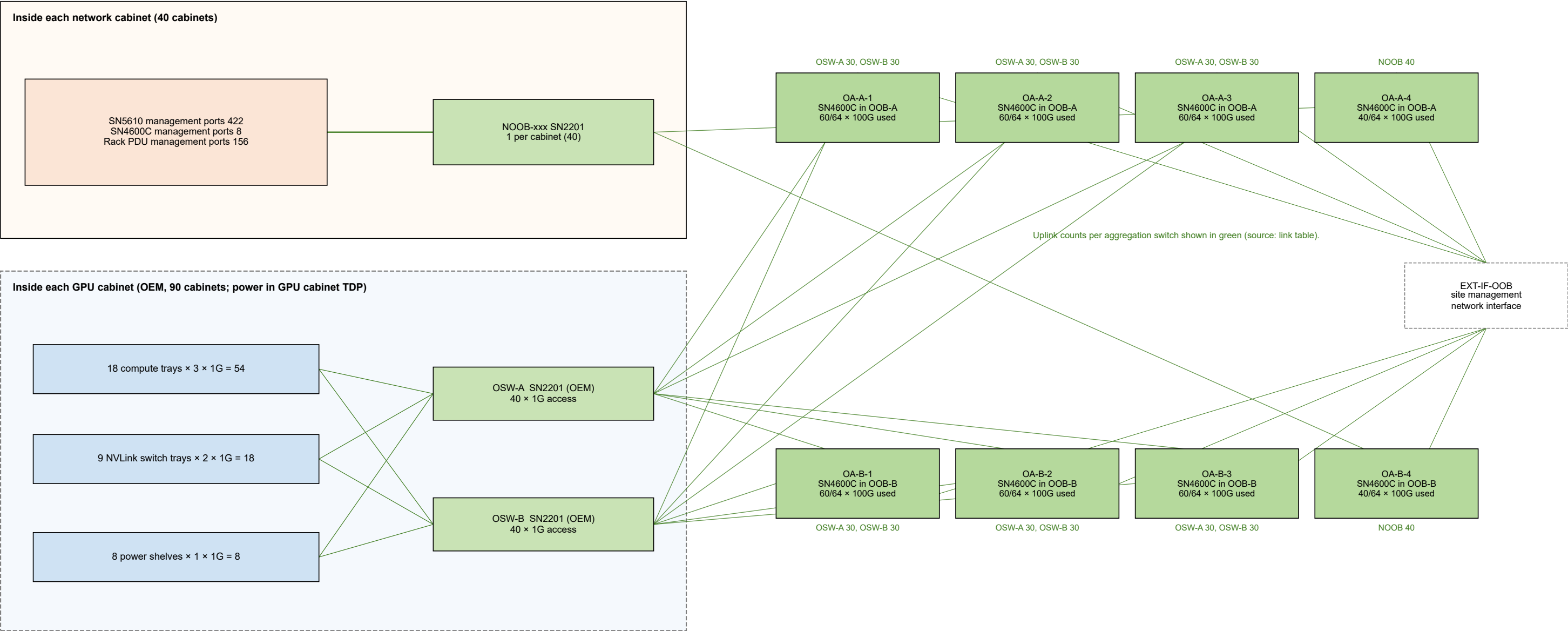
Units: mm

N-111-EN

Sheet 7 of 30

In-rack OEM SN2201 switches in GPU cabinets (part of GPU cabinet TDP) and one SN2201 per network cabinet connect to OOB aggregation SN4600C on sides A and B; aggregation reaches the site management network through EXT-IF-OOB.

Each OSW: 2 × 100G uplinks (MMA1B00-C100D, OM4), one to side A and one to side B. Each NOOB: 2 × 100G to OA-A-4 and OA-B-4.



Class	From	To	Rate	Links	Scope
MGMT	Compute leaf	Cabinet mgmt switch (NOOB)	1G	240	Network cabinet equipment
MGMT	Compute spine	Cabinet mgmt switch (NOOB)	1G	108	Network cabinet equipment
MGMT	NS leaf	Cabinet mgmt switch (NOOB)	1G	60	Network cabinet equipment
MGMT	CVS spine	Cabinet mgmt switch (NOOB)	1G	14	Network cabinet equipment
MGMT	OOB aggregation	Cabinet mgmt switch (NOOB)	1G	8	Network cabinet equipment
MGMT	Rack PDU	Cabinet mgmt switch (NOOB)	1G	156	Network cabinet equipment
OOB_INRACK	Compute tray	GPU-rack OEM switch (OSW)	1G	4,860	GPU rack OEM equipment (in GPU rack TDP)
OOB_INRACK	NVLink switch tray	GPU-rack OEM switch (OSW)	1G	1,620	GPU rack OEM equipment (in GPU rack TDP)
OOB_INRACK	Power shelf	GPU-rack OEM switch (OSW)	1G	720	GPU rack OEM equipment (in GPU rack TDP)
OOB_UPLINK	GPU-rack OEM switch (OSW)	OOB aggregation	100G	360	GPU rack OEM SN2201 → network OOB aggregation
OOB_UPLINK	Cabinet mgmt switch (NOOB)	OOB aggregation	100G	80	Network cabinet equipment

Notes

- GPU-rack OEM SN2201 switches and their 1G access are OEM equipment counted in GPU cabinet power, not in network load.
- Addressing, upstream management network and security zoning beyond EXT-IF-OOB are outside this design (configuration option, design brief Section 9).
- Copper is used for cabinet-local 1G management only (Cat6A in-cabinet patch cords).

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Out-of-band management hierarchy

Scale NTS

Revision PE-P1

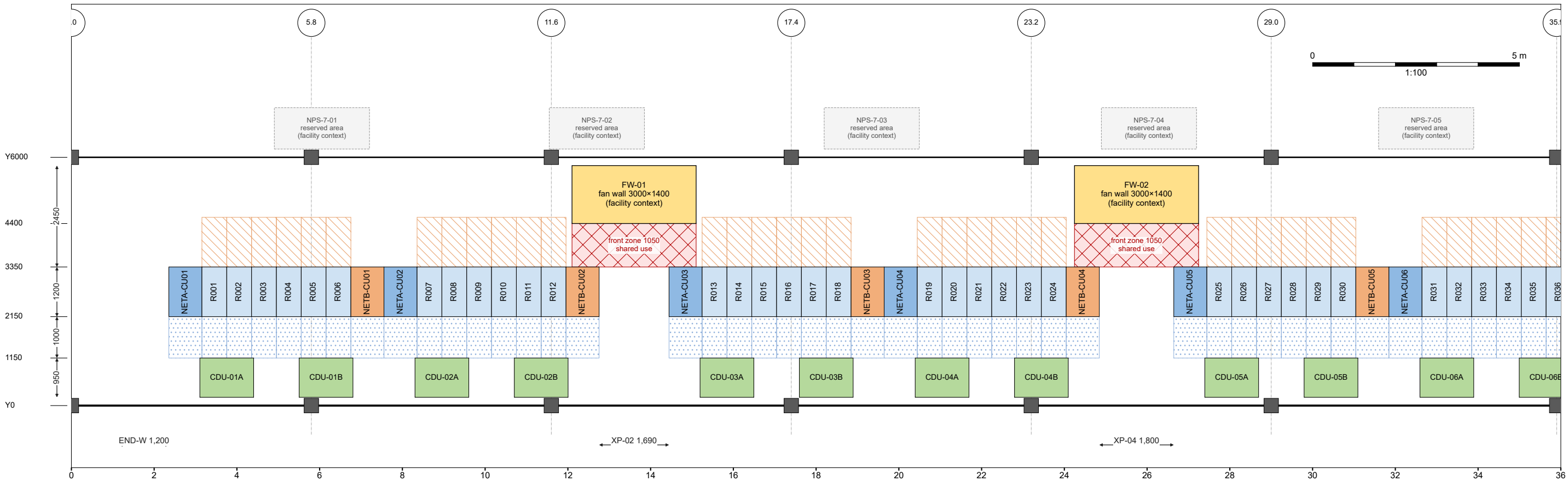
28 September 2026

Units: mm

N-121-EN

Sheet 8 of 30

Deployment plan 1:100, X 0–36 m: all GPU and network cabinet IDs, CDUs and fan walls (facility context), column axes, maintenance zones and section cuts. Door positions are not supplied and are not shown.



Network cabinet	X0–X1	ΔX vs previous	Front clearance
NETA-CU01	2,355–3,155	-3,680	2450 cold aisle
NETB-CU01	6,755–7,555	-3,680	2450 cold aisle
NETA-CU02	7,555–8,355	-3,680	2450 cold aisle
NETB-CU02	11,955–12,755	-3,680	1050 to FW-01
NETA-CU03	14,445–15,245	-3,390	1050 to FW-01
NETB-CU03	18,845–19,645	-3,390	2450 cold aisle

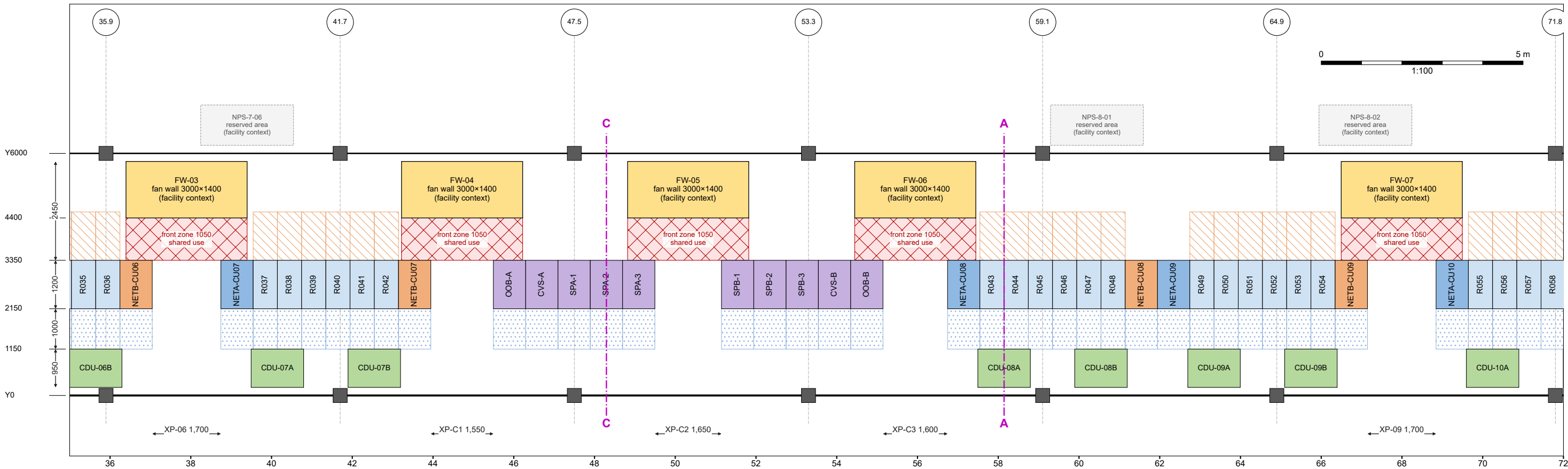
Network cabinet	X0–X1	ΔX vs previous	Front clearance
NETA-CU04	19,645–20,445	-3,390	2450 cold aisle
NETB-CU04	24,045–24,845	-3,390	1050 to FW-02
NETA-CU05	26,645–27,445	-2,990	1050 to FW-02
NETB-CU05	31,045–31,845	-2,990	2450 cold aisle
NETA-CU06	31,845–32,645	-2,990	2450 cold aisle

Network cabinet front zone where a fan wall faces (1,050 mm)

- Switch front withdrawal needs 1,000 mm and fan-wall service needs 850 mm; both use the same 1,050 mm zone and are not performed at the same time (red cross-hatch).
- GPU cabinet fronts keep a 1,200 mm tray-withdrawal zone (orange hatch); fan walls do not face GPU cabinets.

- Notes
- Y chain: wall line Y0 / wall zone Y200 / CDU ≤950 to Y1150 / rear maintenance 1000 to Y2150 / cabinet 1200 to Y3350 / cold aisle 2450 to the fan-wall rear and column-flange line Y5800 (flange Y5825, partition axis Y6000).
 - Rear zone 1000 (blue dots): GPU rear access and network PSU/fan replacement from the rear.
 - Cabinets sit on IT support rails clear of the main-beam zone (axis ±160 mm) at every position.
 - Electrical-zone reserved areas north of Y6000 are facility context; door positions are to be confirmed.

Deployment plan 1:100, X 35–72 m: all GPU and network cabinet IDs, CDUs and fan walls (facility context), column axes, maintenance zones and section cuts. Door positions are not supplied and are not shown.



Network cabinet	X0–X1	ΔX vs previous	Front clearance
NETB-CU06	36,245–37,045	-2,990	1050 to FW-03
NETA-CU07	38,745–39,545	-2,690	1050 to FW-03
NETB-CU07	43,145–43,945	-2,690	1050 to FW-04
OOB-A	45,495–46,295	-2,690	1050 to FW-04
CVS-A	46,295–47,095	-2,690	2450 cold aisle
SPA-1	47,095–47,895	-2,690	2450 cold aisle
SPA-2	47,895–48,695	-2,690	2450 cold aisle
SPA-3	48,695–49,495	-2,690	1050 to FW-05
SPB-1	51,145–51,945	-2,590	1050 to FW-05

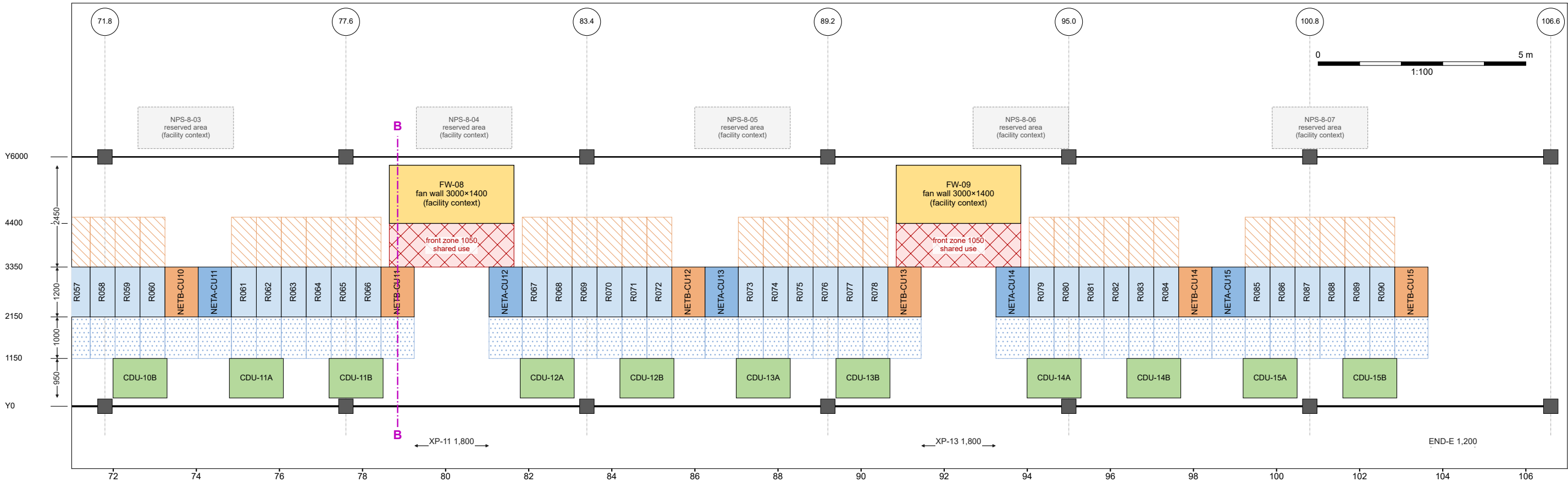
Network cabinet	X0–X1	ΔX vs previous	Front clearance
SPB-2	51,945–52,745	-2,590	2450 cold aisle
SPB-3	52,745–53,545	-2,590	2450 cold aisle
CVS-B	53,545–54,345	-2,590	2450 cold aisle
OOB-B	54,345–55,145	-2,590	1050 to FW-06
NETA-CU08	56,745–57,545	-2,540	1050 to FW-06
NETB-CU08	61,145–61,945	-2,540	2450 cold aisle
NETA-CU09	61,945–62,745	-2,540	2450 cold aisle
NETB-CU09	66,345–67,145	-2,540	1050 to FW-07
NETA-CU10	68,845–69,645	-2,240	1050 to FW-07

Network cabinet front zone where a fan wall faces (1,050 mm)

- Switch front withdrawal needs 1,000 mm and fan-wall service needs 850 mm; both use the same 1,050 mm zone and are not performed at the same time (red cross-hatch).
- GPU cabinet fronts keep a 1,200 mm tray-withdrawal zone (orange hatch); fan walls do not face GPU cabinets.

- Notes**
- Y chain: wall line Y0 / wall zone Y200 / CDU ≤950 to Y1150 / rear maintenance 1000 to Y2150 / cabinet 1200 to Y3350 / cold aisle 2450 to the fan-wall rear and column-flange line Y5800 (flange Y5825, partition axis Y6000).
 - Rear zone 1000 (blue dots): GPU rear access and network PSU/fan replacement from the rear.
 - Cabinets sit on IT support rails clear of the main-beam zone (axis ±160 mm) at every position.
 - Electrical-zone reserved areas north of Y6000 are facility context; door positions are to be confirmed.

Deployment plan 1:100, X 71–107 m: all GPU and network cabinet IDs, CDUs and fan walls (facility context), column axes, maintenance zones and section cuts. Door positions are not supplied and are not shown.



Network cabinet	X0–X1	ΔX vs previous	Front clearance
NETB-CU10	73,245–74,045	-2,240	2450 cold aisle
NETA-CU11	74,045–74,845	-2,240	2450 cold aisle
NETB-CU11	78,445–79,245	-2,240	1050 to FW-08
NETA-CU12	81,045–81,845	-1,840	1050 to FW-08
NETB-CU12	85,445–86,245	-1,840	2450 cold aisle
NETA-CU13	86,245–87,045	-1,840	2450 cold aisle

Network cabinet	X0–X1	ΔX vs previous	Front clearance
NETB-CU13	90,645–91,445	-1,840	1050 to FW-09
NETA-CU14	93,245–94,045	-1,440	1050 to FW-09
NETB-CU14	97,645–98,445	-1,440	2450 cold aisle
NETA-CU15	98,445–99,245	-1,440	2450 cold aisle
NETB-CU15	102,845–103,645	-1,440	2450 cold aisle

Network cabinet front zone where a fan wall faces (1,050 mm)

- Switch front withdrawal needs 1,000 mm and fan-wall service needs 850 mm; both use the same 1,050 mm zone and are not performed at the same time (red cross-hatch).
- GPU cabinet fronts keep a 1,200 mm tray-withdrawal zone (orange hatch); fan walls do not face GPU cabinets.

- Notes**
- Y chain: wall line Y0 / wall zone Y200 / CDU ≤950 to Y1150 / rear maintenance 1000 to Y2150 / cabinet 1200 to Y3350 / cold aisle 2450 to the fan-wall rear and column-flange line Y5800 (flange Y5825, partition axis Y6000).
 - Rear zone 1000 (blue dots): GPU rear access and network PSU/fan replacement from the rear.
 - Cabinets sit on IT support rails clear of the main-beam zone (axis ±160 mm) at every position.
 - Electrical-zone reserved areas north of Y6000 are facility context; door positions are to be confirmed.

Reference row adjustment relative to the previous layout: cross aisles widened and row start moved; cabinet widths, count, order and Y positions unchanged. Building geometry, axes, columns and joists are unchanged.

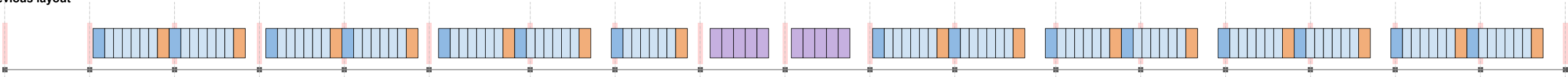
Aisle	Previous X0	Previous width	Current X0	Current width	Widened
END-W	4,835	1,200	1,155	1,200	0
XP-02	16,435	1,400	12,755	1,690	+290
XP-04	28,235	1,400	24,845	1,800	+400
XP-06	40,035	1,400	37,045	1,700	+300
XP-C1	46,635	1,550	43,945	1,550	0
XP-C2	52,185	1,550	49,495	1,650	+100
XP-C3	57,735	1,550	55,145	1,600	+50
XP-09	69,685	1,400	67,145	1,700	+300
XP-11	81,485	1,400	79,245	1,800	+400
XP-13	93,285	1,400	91,445	1,800	+400
END-E	105,085	1,200	103,645	1,200	0
Total					+2,240

Cabinet run (row order)	Cabinets	ΔX (mm)
NETA-CU01 ... NETB-CU02	16	-3,680
NETA-CU03 ... NETB-CU04	16	-3,390
NETA-CU05 ... NETB-CU06	16	-2,990
NETA-CU07 ... SPA-3	13	-2,690
SPB-1 ... OOB-B	5	-2,590
NETA-CU08 ... NETB-CU09	16	-2,540
NETA-CU10 ... NETB-CU11	16	-2,240
NETA-CU12 ... NETB-CU13	16	-1,840
NETA-CU14 ... NETB-CU15	16	-1,440

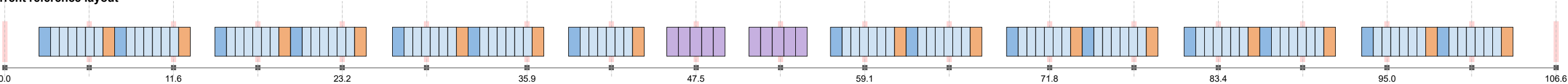
Notes

- 1. Aisle widening: 2,240 mm in total; row start at X1155.
- 2. Purpose: every IT support rail under a cabinet clears the main-beam zone (axis ±160 mm). Previous layout: 4 positions in the beam zone; current reference layout: 0.
- 3. This is a difference between two reference row layouts. It is not a change to the building drawings.
- 4. Per-cabinet previous and current X values are listed in the technical appendix (cabinet placement, A3).
- 5. Door positions are not supplied. An earlier door drawing is superseded as a current condition; door locations are to be confirmed against fan-wall and 1,050 mm front zones before layout confirmation.

Previous layout



Current reference layout



Pink bands: main-beam zone on each column axis (±160 mm). Cabinet colours as N-001-EN. Strips drawn at 1:300; axis values in m.

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Reference row adjustment relative to previous layout

Scale 1:300

Revision PE-P1

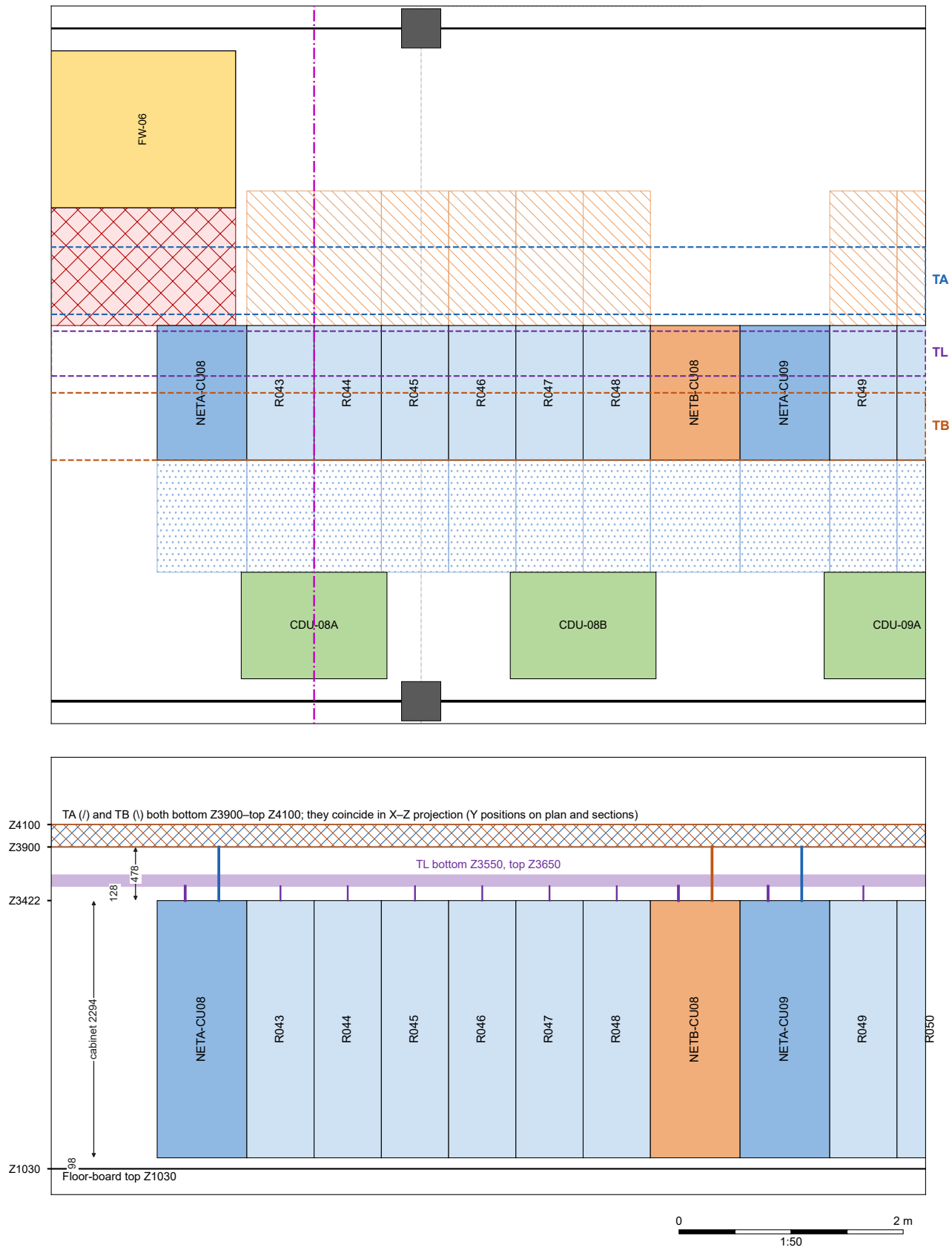
28 September 2026

Units: mm

N-204-EN

Sheet 12 of 30

Typical unit CU-08 (NETA-CU08, R043–R048, NETB-CU08, CDU-08A/B): plan (upper) and X–Z elevation (lower). Fibre drops from the trays onto the cabinet tops. Dimensions in mm.



Jumpers entering the unit cabinets from R043–R048

Enters	Class	Links	Length m	Medium
NETA-CU08	NIC → compute leaf	432	5.65–9.62	OM4 MPO-12 APC jumper
NETA-CU08	DPU → NS leaf	108	6.18–10.25	OM4 MPO-12 APC jumper
NETB-CU08	NIC → compute leaf	432	5.20–10.07	OM4 MPO-12 APC jumper
NETB-CU08	DPU → NS leaf	108	6.09–10.34	OM4 MPO-12 APC jumper

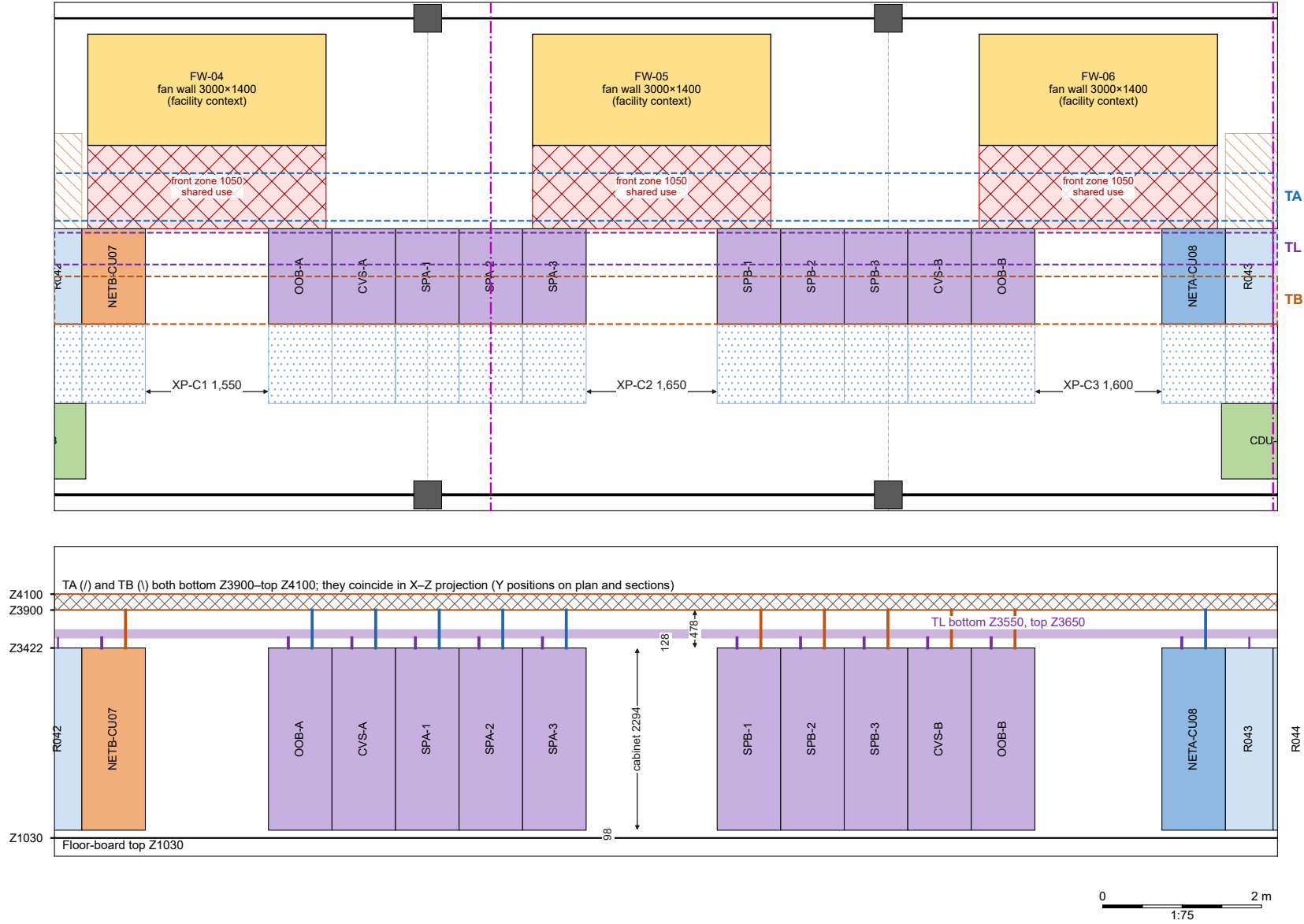
Jumpers per GPU cabinet (NIC + DPU) and length range

GPU cabinet	To NETA-CU08	Length m	To NETB-CU08	Length m
R043	72 + 18	5.65–7.34	72 + 18	8.65–10.34
R044	72 + 18	6.25–7.94	72 + 18	8.05–9.74
R045	72 + 18	6.85–8.54	72 + 18	7.45–9.14
R046	72 + 18	7.00–9.05	72 + 18	6.40–8.45
R047	72 + 18	7.60–9.65	72 + 18	5.80–7.85
R048	72 + 18	8.20–10.25	72 + 18	5.20–7.25

Notes

- Drops: NIC/DPU jumpers leave TL (bottom Z3550) and enter the cabinet top through a 128 mm drop; leaf/spine trunks leave TA (plane A) or TB (plane B) at bottom Z3900 and enter at the cabinet top rear. Trunk bend radius $\geq 10 \times OD$ (13 mm trunk $\rightarrow \geq 130$ mm).
- Cabinet height 2294 mm stands on the IT support rails (top Z1128); cabinet top is at absolute elevation Z3422.
- Clear height from cabinet top to the roof main-beam underside (about Z6700) exceeds 3 m; tray hangers bear on roof purlins (hanger and purlin capacity: CONFIRM, structural engineer).
- Per GPU cabinet: 72 NIC + 18 DPU jumpers to NETA and the same to NETB (N-102-EN, N-111-EN).

Central spine zone (OOB-A, CVS-A, SPA-1..3, SPB-1..3, CVS-B, OOB-B): plan (upper) and X–Z elevation (lower). Fibre drops from the trays onto the cabinet tops. Dimensions in mm.



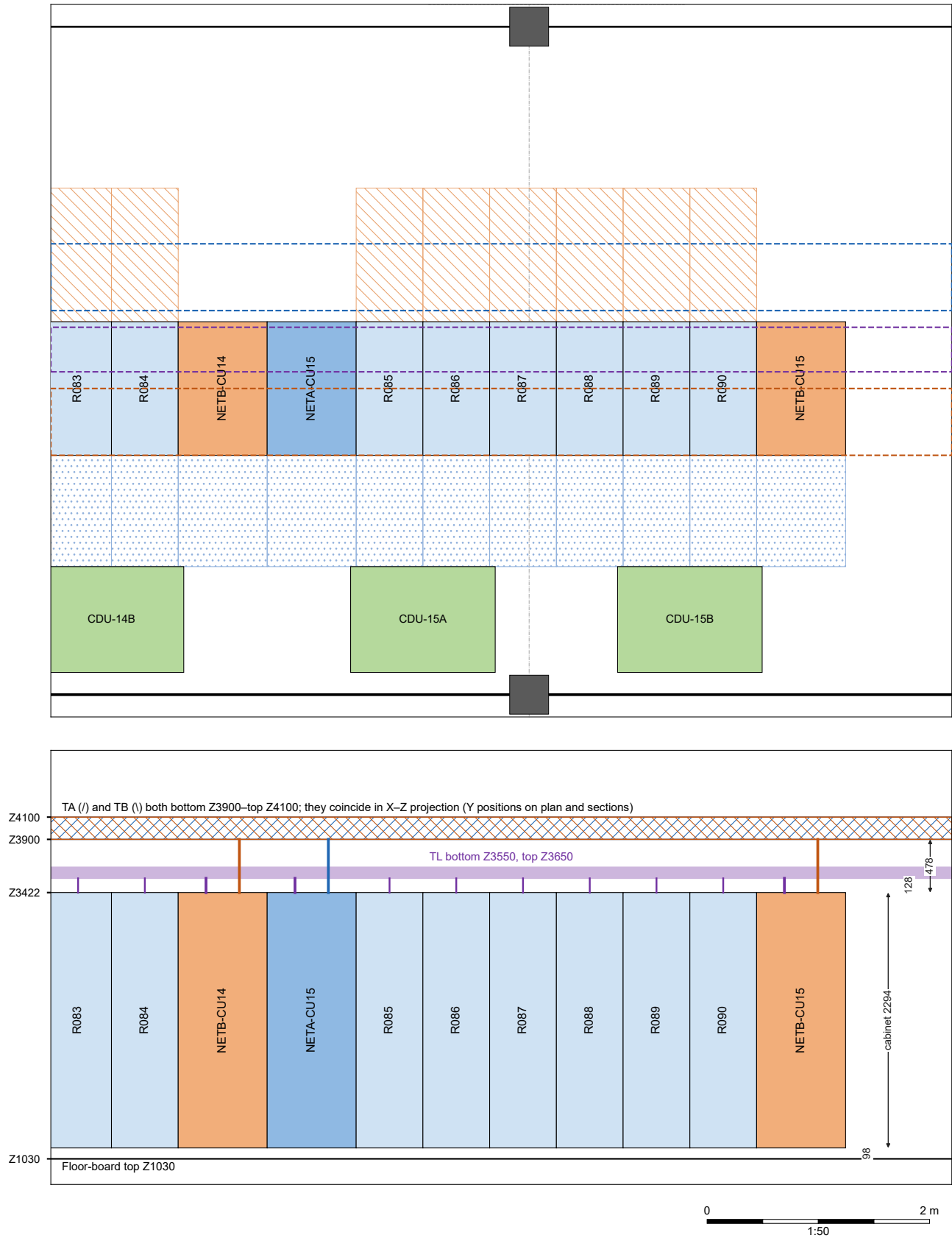
Trunks landing in central cabinets

Cabinet	Tray	Trunks
CVS-A (listed CS-A)	TA	60
CVS-B (listed CS-B)	TB	60
SPA-1	TA	120
SPA-2	TA	120
SPA-3	TA	120
SPB-1	TB	120
SPB-2	TB	120
SPB-3	TB	120

Notes

- Trunk unit: 1 trunk = 18 × MPO-12 legs / 216 fibres (N-503-EN).
- Drops: jumpers from TL (bottom Z3550); trunks from TA/TB (bottom Z3900) at the cabinet top rear; bend radius ≥130 mm for 13 mm trunks.
- Cabinet height 2294 mm on rails at Z1128; cabinet top Z3422.
- Fan walls FW-04, FW-05 and FW-06 face OOB-A, SPA-3/SPB-1 and OOB-B: 1,050 mm front zone shared in time between switch withdrawal (1,000) and fan-wall service (850).

Far-end unit CU-15 (NETA-CU15, R085–R090, NETB-CU15): plan (upper) and X–Z elevation (lower). Fibre drops from the trays onto the cabinet tops. Dimensions in mm.



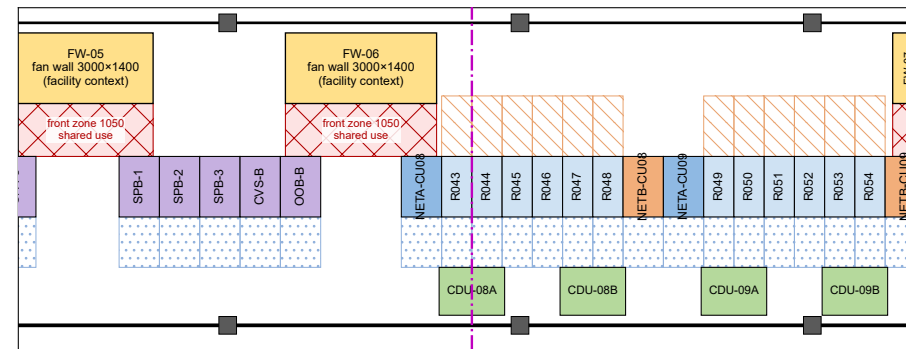
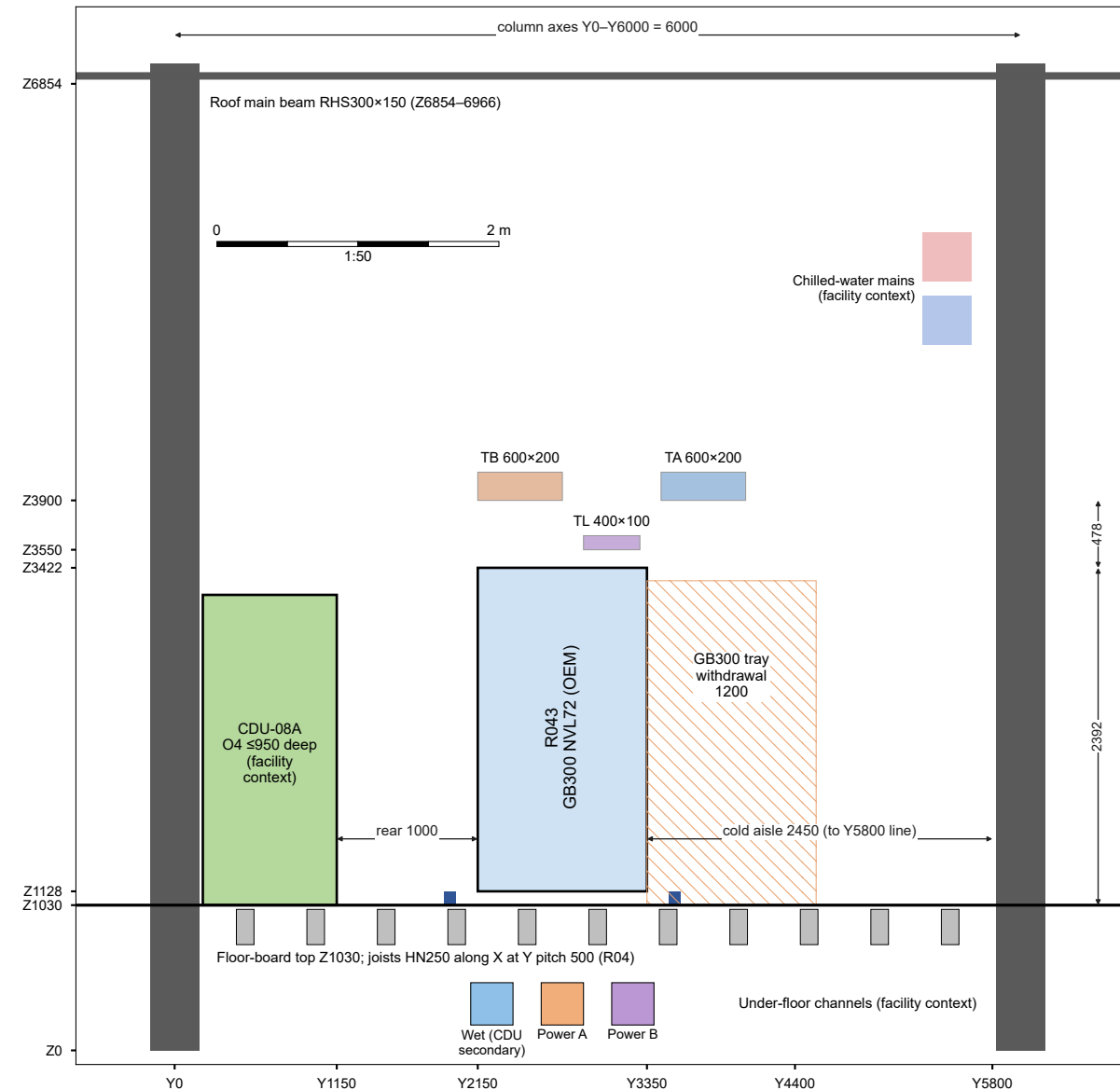
Uplinks from the far-end unit cabinets

From	To	Links	Module	Longest m	Panels
NETA-CU15	CVS-A	56	MMS4X00-NS	61.40	1
NETA-CU15	SPA-1	144	MMS4X00-NS	60.33	1
NETA-CU15	SPA-2	144	MMS4X00-NS	59.53	1
NETA-CU15	SPA-3	144	MMS4X00-NS	58.73	1
NETB-CU15	CVS-B	56	MMS4X00-NS	58.95	1
NETB-CU15	SPB-1	144	MMS4X00-NS	61.08	1
NETB-CU15	SPB-2	144	MMS4X00-NS	60.28	1
NETB-CU15	SPB-3	144	MMS4X00-NS	59.48	1

Notes

- Drops: NIC/DPU jumpers leave TL (bottom Z3550) and enter the cabinet top through a 128 mm drop; leaf/spine trunks leave TA (plane A) or TB (plane B) at bottom Z3900 and enter at the cabinet top rear. Trunk bend radius $\geq 10 \times OD$ (13 mm trunk $\rightarrow \geq 130$ mm).
- Cabinet height 2294 mm stands on the IT support rails (top Z1128); cabinet top is at absolute elevation Z3422.
- Clear height from cabinet top to the roof main-beam underside (about Z6700) exceeds 3 m; tray hangers bear on roof purlins (hanger and purlin capacity: CONFIRM, structural engineer).
- Far-end uplink channels reach 58.7–61.4 m and use MMS4X00-NS (OS2 single-mode, 100 m stated with two patch panels).

Section A-A at X58145 through CDU-08A and GPU cabinets R043/R044: GPU front tray withdrawal 1,200 mm in the 2,450 mm cold aisle; rear access 1,000 mm to the CDU front. No fan wall on this cut.

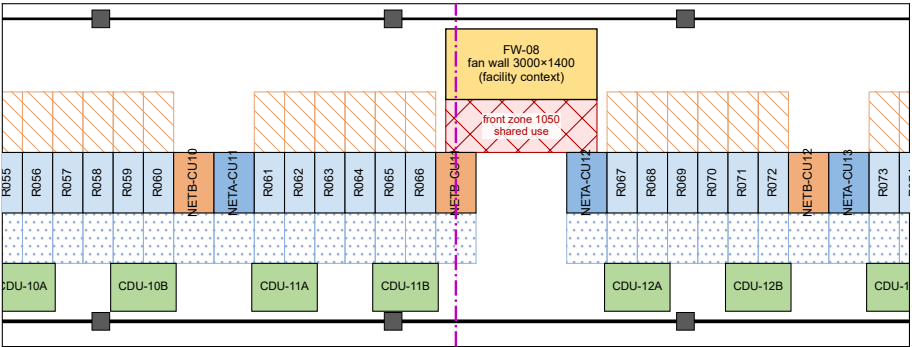
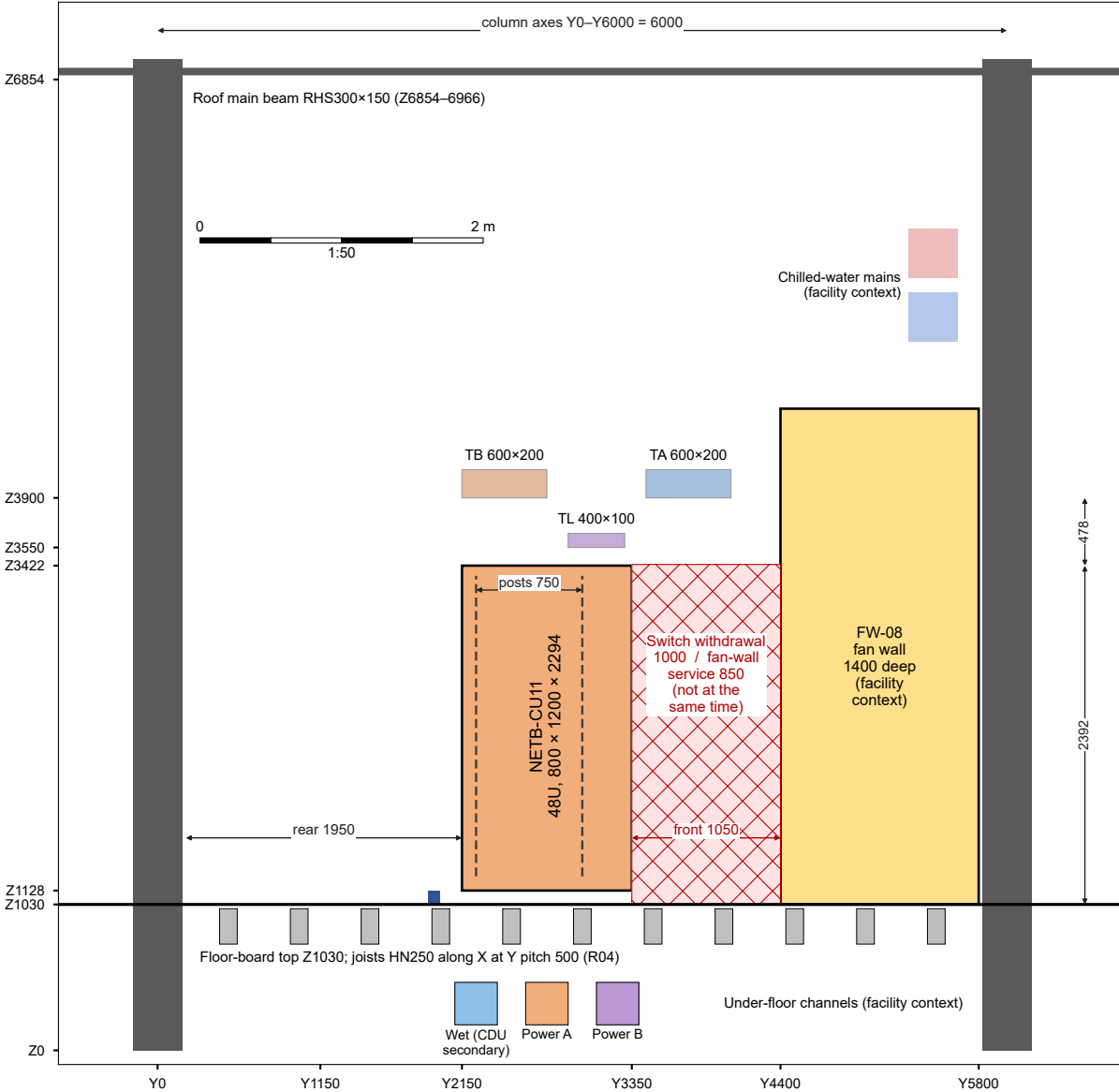


Cut location (1:150): section A-A at X58,145 through CDU-08A and GPU cabinets R043/R044 boundary; no fan wall in the cut.

Notes

1. The section shows only objects that exist on the cut line; equipment at other X positions is not superimposed.
2. Network cabinet: 800 × 1200 × 2294 mm (48U, 46U usable) on IT support rails. Cabinet height is 2294 mm; its top is at absolute elevation Z3422 (rails top Z1128).
3. Rail posts 750 mm apart (NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A, 600–800 mm, FACT); front post 100 mm behind the front door.
4. IT support rails RHS80×40 at Y1950 / Y3550 (dark blue, top Z1128) carry the cabinets; the 30 mm floor board is not an equipment support.
5. Trays TL / TA / TB are separated in Y; TA and TB (bottom Z3900) are 250 mm above the TL top (Z3650). Power and wet channels are below the floor boards.
6. Roof beams, purlins and tray hangers: capacity to be confirmed by the structural engineer (CONFIRM).
7. GPU cabinets: front tray withdrawal 1,200 mm (Y3350–4550); rear access in the 1,000 mm zone between cabinet rear (Y2150) and CDU front (Y1150).

Section B-B at X78845 through network cabinet NETB-CU11 and fan wall FW-08: the network cabinet front zone is 1,050 mm to the fan-wall face.



Cut location (1:150): section B-B at X78,845 through Network cabinet NETB-CU11 and fan wall FW-08.

Front-zone limitation at NETB-CU11 and every network cabinet facing a fan wall

- 1,050 mm clear between cabinet front (Y3350) and fan-wall face (Y4400).
- Switch front withdrawal (1,000 mm) and fan-wall service (850 mm) use this same zone at different times; they are not scheduled together. Fan-wall service is coordinated with network maintenance.

Notes

1. The section shows only objects that exist on the cut line; equipment at other X positions is not superimposed.
2. Network cabinet: 800 × 1200 × 2294 mm (48U, 46U usable) on IT support rails. Cabinet height is 2294 mm; its top is at absolute elevation Z3422 (rails top Z1128).
3. Rail posts 750 mm apart (NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A, 600–800 mm, FACT); front post 100 mm behind the front door.
4. IT support rails RHS80×40 at Y1950 / Y3550 (dark blue, top Z1128) carry the cabinets; the 30 mm floor board is not an equipment support.
5. Trays TL / TA / TB are separated in Y; TA and TB (bottom Z3900) are 250 mm above the TL top (Z3650). Power and wet channels are below the floor boards.
6. Roof beams, purlins and tray hangers: capacity to be confirmed by the structural engineer (CONFIRM).
7. Rear: switch PSUs and fans are replaced from the rear (1,950 mm to the wall zone where no CDU is behind the cabinet).

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Section B-B: network cabinet and fan wall

Scale 1:50

Revision PE-P1

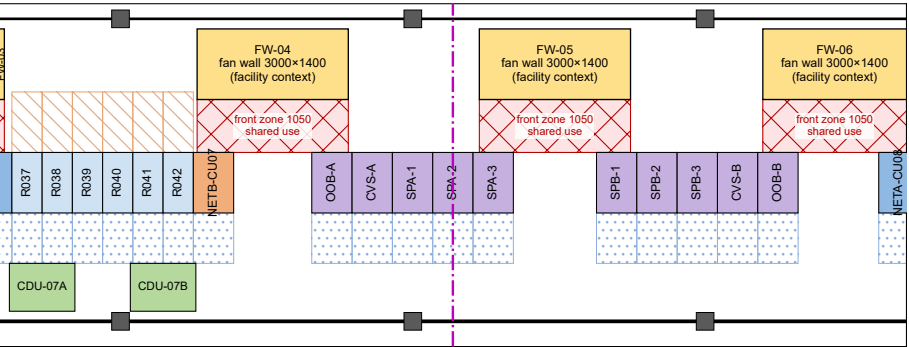
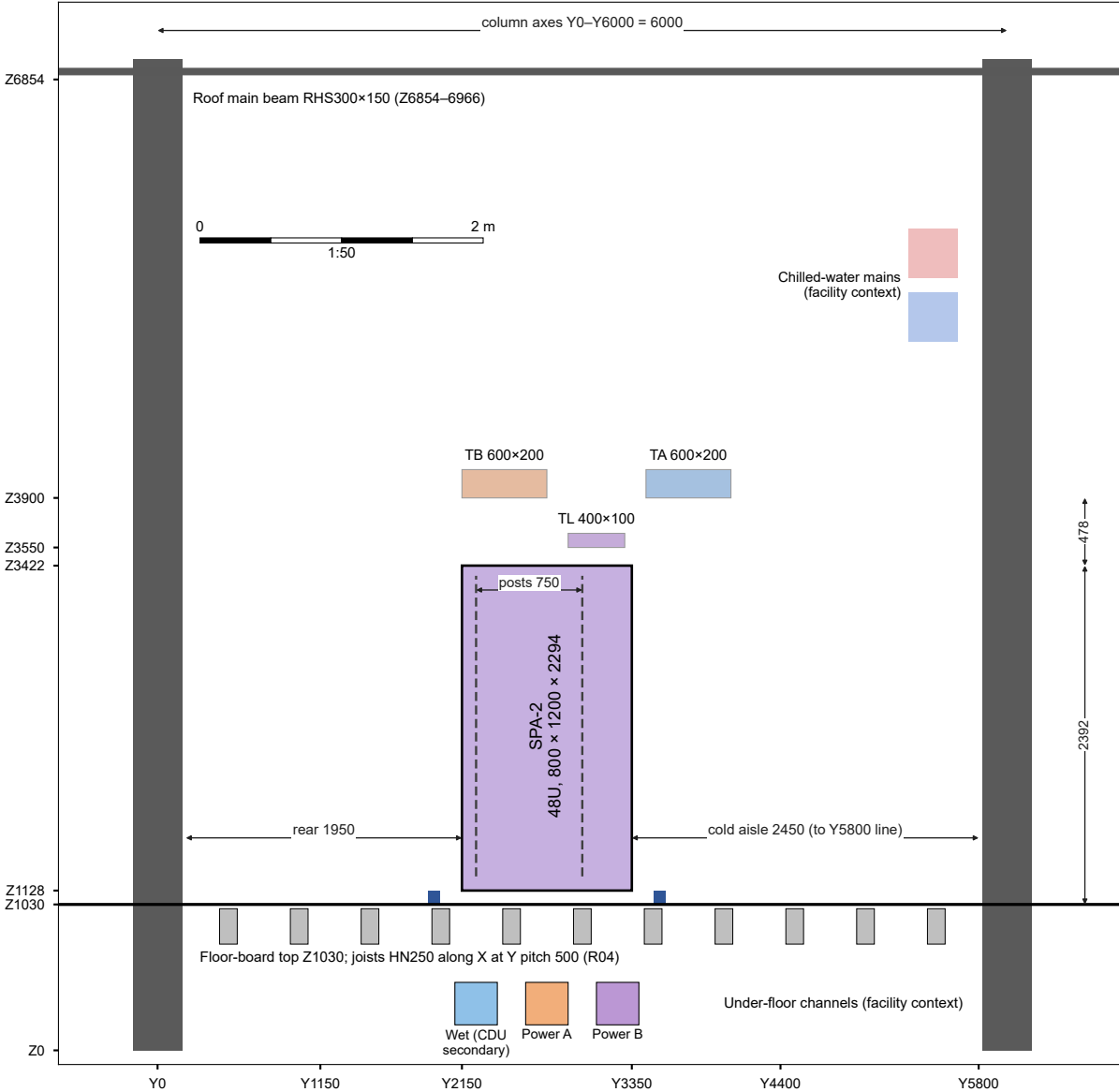
28 September 2026

Units: mm

N-312-EN

Sheet 17 of 30

Section C-C at X48295 through spine cabinet SPA-2: TA and TB trunks enter from the cabinet top rear; the cold aisle in front of SPA-2 is 2,450 mm.



Cut location (1:150): section C-C at X48,295 through Central spine cabinet SPA-2 (TA/TB trunk entry).

Notes

1. The section shows only objects that exist on the cut line; equipment at other X positions is not superimposed.
2. Network cabinet: 800 × 1200 × 2294 mm (48U, 46U usable) on IT support rails. Cabinet height is 2294 mm; its top is at absolute elevation Z3422 (rails top Z1128).
3. Rail posts 750 mm apart (NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A, 600–800 mm, FACT); front post 100 mm behind the front door.
4. IT support rails RHS80×40 at Y1950 / Y3550 (dark blue, top Z1128) carry the cabinets; the 30 mm floor board is not an equipment support.
5. Trays TL / TA / TB are separated in Y; TA and TB (bottom Z3900) are 250 mm above the TL top (Z3650). Power and wet channels are below the floor boards.
6. Roof beams, purlins and tray hangers: capacity to be confirmed by the structural engineer (CONFIRM).
7. Spine cabinets SPA-1..3 / SPB-1..3 receive 120 trunks each from TA (plane A) or TB (plane B); CVS-A/B receive 60 each (N-503-EN).

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Section C-C: spine cabinet and trunk entry

Scale 1:50

Revision PE-P1

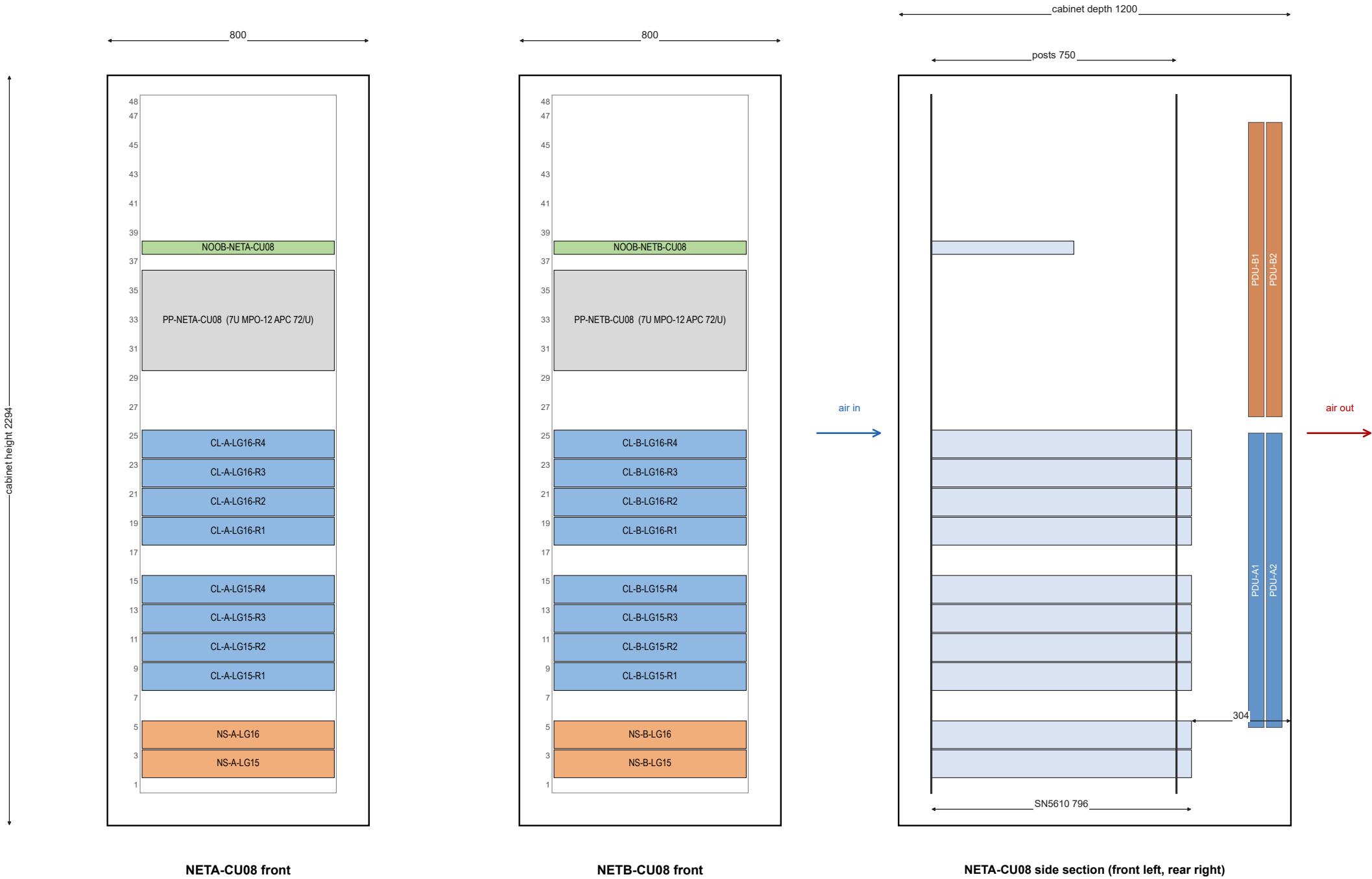
28 September 2026

Units: mm

N-313-EN

Sheet 18 of 30

Network cabinet 800 × 1200 × 2294 mm, 48U (46U usable). SN5610 depth 796 mm incl. fan handles; NVIDIA SN5xxx rail kit 930-9SKIT-00L0-00A fits post spacing 600–800 mm; PSUs and fans are replaced from the rear, switches withdraw to the front.



NETA-CU08 equipment (NETB-CU08 mirrors with plane B)

U	Device	Role	Model	kg
U2–U3	NS-A-LG15	North–south (NS) leaf	SN5610	26.9
U4–U5	NS-A-LG16	North–south (NS) leaf	SN5610	26.9
U8–U9	CL-A-LG15-R1	Compute rail leaf	SN5610	26.9
U10–U11	CL-A-LG15-R2	Compute rail leaf	SN5610	26.9
U12–U13	CL-A-LG15-R3	Compute rail leaf	SN5610	26.9
U14–U15	CL-A-LG15-R4	Compute rail leaf	SN5610	26.9
U18–U19	CL-A-LG16-R1	Compute rail leaf	SN5610	26.9
U20–U21	CL-A-LG16-R2	Compute rail leaf	SN5610	26.9
U22–U23	CL-A-LG16-R3	Compute rail leaf	SN5610	26.9
U24–U25	CL-A-LG16-R4	Compute rail leaf	SN5610	26.9
U30–U36	PP-NETA-CU08	Patch panel	7U MPO-12 APC 72/U	28.0
U38	NOOB-NETA-CU08	Cabinet management switch	SN2201	7.41

Notes

- Posts: front post 100 mm behind the front door; rear post 750 mm behind the front post (adjustable 600–800 mm). SN5610 extends 46 mm behind the rear post; 304 mm remains at the rear for power cords and fibre bend space. The 1,200 mm cabinet depth is not the rail dimension; the rail fits the post spacing.
- PDUs: 0U vertical at the rear, both sides. SN5610 PSU1/PSU2 → PDU-A1/A2 and PSU3/PSU4 → PDU-B1/B2 (at least two PSUs operating, FACT); SN4600C / SN2201 PSU1 → A1, PSU2 → B1.
- Used 28U / free 18U in each unit cabinet (U positions: technical appendix A2). Door perforation and blanking panels follow the front-to-rear (C2P) airflow requirement (product: CONFIRM).
- Front withdrawal of switches needs 1,000 mm; at cabinets facing a fan wall the 1,050 mm front zone is shared in time with fan-wall service.

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Network cabinet elevations: unit cabinets

NETA/NETB-CU08

Scale 1:15

Revision PE-P1

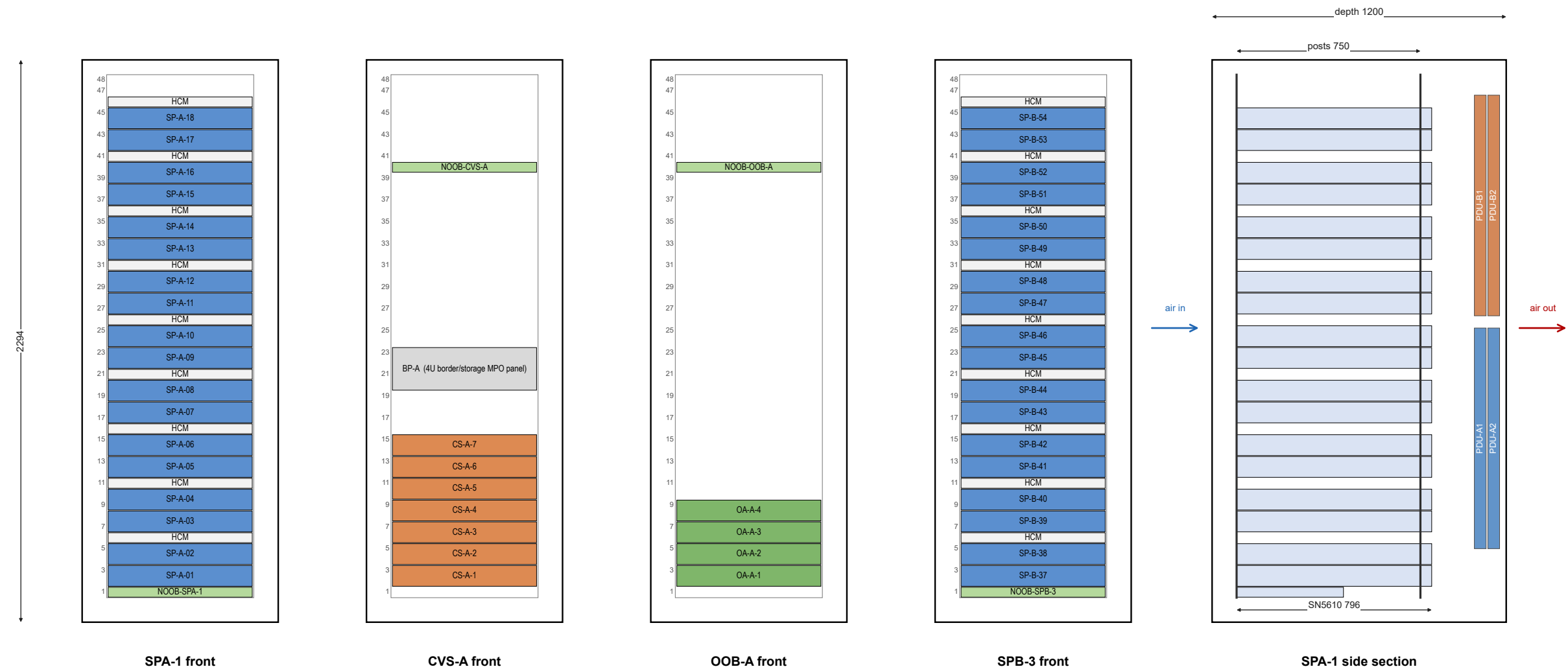
28 September 2026

Units: mm

N-401-EN

Sheet 19 of 30

Central network cabinets: compute spine SPA-1 (plane A) and SPB-3 (plane B), north–south spine CVS-A, OOB aggregation OOB-A. Same cabinet (800 × 1200 × 2294, 48U) and rail geometry as N-401-EN.



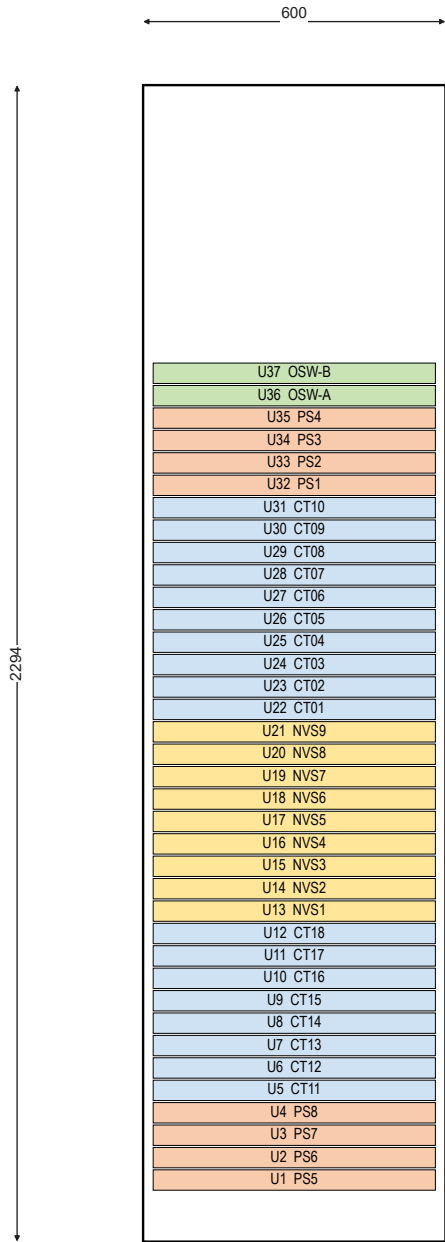
Central cabinet composition

Cabinet	Equipment	U used / free	PDUs
OOB-A	SN2201 × 1; SN4600C × 4	9 / 37	2
CVS-A	4U border/storage MPO panel × 1; SN2201 × 1; SN5610 × 7	19 / 27	4
SPA-1	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
SPA-2	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
SPA-3	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
SPB-1	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
SPB-2	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
SPB-3	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18	46 / 0	4
CVS-B	4U border/storage MPO panel × 1; SN2201 × 1; SN5610 × 7	19 / 27	4
OOB-B	SN2201 × 1; SN4600C × 4	9 / 37	2

Notes

- Spine cabinets hold 18 SN5610 each with a 1U horizontal cable manager after every two switches; the cabinet management switch (NOOB, SN2201) is at U1.
- CVS-A/B hold 7 SN5610 (U2–U15) and a 4U border MPO panel (BP, U20–U23) for the external north–south interface EXT-IF-NS-A/B.
- OOB-A/B hold 4 SN4600C aggregation switches (U2–U9); spare 100G ports reach the site management interface EXT-IF-OOB.
- PDU arrangement: cabinets with SN5610 have four PDUs (A1/A2/B1/B2); OOB cabinets have two (A1/B1).
- Front zone: OOB-A, SPA-3, SPB-1 and OOB-B face fan walls (1,050 mm, shared in time between switch withdrawal and fan-wall service).

GPU cabinet (GB300 NVL72, OEM, 600 × 1200 × 2294 mm): compute-tray NIC OSFP and DPU QSFP112 ports at the front; two in-rack OEM SN2201 management switches. Arrangement per the OEM rack envelope (600 × 1200 mm) for cabinet R043.



R043 front (OEM arrangement)

Network interfaces per GPU cabinet

Interface	Per cabinet	Connects to	Module / cable
CX-8 NIC OSFP 800G (2 × 400G)	72 (18 trays × 4)	Plane-A CL-A and plane-B CL-B leaves (N-102-EN)	MMA4Z00-NS-FLT; OM4 jumper via TL
BlueField-3 QSFP112 400G	36 (18 × 2)	NS-A and NS-B leaves (N-111-EN)	MMA1Z00-NS400; OM4 jumper via TL
OEM SN2201 100G uplink	4 (2 switches × 2)	OOB aggregation OA-A / OA-B (N-121-EN)	MMA1B00-C100D; OM4
Tray / NVLink / power-shelf 1G management	80	In-rack OEM SN2201 (GPU cabinet TDP)	In-cabinet copper (OEM)

Notes

- GPU cabinet, trays, NVLink switch trays and in-rack SN2201 are OEM equipment; their power is inside the GPU cabinet TDP and is not counted in network load.
- GPU-side optical modules (MMA4Z00-NS-FLT 6,480 and MMA1Z00-NS400 3,240 in total): whether they are included in the GPU cabinet TDP is to be confirmed by the OEM (CONFIRM); they are not counted in network load.
- Front: 1,200 mm tray-withdrawal zone in the cold aisle (N-311-EN). Rear: 1,000 mm access zone to the CDU front.
- Jumpers from the cabinet top drop from TL (bottom Z3550) and are dressed to the front-panel NIC and DPU ports.
- Selected media: optical NIC/DPU uplinks to the leaves (N-901-EN). Copper remains for cabinet-local 1G management.

Port map of R043 trays (from the link table): NIC r → leaf CL-x-LG15-Rr at the port shown (same port on rails 1–4); DPU ports to the NS leaves

Tray	NIC1–4 → CL-A-LG15-R1..R4 port	NIC1–4 → CL-B-LG15-R1..R4 port	DPU → NS-A leaf port	DPU → NS-B leaf port
CT01	P1/1	P1/1	NS-A-LG15:P1/1	NS-B-LG15:P1/1
CT02	P1/2	P1/2	NS-A-LG15:P1/2	NS-B-LG15:P1/2
CT03	P2/1	P2/1	NS-A-LG15:P2/1	NS-B-LG15:P2/1
CT04	P2/2	P2/2	NS-A-LG15:P2/2	NS-B-LG15:P2/2
CT05	P3/1	P3/1	NS-A-LG15:P3/1	NS-B-LG15:P3/1
CT06	P3/2	P3/2	NS-A-LG15:P3/2	NS-B-LG15:P3/2
CT07	P4/1	P4/1	NS-A-LG15:P4/1	NS-B-LG15:P4/1
CT08	P4/2	P4/2	NS-A-LG15:P4/2	NS-B-LG15:P4/2
CT09	P5/1	P5/1	NS-A-LG15:P5/1	NS-B-LG15:P5/1
CT10	P5/2	P5/2	NS-A-LG15:P5/2	NS-B-LG15:P5/2
CT11	P6/1	P6/1	NS-A-LG15:P6/1	NS-B-LG15:P6/1
CT12	P6/2	P6/2	NS-A-LG15:P6/2	NS-B-LG15:P6/2
CT13	P7/1	P7/1	NS-A-LG15:P7/1	NS-B-LG15:P7/1
CT14	P7/2	P7/2	NS-A-LG15:P7/2	NS-B-LG15:P7/2
CT15	P8/1	P8/1	NS-A-LG15:P8/1	NS-B-LG15:P8/1
CT16	P8/2	P8/2	NS-A-LG15:P8/2	NS-B-LG15:P8/2
CT17	P9/1	P9/1	NS-A-LG15:P9/1	NS-B-LG15:P9/1
CT18	P9/2	P9/2	NS-A-LG15:P9/2	NS-B-LG15:P9/2

Network cabinets: position, existing source pairing, equipment, U use, PDUs and PSU inlets, input power (planning = typical × 1.25), heat to air, airflow at 15 K, mass and foot load. Switch mass FACT; empty cabinet 180 kg CONFIRM.

Cabinet	Plane	X0–X1	UPS A / B (existing)	Switches	U used / free	PDUs	PSU inlets	Typical kW	Planning kW	Heat to air kW	Airflow m³/h	Mass kg	Foot kN (×1.5)	Front zone
NETA-CU01	A	2,355–3,155	UPS7-01 / UPS7-02	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU01	B	6,755–7,555	UPS7-02 / UPS7-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU02	A	7,555–8,355	UPS7-01 / UPS7-02	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU02	B	11,955–12,755	UPS7-02 / UPS7-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-01
NETA-CU03	A	14,445–15,245	UPS7-02 / UPS7-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-01
NETB-CU03	B	18,845–19,645	UPS7-03 / UPS7-04	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU04	A	19,645–20,445	UPS7-03 / UPS7-04	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU04	B	24,045–24,845	UPS7-04 / UPS7-05	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-02
NETA-CU05	A	26,645–27,445	UPS7-04 / UPS7-05	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-02
NETB-CU05	B	31,045–31,845	UPS7-05 / UPS7-06	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU06	A	31,845–32,645	UPS7-05 / UPS7-06	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU06	B	36,245–37,045	UPS7-06 / UPS7-01	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-03
NETA-CU07	A	38,745–39,545	UPS7-06 / UPS7-01	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-03
NETB-CU07	B	43,145–43,945	UPS7-05 / UPS7-06	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-04
OOB-A	central	45,495–46,295	UPS7-03 / UPS7-04	5	9 / 37	2	10	2.52	3.15	3.18	653	282	0.69 (1.04)	1050 to FW-04
CVS-A	central	46,295–47,095	UPS7-01 / UPS7-02	8	19 / 27	4	30	14.15	17.68	17.74	3,649	476	1.17 (1.75)	2450 aisle
SPA-1	central	47,095–47,895	UPS7-01 / UPS7-02	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	2450 aisle
SPA-2	central	47,895–48,695	UPS7-03 / UPS7-04	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	2450 aisle
SPA-3	central	48,695–49,495	UPS7-05 / UPS7-06	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	1050 to FW-05
SPB-1	central	51,145–51,945	UPS8-01 / UPS8-02	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	1050 to FW-05

Cabinet	Equipment composition
NETA-CU01	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU01	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU02	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU02	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU03	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU03	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU04	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU04	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU05	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU05	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10

Cabinet	Equipment composition
NETA-CU06	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU06	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU07	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU07	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
OOB-A	SN2201 × 1; SN4600C × 4
CVS-A	4U border/storage MPO panel × 1; SN2201 × 1; SN5610 × 7
SPA-1	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18
SPA-2	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18
SPA-3	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18
SPB-1	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Network cabinet schedule (1 of 2)

Scale NTS

Revision PE-P1

28 September 2026

Units: mm

N-411-EN

Sheet 22 of 30

Network cabinets: position, existing source pairing, equipment, U use, PDUs and PSU inlets, input power (planning = typical × 1.25), heat to air, airflow at 15 K, mass and foot load. Switch mass FACT; empty cabinet 180 kg CONFIRM.

Cabinet	Plane	X0–X1	UPS A / B (existing)	Switches	U used / free	PDUs	PSU inlets	Typical kW	Planning kW	Heat to air kW	Airflow m³/h	Mass kg	Foot kN (×1.5)	Front zone
SPB-2	central	51,945–52,745	UPS8-03 / UPS8-04	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	2450 aisle
SPB-3	central	52,745–53,545	UPS8-05 / UPS8-06	19	46 / 0	4	74	36.22	45.27	45.33	9,323	794	1.95 (2.92)	2450 aisle
CVS-B	central	53,545–54,345	UPS8-07 / UPS8-01	8	19 / 27	4	30	14.15	17.68	17.74	3,649	476	1.17 (1.75)	2450 aisle
OOB-B	central	54,345–55,145	UPS8-03 / UPS8-04	5	9 / 37	2	10	2.52	3.15	3.18	653	282	0.69 (1.04)	1050 to FW-06
NETA-CU08	A	56,745–57,545	UPS8-01 / UPS8-02	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-06
NETB-CU08	B	61,145–61,945	UPS8-02 / UPS8-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU09	A	61,945–62,745	UPS8-01 / UPS8-02	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU09	B	66,345–67,145	UPS8-02 / UPS8-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-07
NETA-CU10	A	68,845–69,645	UPS8-02 / UPS8-03	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-07
NETB-CU10	B	73,245–74,045	UPS8-03 / UPS8-04	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU11	A	74,045–74,845	UPS8-03 / UPS8-04	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU11	B	78,445–79,245	UPS8-04 / UPS8-05	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-08
NETA-CU12	A	81,045–81,845	UPS8-04 / UPS8-05	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-08
NETB-CU12	B	85,445–86,245	UPS8-05 / UPS8-06	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU13	A	86,245–87,045	UPS8-05 / UPS8-06	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU13	B	90,645–91,445	UPS8-06 / UPS8-07	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-09
NETA-CU14	A	93,245–94,045	UPS8-06 / UPS8-07	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	1050 to FW-09
NETB-CU14	B	97,645–98,445	UPS8-07 / UPS8-01	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETA-CU15	A	98,445–99,245	UPS8-07 / UPS8-01	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle
NETB-CU15	B	102,845–103,645	UPS8-01 / UPS8-02	11	28 / 18	4	42	18.58	23.23	23.29	4,789	572	1.4 (2.11)	2450 aisle

Cabinet	Equipment composition
SPB-2	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18
SPB-3	1U horizontal manager × 9; SN2201 × 1; SN5610 × 18
CVS-B	4U border/storage MPO panel × 1; SN2201 × 1; SN5610 × 7
OOB-B	SN2201 × 1; SN4600C × 4
NETA-CU08	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU08	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU09	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU09	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU10	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU10	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10

Cabinet	Equipment composition
NETA-CU11	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU11	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU12	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU12	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU13	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU13	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU14	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU14	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETA-CU15	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10
NETB-CU15	7U MPO-12 APC 72/U × 1; SN2201 × 1; SN5610 × 10

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Network cabinet schedule (2 of 2)

Scale NTS

Revision PE-P1

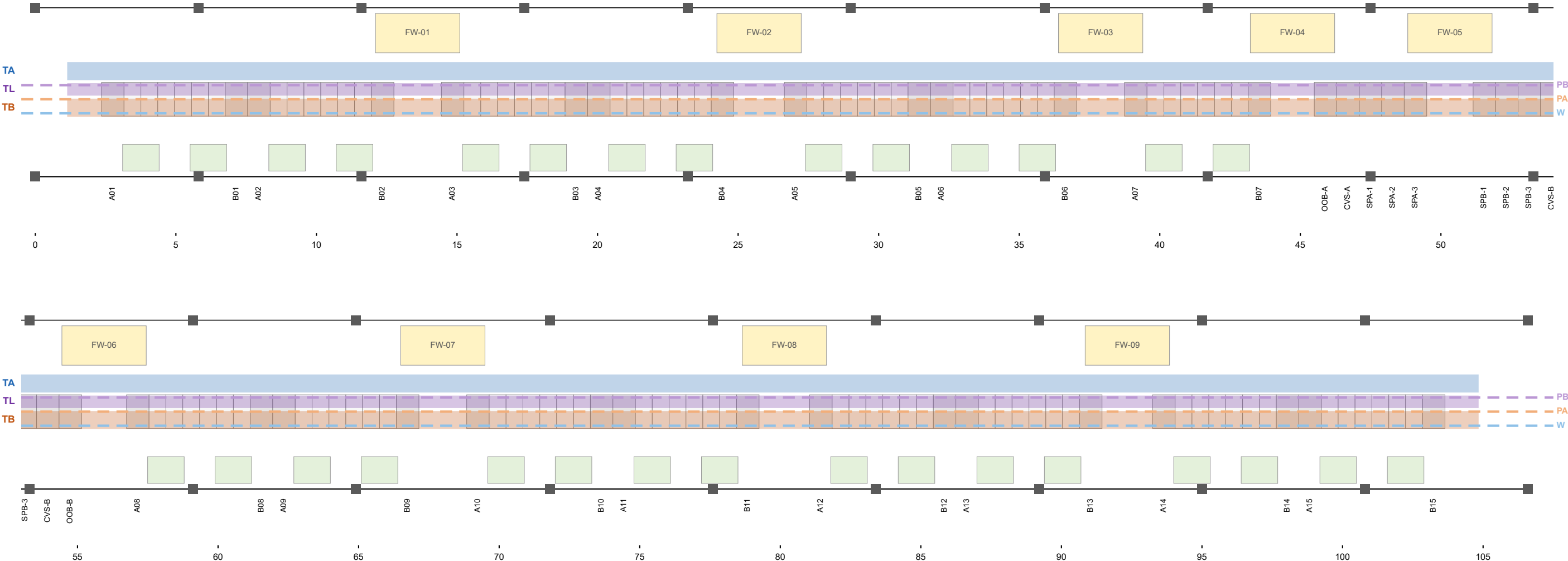
28 September 2026

Units: mm

N-412-EN

Sheet 23 of 30

Fibre trays TL 400×100 (bottom Z3550) and TA / TB 600×200 (bottom Z3900) above the cabinet row, and under-floor wet / power-A / power-B channels (Y2250 / 2750 / 3250). Plane-A trunks use TA only; plane-B trunks use TB only.



Tray labels at left; under-floor channels at right: W = wet (Y2250, facility context), PA = power A (Y2750), PB = power B (Y3250). Network cabinet IDs below the wall line (A01 = NETA-CU01). X in m.

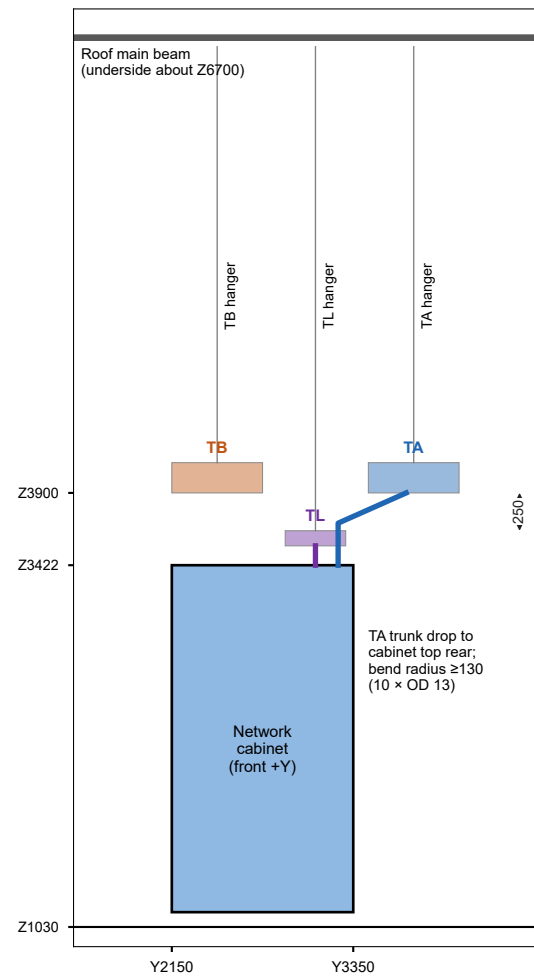
Tray / channel	Size	Y range	Level	Carries
TL	400 × 100	Y2900–3300	bottom Z3550	NIC and DPU jumpers of both planes (common route)
TA	600 × 200	Y3450–4050	bottom Z3900	Plane-A trunks (leaf → SPA, NS → CVS-A) and plane-A OOB 100G uplinks
TB	600 × 200	Y2150–2750	bottom Z3900	Plane-B trunks (leaf → SPB, NS → CVS-B) and plane-B OOB 100G uplinks
Power A / B	under floor	Y2750 / Y3250	below Z1030	PDU A1/A2 and B1/B2 branch circuits (existing supply input)
Wet	under floor	Y2250	below Z1030	CDU secondary piping (facility context)

Notes

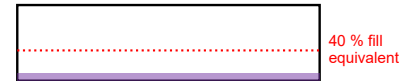
- The three fibre trays are separated in Y and do not cross in plan; TA / TB bottoms (Z3900) are 250 mm above the TL top (Z3650).
- Fibre is above the cabinet tops (Z ≥3550); power and water are below the floor boards (Z <1030): vertical separation.
- Tray hangers bear on the roof purlins; hanger, seismic bracing and purlin capacity: CONFIRM (structural engineer).
- Penetrations of the partition for power branches: position CONFIRM (facility).

Tray sections at the maximum-occupancy and typical positions (cable counts at the actual X position); crossing and drop detail in the Y-Z plane. Filled area is drawn as an equivalent depth (cable cross-section area ÷ tray width).

Crossing and drop (Y-Z, 1:50)



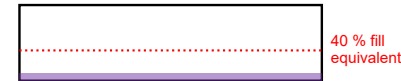
TL 400 × 100 — Maximum occupancy (X2,755)



540 cables; cable area 3,817 mm²; fill 9.5 %; 6.48 kg/m

Bottom Z3550 (2520 above floor boards); Y2900–3300

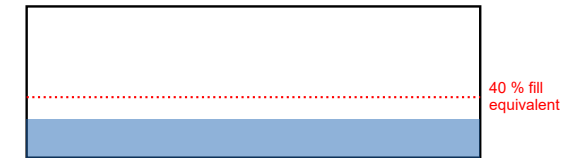
TL 400 x 100 — Typical (median) (X41,045)



540 cables; cable area 3,817 mm²; fill 9.5 %; 6.48 kg/m

Bottom Z3550 (2520 above floor boards); Y2900–3300

TA 600 x 200 — Maximum occupancy (X49,095)



341 cables; cable area 30,559 mm²; fill 25.5 %; 39.48 kg/m

Bottom Z3900 (2870 above floor boards); Y3450–4050

TA 600 x 200 — Typical (median) (X78,845)



168 cables; cable area 15,262 mm²; fill 12.7 %; 19.71 kg/m

Bottom Z3900 (2870 above floor boards); Y3450–4050

TB 600 × 200 — Maximum occupancy (X54,745)



336 cables; cable area 30,524 mm²; fill 25.4 %; 39.42 kg/m

Bottom Z3900 (2870 above floor boards); Y2150–2750

TB 600 × 200 — Typical (median) (X78,845)



168 cables; cable area 15,262 mm²; fill 12.7 %; 19.71 kg/m

Bottom Z3900 (2870 above floor boards); Y2150–2750

Notes

1. Crossing: TA (Y3450–4050), TB (Y2150–2750) and TL (Y2900–3300) are side by side in Y and do not cross in plan. TA / TB bottoms Z3900 are 250 mm above the TL top Z3650; trunk drops pass over TL into the cabinet.
2. Cable units (N-503-EN): MPO-12 jumper OD 3.0 mm (DESIGN); trunk 18 × MPO-12 / 216 fibres, OD 13 mm envelope (DESIGN; product CONFIRM).
3. Fill is the cross-section area ratio with a 40 % limit (DESIGN; engineer of record CONFIRM). Sections drawn at 1:10.
4. Supports at 1.5 m spacing (DESIGN); tray self-weight 15 kg/m (CONFIRM); maximum cable load 39.48 kg/m in TA at X49095.
5. Hangers, seismic bracing and roof purlins: capacity to be confirmed by the structural engineer (CONFIRM).

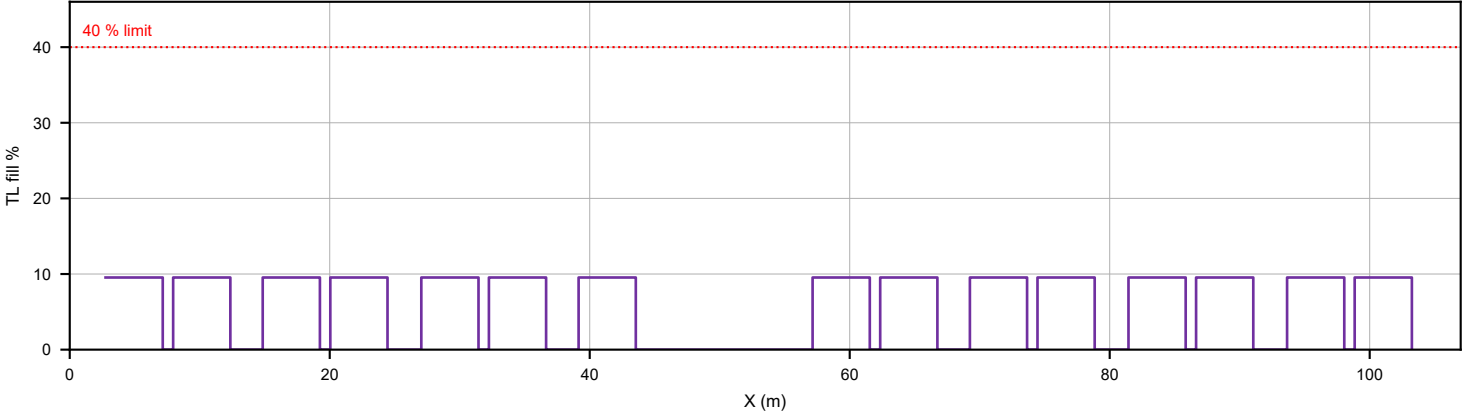
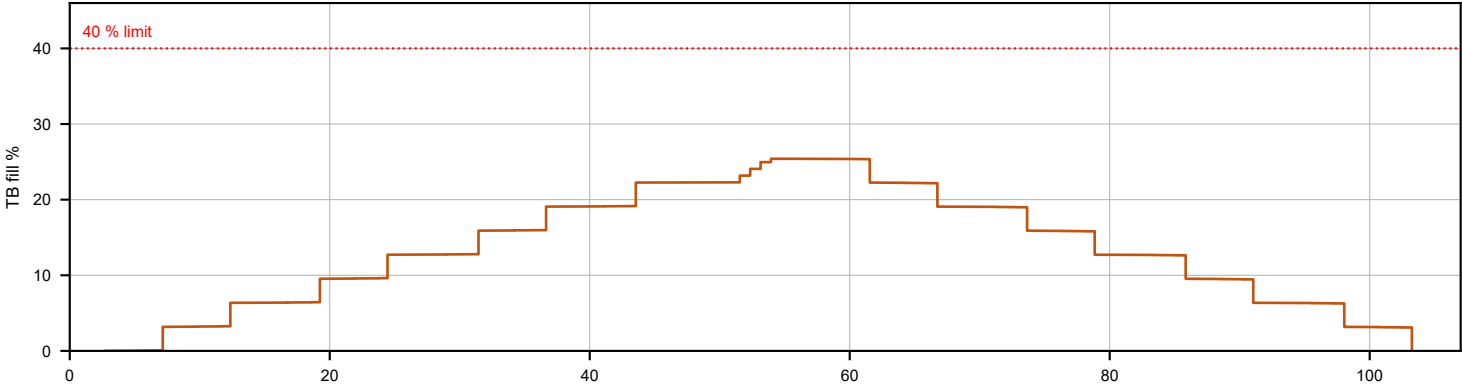
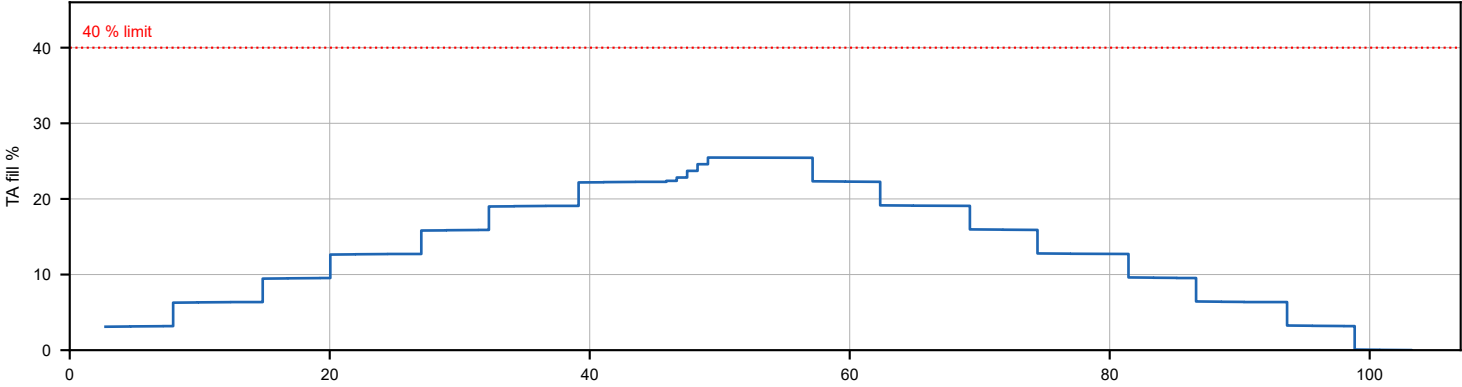
Cable counting units, trunk quantities by destination and tray fill profile along X (values counted from the port-level route table).

Unit	Definition	Status
Jumper	MPO-12 APC jumper, OD 3.0 mm	DESIGN
Trunk	18 × MPO-12 legs / 216 fibres, OD 13.0 mm envelope	DESIGN; product CONFIRM
Static bend radius	10 × OD (trunk 13 mm → 130 mm)	DESIGN
Installation bend radius	20 × OD	DESIGN
Tray fill limit	40 % of cross-section area	DESIGN; EOR CONFIRM
End slack	0.5 m per end	DESIGN

Tray	Destination	MPO-12 legs	Trunks	Fibres
TA	CS-A	840	60	10,080
TA	SPA-1	2,160	120	25,920
TA	SPA-2	2,160	120	25,920
TA	SPA-3	2,160	120	25,920
TB	CS-B	840	60	10,080
TB	SPB-1	2,160	120	25,920
TB	SPB-2	2,160	120	25,920
TB	SPB-3	2,160	120	25,920
Total		14,640	840	175,680

Notes

1. Trunks = Σ roundup(legs per leaf–destination pair + 18).
2. TL carries 540 jumpers (9.5 % fill) within each leaf-group section; its profile drops to zero between sections and across the central zone.
3. Maximum fill: TA 25.5 % at X49095 and TB 25.4 % at X54745 (entry to the central zone).



Failure domains and service boundaries: physical endpoint loss, network reachability and host / job recovery are distinguished. Monthly 99.999 % is a design target to be verified by commissioning and operating measurements.

Level	Event	NIC: host power lost	NIC: both planes unreachable	NIC: one plane unreachable	BF3 tray: host lost	BF3 tray: one port	BF3 tray: no path	OOB racks: host lost	Min. leaf uplink fraction
Cable	One NIC→leaf jumper broken	0	0	1	0	0	0	0	1.0
Cable	One leaf→spine link broken	0	0	0	0	0	0	0	0.9815
Port / module	One leaf port cage (optical module) failed	0	0	2	0	0	0	0	1.0
Port / NIC	One CX-8 NIC (both half-ports share one cage) failed	0	1	0	0	0	0	0	1.0
Device	One compute leaf failed	0	0	54	0	0	0	0	1.0
Device	One compute spine failed	0	0	0	0	0	0	0	0.9815
Device	One north–south leaf failed	0	0	0	0	54	0	0	1.0
Cabinet	One plane-A network cabinet lost (NETA-CU08)	0	0	432	0	108	0	0	1.0
Cabinet	Spine cabinet SPA-1 lost	0	0	0	0	0	0	0	0.6667
Plane	Entire plane A lost (all A leaf/spine/NS leaf/CVS)	0	0	6480	0	1620	0	0	1.0
Tray (whole run)	All links in tray TA lost (whole trunk run damaged)	0	0	6480	0	1620	0	0	0.0
Tray (whole run)	All links in tray TB lost (whole trunk run damaged)	0	0	6480	0	1620	0	0	0.0
Tray (local cut)	TA cut at X30000 (unit CU-05, cabinet R029 X29845–30445); links passing the cut lost	0	0	2160	0	540	0	0	0.0
Tray (local cut)	TB cut at X30000 (unit CU-05, cabinet R029 X29845–30445); links passing the cut lost	0	0	1728	0	432	0	0	0.0
Tray (whole run)	All jumpers in the TL section of unit CU-08 lost	0	432	0	0	0	108	0	1.0
Tray (local cut)	TL cut at X59945 (between R045 and R046)	0	0	432	0	108	0	0	1.0
Generator segment (common)	Generator segment SEG-A lost (after battery depletion; risk case)	1008	0	288	252	1368	0	14	0.6667
Generator segment (common)	Generator segment SEG-B lost (after battery depletion; risk case)	1008	0	720	252	180	0	14	0.6667
Generator segment (common)	Generator segment SEG-C lost (after battery depletion; risk case)	1008	0	720	252	180	0	14	0.6667
Generator segment (common)	Generator segment SEG-D lost (after battery depletion; risk case)	1512	0	216	378	54	0	21	0.6667
Single UPS path	Any one of 13 UPS outputs lost (reference connectivity mapping of network cabinets to UPS paths; maximum shown)	0	0	0	0	0	0	0	1.0

Shaded rows: common causes that leave NIC endpoints unreachable on both planes or DPU trays with no path.

Service boundaries: what a loss means for each service object

Service object	Meaning of loss	Recovery mechanism	Duration status
Physical NIC endpoint (6,480)	NIC / cage failure or host power loss	Replace NIC / restore power (maintenance, hours)	Physical endpoint loss; service accounting follows the defined network measurement scope
Network reachability (per plane)	Endpoint has no path in that plane	Other plane carries traffic; ECMP / BGP convergence	CONFIRM: convergence time by IST
Host service	Host loses network service	Host multi-NIC / multi-plane failover	CONFIRM: host failover by test
Job continuity	Training / inference job interrupted	Checkpoint restart	CONFIRM: workload property

Commissioning (IST) measurements: separate list, not tied to the service-object rows above

Commissioning (IST) measurement	Method	Record
Single link / port failure	Pull NIC and leaf–spine links per plane	Recovery time, loss, convergence
Single leaf / spine power-off	Remove power from an A or B device	Affected endpoints (compare with table), recovery
Single UPS path loss	Each of the 13 paths in turn	No network device reset; PSU transfer; PDU phase current
Network cabinet inlet temperature	Top / middle / bottom of each front door	Maximum inlet ≤35 °C
Job-level test	Representative job under the faults above	Interruption / restart time against monthly allowance

1. Monthly allowance for 99.999 %: 24.192 / 25.056 / 25.920 / 26.784 s for 28 / 29 / 30 / 31-day months. It is a design target, not a measured result.
2. Whole-run loss = every link in that tray; local cut = links passing the given X position. "One plane unreachable" does not mean zero interruption; recovery time is measured at IST. Topological reachability is not job continuity.
3. Common causes that remain in the reference design: one CX-8 NIC uses one OSFP cage for both planes; TL carries the jumpers of both planes (TL section loss in CU-08: 432 NICs unreachable on both planes, 108 DPU trays with no path, hosts powered). Generator-segment loss is a risk case after battery depletion.

Cable, media and module summary for all 39,066 link records of the port-level connection table; both half-ports of a cage use the same module type and medium; label formats.

Class	Module A	Module B	Medium	Tray	Links	Channel m	Panels
NS leaf → CVS	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TA	560	16.17–44.00	1
NS leaf → CVS	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TB	560	16.62–44.35	1
NS leaf → CVS	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TA	280	47.36–61.40	1
NS leaf → CVS	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TB	280	46.12–58.95	1
DPU → NS leaf	MMA1Z00-NS400	MMA4Z00-NS	OM4 MPO-12 APC jumper	TL	3,240	6.09–10.34	0
Compute leaf → spine	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TA	4,320	14.45–43.23	1
Compute leaf → spine	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TB	4,320	14.80–43.68	1
Compute leaf → spine	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TA	2,160	43.95–60.33	1
Compute leaf → spine	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TB	2,160	44.70–61.08	1
Network cabinet 1G management	—	—	Cat6A patch (in-cabinet)	in-cabinet	510	1.50–1.50	0
Network cabinet 1G management	—	—	Cat6A patch (in-cabinet PDU management)	in-cabinet	76	1.50–1.50	0
NIC → compute leaf	MMA4Z00-NS-FLT	MMA4Z00-NS	OM4 MPO-12 APC jumper	TL	12,960	5.20–10.07	0
GPU rack in-rack 1G (OEM)	—	—	Cat6A patch (in-cabinet)	in-cabinet	7,200	2.00–2.00	0
OOB 100G uplink	MMA1B00-C100D	MMA1B00-C100D	OM4 MPO-12 jumper / trunk leg	TA	220	6.51–63.95	0
OOB 100G uplink	MMA1B00-C100D	MMA1B00-C100D	OM4 MPO-12 jumper / trunk leg	TB	220	6.91–58.99	0

Notes

- Label format (identical label at both ends, including the far end): L016201 CL-A-LG01-R1:P33/1 > SP-A-01:P1/1.
- Port = device ID + port (CL-A-LG15-R1:P1/1); cage = device ID + cage (CL-A-LG15-R1:P1); cabinet = NETA-CU08 (top, front and rear doors); PDU = NETA-CU08-PDU-A1; trunk = TRK-TA-CL-A-LG01-R1-SPA-1 (18 legs, each leg carries its L number).
- Optical module quantities are set by the design (by cage).
- Selected media: NIC and DPU uplinks to the leaves are optical. Each CX-8 is an 800G flat-top OSFP host port split into two 400G links to switches in two different cabinets (NETA and NETB). No validated copper part for this host-800G → 2 × switch-400G direction is listed; direct lengths would be 4.27–7.05 m across up to five GPU cabinets. This means no adoptable validated part, not physical impossibility.
- BF3: a listed part exists for the switch-800G → 2 × host-400G direction, but 690 of 1,620 trays exceed 5 m and 660 routes cross the GPU tray-withdrawal zone; DPU uplinks therefore also use fibre (one medium, one maintenance method, one tray).
- Copper remains for cabinet-local 1G management (Cat6A). If the OEM certifies a copper or active-copper part for the host-800G → 2 × 400G direction, units within its certified length and outside the tray-withdrawal zone can be revised together with the module, port and tray-occupancy tables.

Module	Cages	Mixed cages
MMA1B00-C100D	880	0
MMA1Z00-NS400	3,240	0
MMA4Z00-NS	17,860	0
MMA4Z00-NS-FLT	6,480	0
MMS4X00-NS	4,880	0

Module	Description	Location	Cages	Counted in
MMA1B00-C100D	100G SR4 QSFP28, 100 m on OM4	OOB 100G uplinks (both ends)	880	Network device power
MMA1Z00-NS400	400G SR4 QSFP112, 50 m	BlueField-3 (DPU) side	3,240	GPU rack side — inclusion in GPU rack TDP to be confirmed by OEM
MMA4Z00-NS	800G 2×SR4 OSFP, 50 m (reach stated with two patch panels)	Switch side, multimode	17,860	Network device power
MMA4Z00-NS-FLT	800G 2×SR4 OSFP flat-top, 50 m	GPU compute-tray NIC side	6,480	GPU rack side — inclusion in GPU rack TDP to be confirmed by OEM
MMS4X00-NS	800G 2×DR4 OSFP, 100 m single-mode (reach stated with two patch panels)	Switch side, single-mode	4,880	Network device power

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Cable, media and optical module schedule; labelling

Scale NTS

Revision PE-P1

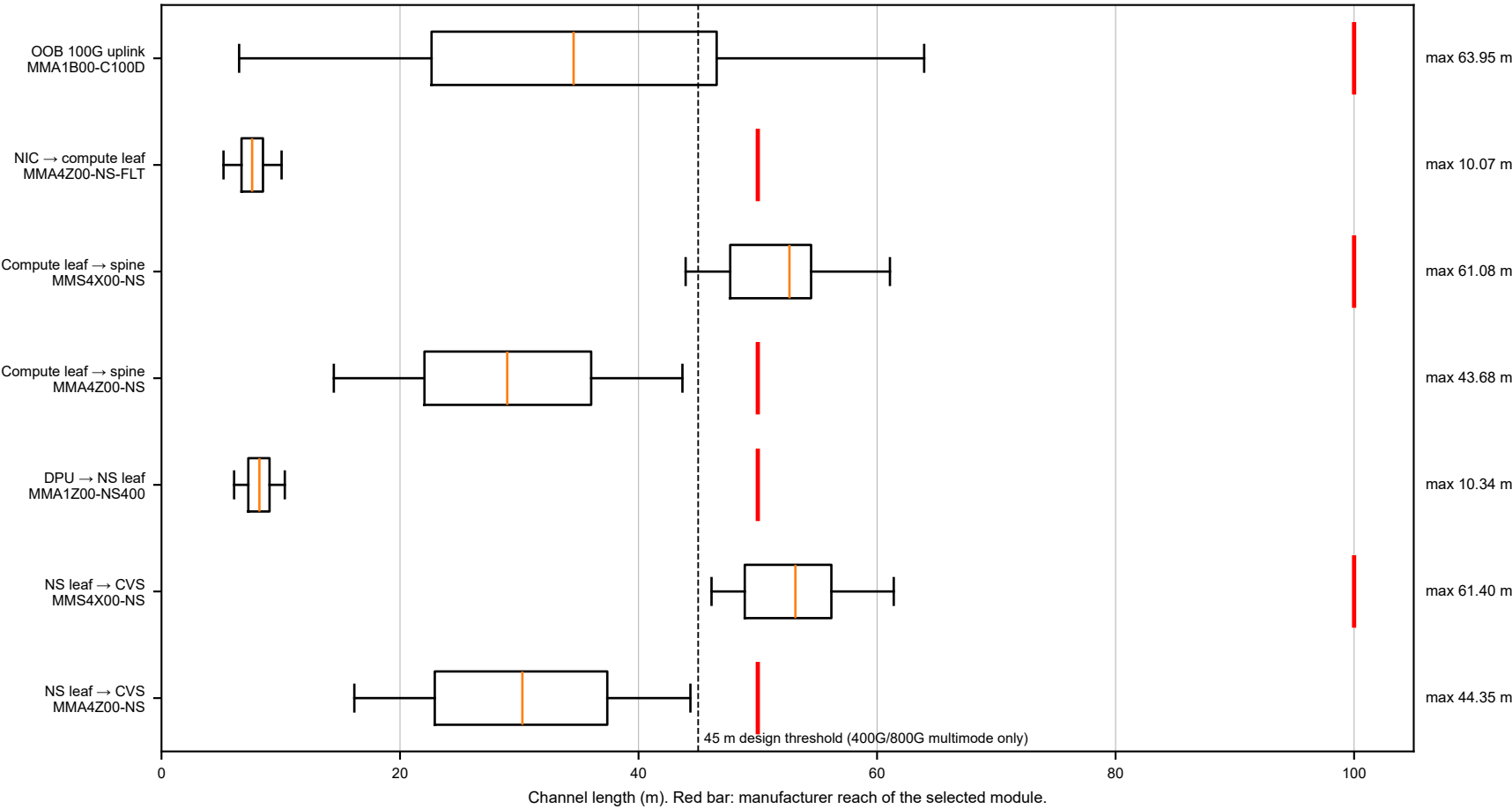
28 September 2026

Units: mm

N-901-EN

Sheet 28 of 30

Channel lengths per link (current reference layout) against the selected module reach. The manufacturer optical loss budget and the actual cable / termination selection remain product conditions (CONFIRM).



Module	Manufacturer statement (FACT)	Design use	Longest m
MMA4Z00-NS / -FLT	2 × 400G SR4, 50 m; stated with two patch panels	45 m design threshold	44.35
MMA1Z00-NS400	400G SR4 QSFP112, 50 m	45 m design threshold	10.34
MMS4X00-NS	2 × 400G DR4 single-mode, 100 m; two patch panels	Cages whose longer half exceeds 45 m	43.95–61.40
MMA1B00-C100D	100G SR4, 100 m on OM4	OOB 100G uplinks, checked against 100 m	63.95

Notes

- Distance check: all 31,280 optical links are within the reach stated for the selected module; actual patch panels per channel ≤1 (manufacturer reach assumes 2).
- The 45 m threshold applies to the selected 400G/800G multimode family (MMA4Z00-NS/-FLT, MMA1Z00-NS400; manufacturer 50 m); the longest such channel is 44.35 m.
- OM4 100 m applies only to the selected 100G SR4 module (MMA1B00-C100D) on the OOB uplinks; it is not a general OM4 reach.
- A cage is single-mode when its longer half-port exceeds 45 m, because both halves of a cage use the same module; 68 single-mode links are themselves shorter than 45 m (shortest 43.95 m).
- Insertion loss: the manufacturer pages state no channel loss budget. Estimates (OM4 3.0 dB/km, OS2 0.5 dB/km, MPO 0.35 dB per mated pair) are reference only; loss acceptance is by field test (CONFIRM).

Longest channels

Link	End A	End B	Module	Channel m	Panels	Reach m	Margin m
L038250	NOOB-NETB-CU15:U1	OA-A-4:P30	MMA1B00-C100D	63.95	0	100	36.05
L038219	R090-OSW-A:U1	OA-A-3:P59	MMA1B00-C100D	63.43	0	100	36.57
L038220	R090-OSW-B:U1	OA-A-3:P60	MMA1B00-C100D	63.38	0	100	36.62
L038217	R089-OSW-A:U1	OA-A-3:P57	MMA1B00-C100D	62.83	0	100	37.17
L038218	R089-OSW-B:U1	OA-A-3:P58	MMA1B00-C100D	62.78	0	100	37.22
L038215	R088-OSW-A:U1	OA-A-3:P55	MMA1B00-C100D	62.23	0	100	37.77
L038216	R088-OSW-B:U1	OA-A-3:P56	MMA1B00-C100D	62.18	0	100	37.82
L038213	R087-OSW-A:U1	OA-A-3:P53	MMA1B00-C100D	61.63	0	100	38.37
L038214	R087-OSW-B:U1	OA-A-3:P54	MMA1B00-C100D	61.58	0	100	38.42
L023465	NS-A-LG29:P33/1	CS-A-1:P57/1	MMS4X00-NS	61.40	1	100	38.60
L023466	NS-A-LG29:P33/2	CS-A-1:P57/2	MMS4X00-NS	61.40	1	100	38.60
L023467	NS-A-LG29:P34/1	CS-A-1:P58/1	MMS4X00-NS	61.40	1	100	38.60

Network equipment interface requirements for the existing facility systems: device quantities, power inputs, heat and airflow, mass, cabinet and rail envelope, pathway loads and external network interfaces. Facility capability is an input and is not verified here.

Device	Qty	Typical W / device	Planning W / device	PSU rating W	Note
SN5610	422	1,656–2,006	2,070–2,508	2,000	Leaf / spine / NS leaf / CVS; 4 PSUs, ≥2 operating (FACT)
SN4600C	8	566–616	708–770	1,100	OOB aggregation; 2 PSUs
SN2201	40	103	129	not stated	Cabinet management; 2 PSUs

Demand item	Value	Condition	Status
Network input power, typical / planning	808.0 / 1,010.0 kW	Planning = typical × 1.25 (no published SN5610 maximum)	DESIGN
Heat to room air (planning, incl. PDU losses)	1,012.4 kW	Front-to-rear (C2P) airflow; all to room air	DESIGN
Airflow required at 15 K rise	208,212 m³/h	Sum of the 40 cabinet values	DESIGN
Rack PDUs	156 (32 A: 132; 63 A: 24)	3-phase 400Y/230 V metered, C13/C19 outlets (product CONFIRM)	DESIGN
PSU inlets	1,784	C14–C15 cords; device range 200–240 V (SN5610 FACT)	DESIGN
Largest cabinet input (planning)	45.27 kW (SPA-1)	Spine cabinets SPA/SPB	DESIGN
Heaviest cabinet	794 kg (SPA-1)	4 feet on IT rails: 1.95 kN each (2.92 kN ×1.5 envelope)	CONFIRM (structure)
Switch inlet air	≤35 °C	SN5610 manufacturer inlet limit; front-to-rear airflow	FACT

Demand per network cabinet type (per cabinet)

Cabinet type	Qty	Typical kW	Planning kW	Heat kW	Airflow m³/h	Mass kg	PDUs	PSU inlets
Unit cabinet NETA/NETB	30	18.58	23.23	23.29	4,789	572	4	42
Compute spine SPA/SPB	6	36.22	45.27	45.33	9,323	794	4	74
North–south spine CVS	2	14.15	17.68	17.74	3,649	476	4	30
OOB aggregation	2	2.52	3.15	3.18	653	282	2	10

Notes

- Network load counts the switches in network cabinets (power per installed optics) and PDU losses only. GPU-rack OEM SN2201 and GPU-side modules are in the GPU cabinet TDP or are to be confirmed by the OEM.
- Each network cabinet PDU pair A1/A2 and B1/B2 is fed from two different existing UPS paths; supply capacity, protection and spare circuits of the existing system are inputs, and no spare capacity is claimed.
- Heat is room-air heat served by the existing diffuse cooling; fan-wall and chilled-water capability is an input and is not verified by this package. No expansion capacity is implied by the spare ports or free U listed.

Interface	Requirement	Status
Cabinet	800 × 1200 × 2294 mm, 48U (46U usable); cabinet top Z3422 on rails top Z1128; empty cabinet 180 kg	DESIGN / CONFIRM
Rails	NVIDIA 930-9SKIT-00L0-00A, posts 600–800 mm (750 used); front post 100 behind door	FACT / DESIGN
Front access	Switch withdrawal 1,000; at fan walls the 1,050 zone is shared in time with fan-wall service 850	DESIGN
Rear access	1,000 zone to CDU front or 1,950 to wall zone; PSU and fan replacement from the rear	DESIGN
GPU cabinet front	Tray withdrawal 1,200 (Y3350–4550); no fan wall faces GPU cabinets	DESIGN
Fibre trays	TL 400×100 Z3550; TA/TB 600×200 Z3900; cable load max 39.48 kg/m + tray 15 kg/m	DESIGN / CONFIRM
Tray supports	Hangers from roof purlins, 1.5 m spacing; seismic bracing and purlin capacity	CONFIRM (structure)
Power branches	Under-floor channels A (Y2750) and B (Y3250); partition penetrations	CONFIRM (facility)
North–south	EXT-IF-NS-A/B: 8 spare 400G per CVS (56 in total) via 4U border MPO panel; upstream outside this design	Configuration option
Management	EXT-IF-OOB: spare 100G ports on OA-A/B-1..4; upstream outside this design	Configuration option
Doors	Current door positions not supplied; check against fan walls and front zones	CONFIRM

Network cabinets with the 1,050 mm shared front zone

Fan wall	Network cabinets in front
FW-01	NETB-CU02, NETA-CU03
FW-02	NETB-CU04, NETA-CU05
FW-03	NETB-CU06, NETA-CU07
FW-04	NETB-CU07, OOB-A
FW-05	SPA-3, SPB-1
FW-06	OOB-B, NETA-CU08
FW-07	NETB-CU09, NETA-CU10
FW-08	NETB-CU11, NETA-CU12
FW-09	NETB-CU13, NETA-CU14

K&K DATA SERVICE INC.

inquiry@kkdatasvc.com

Drawing book, 30 A3 sheets

K&K Data GPU Hall — Network Reference Design

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09

Status key FACT / DESIGN / CONFIRM: see N-001-EN

Network equipment interface requirements

Scale NTS

Revision PE-P1

28 September 2026

Units: mm

N-951-EN

Sheet 30 of 30

K&K Data GPU Hall

Network Reference Design — Technical Appendix

DESIGN DEVELOPMENT — PUBLIC EDITION P1 / 2026-09 · Revision PE-P1 · 28 September 2026

Prepared by K&K DATA SERVICE INC. · inquiry@kkdatasvc.com

Contents

Section	Content	Page
A1	Fabric summary	1
A2	Network cabinet equipment and U positions	2
A3	Cabinet placement	5
A4	Network cabinet demands	7
A5	Port usage per switch	8
A6	Optical modules	11
A7	Link summary and complete link listing of leaf group LG01	12
A8	Trays, trunks and cable units	16
A9	Failure domains	17
A10	Spatial conditions and clearances	18
A11	Network equipment interface requirements	19

Conventions

- This appendix accompanies the design brief and the drawing book (N-000-EN to N-951-EN) and uses the same identifiers.
- Status key: FACT = sourced fact (vendor document or fixed project input); DESIGN = reference design value or derivation; CONFIRM = to be confirmed with the manufacturer or engineer of record.
- Coordinates: local building grid in mm. X along the column axes (0–106,600); Y from the external wall line Y=0 to the partition axis Y=6000; Z from column base (floor-board top Z1030). Power in kW, airflow in m³/h, mass in kg, lengths in m unless stated.
- Every schedule lists all rows of the design table it presents. Long schedules continue across columns and pages with repeated column headings; role, model and code keys are given at the start of each such section.
- The port-level link table holds 39,066 records. Section A7 summarises all of them by class, module, medium and tray and lists every link of leaf group LG01 with its link ID, end ports, modules, medium, tray, channel length and patch panels.
- Spare ports and free U are reported, not reserved as expansion capacity. Facility supply, cooling and structural capacity are design inputs and are not verified in this appendix.
- Monthly 99.999 % availability is a design target (24.192 / 25.056 / 25.920 / 26.784 s for 28 / 29 / 30 / 31-day months), not a measured result.

A1 Fabric summary

Fabric	Endpoints	Endpoint 400G ports per plane/side	Leaves	Leaf down/up (400G ports)	Leaf oversubscription	Spines	Spine ports used	Spare ports per leaf	Spare ports per spine	Leaf→spine capacity per plane/side (Tb/s)
Compute (per plane)	1,620 compute trays × 4 CX-8; each 800G port split 2 × 400G, one per plane	6480	120 × SN5610 (30 leaf groups × 4 rails)	54 / 54	1.0	54 × SN5610	120	20	8	2592.0
North–south (per side)	1,620 × BlueField-3; two 400G ports to the A-side and B-side NS leaves	1620	30 × SN5610 NS leaf	54 / 28	1.929	7 × SN5610 CVS	120	46	8	336.0

- Compute fabric: dual-plane, rail-optimised two-tier leaf–spine; each ConnectX-8 800G port is split into 2 × 400G, one half-port per plane (N-101-EN, N-102-EN). North–south: each BlueField-3 has one 400G port to each side (N-111-EN).
- Leaf → spine capacity per plane = 120 leaves × 54 uplinks × 400G; NS leaf → CVS capacity per side = 30 × 28 × 400G.

A2 Network cabinet equipment and U positions

All 556 devices mounted in the 40 network cabinets, sorted by cabinet ID and within each cabinet from the lowest U position. U1 is at the bottom; U positions refer to the 48U cabinet (N-401-EN, N-402-EN). Depth, mass, airflow and service access are the same for every device of one model and are given in the model key.

Model key

Model	Devices	Depth (mm)	Mass (kg)	Airflow	Service access
SN5610	422	796	26.9	C2P (front intake, rear exhaust)	front removal; PSU/fan rear
4U border/storage MPO panel	2	—	16.0	—	—
SN2201	40	—	7.41	C2P (front intake, rear exhaust)	front removal; PSU/fan rear
7U MPO-12 APC 72/U	30	—	28.0	—	—
SN4600C	8	—	14.64	C2P (front intake, rear exhaust)	front removal; PSU/fan rear
1U horizontal manager	54	—	—	—	—

Role key

Role	Meaning	Devices
CL	Compute rail leaf	240
SP	Compute spine	108
NS	North–south (NS) leaf	60
CS	North–south spine (CVS)	14
OA	OOB aggregation	8
NOOB	Cabinet management switch	40
PP	Patch panel	32
HCM	Horizontal cable manager	54

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
CVS-A	CS-A-1	CS	SN5610	U2–U3	2	A			26.9
CVS-A	CS-A-2	CS	SN5610	U4–U5	2	A			26.9
CVS-A	CS-A-3	CS	SN5610	U6–U7	2	A			26.9
CVS-A	CS-A-4	CS	SN5610	U8–U9	2	A			26.9
CVS-A	CS-A-5	CS	SN5610	U10–U11	2	A			26.9
CVS-A	CS-A-6	CS	SN5610	U12–U13	2	A			26.9
CVS-A	CS-A-7	CS	SN5610	U14–U15	2	A			26.9
CVS-A	BP-A	PP	4U border/storage MPO panel	U20–U23	4				16.0
CVS-A	NOOB-CVS-A	NOOB	SN2201	U40	1				7.41
CVS-B	CS-B-1	CS	SN5610	U2–U3	2	B			26.9
CVS-B	CS-B-2	CS	SN5610	U4–U5	2	B			26.9
CVS-B	CS-B-3	CS	SN5610	U6–U7	2	B			26.9
CVS-B	CS-B-4	CS	SN5610	U8–U9	2	B			26.9
CVS-B	CS-B-5	CS	SN5610	U10–U11	2	B			26.9
CVS-B	CS-B-6	CS	SN5610	U12–U13	2	B			26.9
CVS-B	CS-B-7	CS	SN5610	U14–U15	2	B			26.9
CVS-B	BP-B	PP	4U border/storage MPO panel	U20–U23	4				16.0
CVS-B	NOOB-CVS-B	NOOB	SN2201	U40	1				7.41
NETA-CU01	NS-A-LG01	NS	SN5610	U2–U3	2	A		LG01	26.9
NETA-CU01	NS-A-LG02	NS	SN5610	U4–U5	2	A		LG02	26.9
NETA-CU01	CL-A-LG01-R1	CL	SN5610	U8–U9	2	A	1	LG01	26.9
NETA-CU01	CL-A-LG01-R2	CL	SN5610	U10–U11	2	A	2	LG01	26.9
NETA-CU01	CL-A-LG01-R3	CL	SN5610	U12–U13	2	A	3	LG01	26.9
NETA-CU01	CL-A-LG01-R4	CL	SN5610	U14–U15	2	A	4	LG01	26.9
NETA-CU01	CL-A-LG02-R1	CL	SN5610	U18–U19	2	A	1	LG02	26.9
NETA-CU01	CL-A-LG02-R2	CL	SN5610	U20–U21	2	A	2	LG02	26.9
NETA-CU01	CL-A-LG02-R3	CL	SN5610	U22–U23	2	A	3	LG02	26.9
NETA-CU01	CL-A-LG02-R4	CL	SN5610	U24–U25	2	A	4	LG02	26.9
NETA-CU01	PP-NETA-CU01	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU01	NOOB-NETA-CU01	NOOB	SN2201	U38	1				7.41
NETA-CU02	NS-A-LG03	NS	SN5610	U2–U3	2	A		LG03	26.9
NETA-CU02	NS-A-LG04	NS	SN5610	U4–U5	2	A		LG04	26.9
NETA-CU02	CL-A-LG03-R1	CL	SN5610	U8–U9	2	A	1	LG03	26.9
NETA-CU02	CL-A-LG03-R2	CL	SN5610	U10–U11	2	A	2	LG03	26.9
NETA-CU02	CL-A-LG03-R3	CL	SN5610	U12–U13	2	A	3	LG03	26.9
NETA-CU02	CL-A-LG03-R4	CL	SN5610	U14–U15	2	A	4	LG03	26.9
NETA-CU02	CL-A-LG04-R1	CL	SN5610	U18–U19	2	A	1	LG04	26.9
NETA-CU02	CL-A-LG04-R2	CL	SN5610	U20–U21	2	A	2	LG04	26.9
NETA-CU02	CL-A-LG04-R3	CL	SN5610	U22–U23	2	A	3	LG04	26.9
NETA-CU02	CL-A-LG04-R4	CL	SN5610	U24–U25	2	A	4	LG04	26.9
NETA-CU02	PP-NETA-CU02	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU02	NOOB-NETA-CU02	NOOB	SN2201	U38	1				7.41
NETA-CU03	NS-A-LG05	NS	SN5610	U2–U3	2	A		LG05	26.9
NETA-CU03	NS-A-LG06	NS	SN5610	U4–U5	2	A		LG06	26.9
NETA-CU03	CL-A-LG05-R1	CL	SN5610	U8–U9	2	A	1	LG05	26.9
NETA-CU03	CL-A-LG05-R2	CL	SN5610	U10–U11	2	A	2	LG05	26.9
NETA-CU03	CL-A-LG05-R3	CL	SN5610	U12–U13	2	A	3	LG05	26.9
NETA-CU03	CL-A-LG05-R4	CL	SN5610	U14–U15	2	A	4	LG05	26.9
NETA-CU03	CL-A-LG06-R1	CL	SN5610	U18–U19	2	A	1	LG06	26.9
NETA-CU03	CL-A-LG06-R2	CL	SN5610	U20–U21	2	A	2	LG06	26.9
NETA-CU03	CL-A-LG06-R3	CL	SN5610	U22–U23	2	A	3	LG06	26.9
NETA-CU03	CL-A-LG06-R4	CL	SN5610	U24–U25	2	A	4	LG06	26.9
NETA-CU03	PP-NETA-CU03	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU03	NOOB-NETA-CU03	NOOB	SN2201	U38	1				7.41
NETA-CU04	NS-A-LG07	NS	SN5610	U2–U3	2	A		LG07	26.9
NETA-CU04	NS-A-LG08	NS	SN5610	U4–U5	2	A		LG08	26.9
NETA-CU04	CL-A-LG07-R1	CL	SN5610	U8–U9	2	A	1	LG07	26.9
NETA-CU04	CL-A-LG07-R2	CL	SN5610	U10–U11	2	A	2	LG07	26.9
NETA-CU04	CL-A-LG07-R3	CL	SN5610	U12–U13	2	A	3	LG07	26.9

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
NETA-CU04	CL-A-LG07-R4	CL	SN5610	U14–U15	2	A	4	LG07	26.9
NETA-CU04	CL-A-LG08-R1	CL	SN5610	U18–U19	2	A	1	LG08	26.9
NETA-CU04	CL-A-LG08-R2	CL	SN5610	U20–U21	2	A	2	LG08	26.9
NETA-CU04	CL-A-LG08-R3	CL	SN5610	U22–U23	2	A	3	LG08	26.9
NETA-CU04	CL-A-LG08-R4	CL	SN5610	U24–U25	2	A	4	LG08	26.9
NETA-CU04	PP-NETA-CU04	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU04	NOOB-NETA-CU04	NOOB	SN2201	U38	1				7.41
NETA-CU05	NS-A-LG09	NS	SN5610	U2–U3	2	A		LG09	26.9
NETA-CU05	NS-A-LG10	NS	SN5610	U4–U5	2	A		LG10	26.9
NETA-CU05	CL-A-LG09-R1	CL	SN5610	U8–U9	2	A	1	LG09	26.9
NETA-CU05	CL-A-LG09-R2	CL	SN5610	U10–U11	2	A	2	LG09	26.9
NETA-CU05	CL-A-LG09-R3	CL	SN5610	U12–U13	2	A	3	LG09	26.9
NETA-CU05	CL-A-LG09-R4	CL	SN5610	U14–U15	2	A	4	LG09	26.9
NETA-CU05	CL-A-LG10-R1	CL	SN5610	U18–U19	2	A	1	LG10	26.9
NETA-CU05	CL-A-LG10-R2	CL	SN5610	U20–U21	2	A	2	LG10	26.9
NETA-CU05	CL-A-LG10-R3	CL	SN5610	U22–U23	2	A	3	LG10	26.9
NETA-CU05	CL-A-LG10-R4	CL	SN5610	U24–U25	2	A	4	LG10	26.9
NETA-CU05	PP-NETA-CU05	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU05	NOOB-NETA-CU05	NOOB	SN2201	U38	1				7.41
NETA-CU06	NS-A-LG11	NS	SN5610	U2–U3	2	A		LG11	26.9
NETA-CU06	NS-A-LG12	NS	SN5610	U4–U5	2	A		LG12	26.9
NETA-CU06	CL-A-LG11-R1	CL	SN5610	U8–U9	2	A	1	LG11	26.9
NETA-CU06	CL-A-LG11-R2	CL	SN5610	U10–U11	2	A	2	LG11	26.9
NETA-CU06	CL-A-LG11-R3	CL	SN5610	U12–U13	2	A	3	LG11	26.9
NETA-CU06	CL-A-LG11-R4	CL	SN5610	U14–U15	2	A	4	LG11	26.9
NETA-CU06	CL-A-LG12-R1	CL	SN5610	U18–U19	2	A	1	LG12	26.9
NETA-CU06	CL-A-LG12-R2	CL	SN5610	U20–U21	2	A	2	LG12	26.9
NETA-CU06	CL-A-LG12-R3	CL	SN5610	U22–U23	2	A	3	LG12	26.9
NETA-CU06	CL-A-LG12-R4	CL	SN5610	U24–U25	2	A	4	LG12	26.9
NETA-CU06	PP-NETA-CU06	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU06	NOOB-NETA-CU06	NOOB	SN2201	U38	1				7.41
NETA-CU07	NS-A-LG13	NS	SN5610	U2–U3	2	A		LG13	26.9
NETA-CU07	NS-A-LG14	NS	SN5610	U4–U5	2	A		LG14	26.9
NETA-CU07	CL-A-LG13-R1	CL	SN5610	U8–U9	2	A	1	LG13	26.9
NETA-CU07	CL-A-LG13-R2	CL	SN5610	U10–U11	2	A	2	LG13	26.9
NETA-CU07	CL-A-LG13-R3	CL	SN5610	U12–U13	2	A	3	LG13	26.9
NETA-CU07	CL-A-LG13-R4	CL	SN5610	U14–U15	2	A	4	LG13	26.9
NETA-CU07	CL-A-LG14-R1	CL	SN5610	U18–U19	2	A	1	LG14	26.9
NETA-CU07	CL-A-LG14-R2	CL	SN5610	U20–U21	2	A	2	LG14	26.9
NETA-CU07	CL-A-LG14-R3	CL	SN5610	U22–U23	2	A	3	LG14	26.9
NETA-CU07	CL-A-LG14-R4	CL	SN5610	U24–U25	2	A	4	LG14	26.9
NETA-CU07	PP-NETA-CU07	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU07	NOOB-NETA-CU07	NOOB	SN2201	U38	1				7.41
NETA-CU08	NS-A-LG15	NS	SN5610	U2–U3	2	A		LG15	26.9
NETA-CU08	NS-A-LG16	NS	SN5610	U4–U5	2	A		LG16	26.9
NETA-CU08	CL-A-LG15-R1	CL	SN5610	U8–U9	2	A	1	LG15	26.9
NETA-CU08	CL-A-LG15-R2	CL	SN5610	U10–U11	2	A	2	LG15	26.9
NETA-CU08	CL-A-LG15-R3	CL	SN5610	U12–U13	2	A	3	LG15	26.9
NETA-CU08	CL-A-LG15-R4	CL	SN5610	U14–U15	2	A	4	LG15	26.9
NETA-CU08	CL-A-LG16-R1	CL	SN5610	U18–U19	2	A	1	LG16	26.9
NETA-CU08	CL-A-LG16-R2	CL	SN5610	U20–U21	2	A	2	LG16	26.9
NETA-CU08	CL-A-LG16-R3	CL	SN5610	U22–U23	2	A	3	LG16	26.9
NETA-CU08	CL-A-LG16-R4	CL	SN5610	U24–U25	2	A	4	LG16	26.9
NETA-CU08	PP-NETA-CU08	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU08	NOOB-NETA-CU08	NOOB	SN2201	U38	1				7.41
NETA-CU09	NS-A-LG17	NS	SN5610	U2–U3	2	A		LG17	26.9
NETA-CU09	NS-A-LG18	NS	SN5610	U4–U5	2	A		LG18	26.9
NETA-CU09	CL-A-LG17-R1	CL	SN5610	U8–U9	2	A	1	LG17	26.9
NETA-CU09	CL-A-LG17-R2	CL	SN5610	U10–U11	2	A	2	LG17	26.9

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
NETA-CU09	CL-A-LG17-R3	CL	SN5610	U12-U13		2 A	3	LG17	26.9
NETA-CU09	CL-A-LG17-R4	CL	SN5610	U14-U15		2 A	4	LG17	26.9
NETA-CU09	CL-A-LG18-R1	CL	SN5610	U18-U19		2 A	1	LG18	26.9
NETA-CU09	CL-A-LG18-R2	CL	SN5610	U20-U21		2 A	2	LG18	26.9
NETA-CU09	CL-A-LG18-R3	CL	SN5610	U22-U23		2 A	3	LG18	26.9
NETA-CU09	CL-A-LG18-R4	CL	SN5610	U24-U25		2 A	4	LG18	26.9
NETA-CU09	PP-NETA-CU09	PP	7U MPO-12 APC 72/U	U30-U36	7				28.0
NETA-CU09	NOOB-NETA-CU09	NOOB	SN2201	U38	1				7.41
NETA-CU10	NS-A-LG19	NS	SN5610	U2-U3		2 A		LG19	26.9
NETA-CU10	NS-A-LG20	NS	SN5610	U4-U5		2 A		LG20	26.9
NETA-CU10	CL-A-LG19-R1	CL	SN5610	U8-U9		2 A	1	LG19	26.9
NETA-CU10	CL-A-LG19-R2	CL	SN5610	U10-U11		2 A	2	LG19	26.9
NETA-CU10	CL-A-LG19-R3	CL	SN5610	U12-U13		2 A	3	LG19	26.9
NETA-CU10	CL-A-LG19-R4	CL	SN5610	U14-U15		2 A	4	LG19	26.9
NETA-CU10	CL-A-LG20-R1	CL	SN5610	U18-U19		2 A	1	LG20	26.9
NETA-CU10	CL-A-LG20-R2	CL	SN5610	U20-U21		2 A	2	LG20	26.9
NETA-CU10	CL-A-LG20-R3	CL	SN5610	U22-U23		2 A	3	LG20	26.9
NETA-CU10	CL-A-LG20-R4	CL	SN5610	U24-U25		2 A	4	LG20	26.9
NETA-CU10	PP-NETA-CU10	PP	7U MPO-12 APC 72/U	U30-U36	7				28.0
NETA-CU10	NOOB-NETA-CU10	NOOB	SN2201	U38	1				7.41
NETA-CU11	NS-A-LG21	NS	SN5610	U2-U3		2 A		LG21	26.9
NETA-CU11	NS-A-LG22	NS	SN5610	U4-U5		2 A		LG22	26.9
NETA-CU11	CL-A-LG21-R1	CL	SN5610	U8-U9		2 A	1	LG21	26.9
NETA-CU11	CL-A-LG21-R2	CL	SN5610	U10-U11		2 A	2	LG21	26.9
NETA-CU11	CL-A-LG21-R3	CL	SN5610	U12-U13		2 A	3	LG21	26.9
NETA-CU11	CL-A-LG21-R4	CL	SN5610	U14-U15		2 A	4	LG21	26.9
NETA-CU11	CL-A-LG22-R1	CL	SN5610	U18-U19		2 A	1	LG22	26.9
NETA-CU11	CL-A-LG22-R2	CL	SN5610	U20-U21		2 A	2	LG22	26.9
NETA-CU11	CL-A-LG22-R3	CL	SN5610	U22-U23		2 A	3	LG22	26.9
NETA-CU11	CL-A-LG22-R4	CL	SN5610	U24-U25		2 A	4	LG22	26.9
NETA-CU11	PP-NETA-CU11	PP	7U MPO-12 APC 72/U	U30-U36	7				28.0
NETA-CU11	NOOB-NETA-CU11	NOOB	SN2201	U38	1				7.41
NETA-CU12	NS-A-LG23	NS	SN5610	U2-U3		2 A		LG23	26.9
NETA-CU12	NS-A-LG24	NS	SN5610	U4-U5		2 A		LG24	26.9
NETA-CU12	CL-A-LG23-R1	CL	SN5610	U8-U9		2 A	1	LG23	26.9
NETA-CU12	CL-A-LG23-R2	CL	SN5610	U10-U11		2 A	2	LG23	26.9
NETA-CU12	CL-A-LG23-R3	CL	SN5610	U12-U13		2 A	3	LG23	26.9
NETA-CU12	CL-A-LG23-R4	CL	SN5610	U14-U15		2 A	4	LG23	26.9
NETA-CU12	CL-A-LG24-R1	CL	SN5610	U18-U19		2 A	1	LG24	26.9
NETA-CU12	CL-A-LG24-R2	CL	SN5610	U20-U21		2 A	2	LG24	26.9
NETA-CU12	CL-A-LG24-R3	CL	SN5610	U22-U23		2 A	3	LG24	26.9
NETA-CU12	CL-A-LG24-R4	CL	SN5610	U24-U25		2 A	4	LG24	26.9
NETA-CU12	PP-NETA-CU12	PP	7U MPO-12 APC 72/U	U30-U36	7				28.0
NETA-CU12	NOOB-NETA-CU12	NOOB	SN2201	U38	1				7.41
NETA-CU13	NS-A-LG25	NS	SN5610	U2-U3		2 A		LG25	26.9
NETA-CU13	NS-A-LG26	NS	SN5610	U4-U5		2 A		LG26	26.9
NETA-CU13	CL-A-LG25-R1	CL	SN5610	U8-U9		2 A	1	LG25	26.9
NETA-CU13	CL-A-LG25-R2	CL	SN5610	U10-U11		2 A	2	LG25	26.9
NETA-CU13	CL-A-LG25-R3	CL	SN5610	U12-U13		2 A	3	LG25	26.9
NETA-CU13	CL-A-LG25-R4	CL	SN5610	U14-U15		2 A	4	LG25	26.9
NETA-CU13	CL-A-LG26-R1	CL	SN5610	U18-U19		2 A	1	LG26	26.9
NETA-CU13	CL-A-LG26-R2	CL	SN5610	U20-U21		2 A	2	LG26	26.9
NETA-CU13	CL-A-LG26-R3	CL	SN5610	U22-U23		2 A	3	LG26	26.9
NETA-CU13	CL-A-LG26-R4	CL	SN5610	U24-U25		2 A	4	LG26	26.9
NETA-CU13	PP-NETA-CU13	PP	7U MPO-12 APC 72/U	U30-U36	7				28.0
NETA-CU13	NOOB-NETA-CU13	NOOB	SN2201	U38	1				7.41
NETA-CU14	NS-A-LG27	NS	SN5610	U2-U3		2 A		LG27	26.9
NETA-CU14	NS-A-LG28	NS	SN5610	U4-U5		2 A		LG28	26.9
NETA-CU14	CL-A-LG27-R1	CL	SN5610	U8-U9		2 A	1	LG27	26.9

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
NETA-CU14	CL-A-LG27-R2	CL	SN5610	U10–U11	2	A	2	LG27	26.9
NETA-CU14	CL-A-LG27-R3	CL	SN5610	U12–U13	2	A	3	LG27	26.9
NETA-CU14	CL-A-LG27-R4	CL	SN5610	U14–U15	2	A	4	LG27	26.9
NETA-CU14	CL-A-LG28-R1	CL	SN5610	U18–U19	2	A	1	LG28	26.9
NETA-CU14	CL-A-LG28-R2	CL	SN5610	U20–U21	2	A	2	LG28	26.9
NETA-CU14	CL-A-LG28-R3	CL	SN5610	U22–U23	2	A	3	LG28	26.9
NETA-CU14	CL-A-LG28-R4	CL	SN5610	U24–U25	2	A	4	LG28	26.9
NETA-CU14	PP-NETA-CU14	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU14	NOOB-NETA-CU14	NOOB	SN2201	U38	1				7.41
NETA-CU15	NS-A-LG29	NS	SN5610	U2–U3	2	A		LG29	26.9
NETA-CU15	NS-A-LG30	NS	SN5610	U4–U5	2	A		LG30	26.9
NETA-CU15	CL-A-LG29-R1	CL	SN5610	U8–U9	2	A	1	LG29	26.9
NETA-CU15	CL-A-LG29-R2	CL	SN5610	U10–U11	2	A	2	LG29	26.9
NETA-CU15	CL-A-LG29-R3	CL	SN5610	U12–U13	2	A	3	LG29	26.9
NETA-CU15	CL-A-LG29-R4	CL	SN5610	U14–U15	2	A	4	LG29	26.9
NETA-CU15	CL-A-LG30-R1	CL	SN5610	U18–U19	2	A	1	LG30	26.9
NETA-CU15	CL-A-LG30-R2	CL	SN5610	U20–U21	2	A	2	LG30	26.9
NETA-CU15	CL-A-LG30-R3	CL	SN5610	U22–U23	2	A	3	LG30	26.9
NETA-CU15	CL-A-LG30-R4	CL	SN5610	U24–U25	2	A	4	LG30	26.9
NETA-CU15	PP-NETA-CU15	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETA-CU15	NOOB-NETA-CU15	NOOB	SN2201	U38	1				7.41
NETB-CU01	NS-B-LG01	NS	SN5610	U2–U3	2	B		LG01	26.9
NETB-CU01	NS-B-LG02	NS	SN5610	U4–U5	2	B		LG02	26.9
NETB-CU01	CL-B-LG01-R1	CL	SN5610	U8–U9	2	B	1	LG01	26.9
NETB-CU01	CL-B-LG01-R2	CL	SN5610	U10–U11	2	B	2	LG01	26.9
NETB-CU01	CL-B-LG01-R3	CL	SN5610	U12–U13	2	B	3	LG01	26.9
NETB-CU01	CL-B-LG01-R4	CL	SN5610	U14–U15	2	B	4	LG01	26.9
NETB-CU01	CL-B-LG02-R1	CL	SN5610	U18–U19	2	B	1	LG02	26.9
NETB-CU01	CL-B-LG02-R2	CL	SN5610	U20–U21	2	B	2	LG02	26.9
NETB-CU01	CL-B-LG02-R3	CL	SN5610	U22–U23	2	B	3	LG02	26.9
NETB-CU01	CL-B-LG02-R4	CL	SN5610	U24–U25	2	B	4	LG02	26.9
NETB-CU01	PP-NETB-CU01	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU01	NOOB-NETB-CU01	NOOB	SN2201	U38	1				7.41
NETB-CU02	NS-B-LG03	NS	SN5610	U2–U3	2	B		LG03	26.9
NETB-CU02	NS-B-LG04	NS	SN5610	U4–U5	2	B		LG04	26.9
NETB-CU02	CL-B-LG03-R1	CL	SN5610	U8–U9	2	B	1	LG03	26.9
NETB-CU02	CL-B-LG03-R2	CL	SN5610	U10–U11	2	B	2	LG03	26.9
NETB-CU02	CL-B-LG03-R3	CL	SN5610	U12–U13	2	B	3	LG03	26.9
NETB-CU02	CL-B-LG03-R4	CL	SN5610	U14–U15	2	B	4	LG03	26.9
NETB-CU02	CL-B-LG04-R1	CL	SN5610	U18–U19	2	B	1	LG04	26.9
NETB-CU02	CL-B-LG04-R2	CL	SN5610	U20–U21	2	B	2	LG04	26.9
NETB-CU02	CL-B-LG04-R3	CL	SN5610	U22–U23	2	B	3	LG04	26.9
NETB-CU02	CL-B-LG04-R4	CL	SN5610	U24–U25	2	B	4	LG04	26.9
NETB-CU02	PP-NETB-CU02	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU02	NOOB-NETB-CU02	NOOB	SN2201	U38	1				7.41
NETB-CU03	NS-B-LG05	NS	SN5610	U2–U3	2	B		LG05	26.9
NETB-CU03	NS-B-LG06	NS	SN5610	U4–U5	2	B		LG06	26.9
NETB-CU03	CL-B-LG05-R1	CL	SN5610	U8–U9	2	B	1	LG05	26.9
NETB-CU03	CL-B-LG05-R2	CL	SN5610	U10–U11	2	B	2	LG05	26.9
NETB-CU03	CL-B-LG05-R3	CL	SN5610	U12–U13	2	B	3	LG05	26.9
NETB-CU03	CL-B-LG05-R4	CL	SN5610	U14–U15	2	B	4	LG05	26.9
NETB-CU03	CL-B-LG06-R1	CL	SN5610	U18–U19	2	B	1	LG06	26.9
NETB-CU03	CL-B-LG06-R2	CL	SN5610	U20–U21	2	B	2	LG06	26.9
NETB-CU03	CL-B-LG06-R3	CL	SN5610	U22–U23	2	B	3	LG06	26.9
NETB-CU03	CL-B-LG06-R4	CL	SN5610	U24–U25	2	B	4	LG06	26.9
NETB-CU03	PP-NETB-CU03	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU03	NOOB-NETB-CU03	NOOB	SN2201	U38	1				7.41
NETB-CU04	NS-B-LG07	NS	SN5610	U2–U3	2	B		LG07	26.9
NETB-CU04	NS-B-LG08	NS	SN5610	U4–U5	2	B		LG08	26.9
NETB-CU04	CL-B-LG07-R1	CL	SN5610	U8–U9	2	B	1	LG07	26.9
NETB-CU04	CL-B-LG07-R2	CL	SN5610	U10–U11	2	B	2	LG07	26.9
NETB-CU04	CL-B-LG07-R3	CL	SN5610	U12–U13	2	B	3	LG07	26.9
NETB-CU04	CL-B-LG07-R4	CL	SN5610	U14–U15	2	B	4	LG07	26.9
NETB-CU04	CL-B-LG08-R1	CL	SN5610	U18–U19	2	B	1	LG08	26.9
NETB-CU04	CL-B-LG08-R2	CL	SN5610	U20–U21	2	B	2	LG08	26.9
NETB-CU04	CL-B-LG08-R3	CL	SN5610	U22–U23	2	B	3	LG08	26.9
NETB-CU04	CL-B-LG08-R4	CL	SN5610	U24–U25	2	B	4	LG08	26.9
NETB-CU04	PP-NETB-CU04	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU04	NOOB-NETB-CU04	NOOB	SN2201	U38	1				7.41
NETB-CU05	NS-B-LG09	NS	SN5610	U2–U3	2	B		LG09	26.9
NETB-CU05	NS-B-LG10	NS	SN5610	U4–U5	2	B		LG10	26.9
NETB-CU05	CL-B-LG09-R1	CL	SN5610	U8–U9	2	B	1	LG09	26.9
NETB-CU05	CL-B-LG09-R2	CL	SN5610	U10–U11	2	B	2	LG09	26.9
NETB-CU05	CL-B-LG09-R3	CL	SN5610	U12–U13	2	B	3	LG09	26.9
NETB-CU05	CL-B-LG09-R4	CL	SN5610	U14–U15	2	B	4	LG09	26.9
NETB-CU05	CL-B-LG10-R1	CL	SN5610	U18–U19	2	B	1	LG10	26.9
NETB-CU05	CL-B-LG10-R2	CL	SN5610	U20–U21	2	B	2	LG10	26.9

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
NETB-CU05	CL-B-LG10-R3	CL	SN5610	U22–U23	2	B	3	LG10	26.9
NETB-CU05	CL-B-LG10-R4	CL	SN5610	U24–U25	2	B	4	LG10	26.9
NETB-CU05	PP-NETB-CU05	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU05	NOOB-NETB-CU05	NOOB	SN2201	U38	1				7.41
NETB-CU06	NS-B-LG11	NS	SN5610	U2–U3	2	B		LG11	26.9
NETB-CU06	NS-B-LG12	NS	SN5610	U4–U5	2	B		LG12	26.9
NETB-CU06	CL-B-LG11-R1	CL	SN5610	U8–U9	2	B	1	LG11	26.9
NETB-CU06	CL-B-LG11-R2	CL	SN5610	U10–U11	2	B	2	LG11	26.9
NETB-CU06	CL-B-LG11-R3	CL	SN5610	U12–U13	2	B	3	LG11	26.9
NETB-CU06	CL-B-LG11-R4	CL	SN5610	U14–U15	2	B	4	LG11	26.9
NETB-CU06	CL-B-LG12-R1	CL	SN5610	U18–U19	2	B	1	LG12	26.9
NETB-CU06	CL-B-LG12-R2	CL	SN5610	U20–U21	2	B	2	LG12	26.9
NETB-CU06	CL-B-LG12-R3	CL	SN5610	U22–U23	2	B	3	LG12	26.9
NETB-CU06	CL-B-LG12-R4	CL	SN5610	U24–U25	2	B	4	LG12	26.9
NETB-CU06	PP-NETB-CU06	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU06	NOOB-NETB-CU06	NOOB	SN2201	U38	1				7.41
NETB-CU07	NS-B-LG13	NS	SN5610	U2–U3	2	B		LG13	26.9
NETB-CU07	NS-B-LG14	NS	SN5610	U4–U5	2	B		LG14	26.9
NETB-CU07	CL-B-LG13-R1	CL	SN5610	U8–U9	2	B	1	LG13	26.9
NETB-CU07	CL-B-LG13-R2	CL	SN5610	U10–U11	2	B	2	LG13	26.9
NETB-CU07	CL-B-LG13-R3	CL	SN5610	U12–U13	2	B	3	LG13	26.9
NETB-CU07	CL-B-LG13-R4	CL	SN5610	U14–U15	2	B	4	LG13	26.9
NETB-CU07	CL-B-LG14-R1	CL	SN5610	U18–U19	2	B	1	LG14	26.9
NETB-CU07	CL-B-LG14-R2	CL	SN5610	U20–U21	2	B	2	LG14	26.9
NETB-CU07	CL-B-LG14-R3	CL	SN5610	U22–U23	2	B	3	LG14	26.9
NETB-CU07	CL-B-LG14-R4	CL	SN5610	U24–U25	2	B	4	LG14	26.9
NETB-CU07	PP-NETB-CU07	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU07	NOOB-NETB-CU07	NOOB	SN2201	U38	1				7.41
NETB-CU08	NS-B-LG15	NS	SN5610	U2–U3	2	B		LG15	26.9
NETB-CU08	NS-B-LG16	NS	SN5610	U4–U5	2	B		LG16	26.9
NETB-CU08	CL-B-LG15-R1	CL	SN5610	U8–U9	2	B	1	LG15	26.9
NETB-CU08	CL-B-LG15-R2	CL	SN5610	U10–U11	2	B	2	LG15	26.9
NETB-CU08	CL-B-LG15-R3	CL	SN5610	U12–U13	2	B	3	LG15	26.9
NETB-CU08	CL-B-LG15-R4	CL	SN5610	U14–U15	2	B	4	LG15	26.9
NETB-CU08	CL-B-LG16-R1	CL	SN5610	U18–U19	2	B	1	LG16	26.9
NETB-CU08	CL-B-LG16-R2	CL	SN5610	U20–U21	2	B	2	LG16	26.9
NETB-CU08	CL-B-LG16-R3	CL	SN5610	U22–U23	2	B	3	LG16	26.9
NETB-CU08	CL-B-LG16-R4	CL	SN5610	U24–U25	2	B	4	LG16	26.9
NETB-CU08	PP-NETB-CU08	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU08	NOOB-NETB-CU08	NOOB	SN2201	U38	1				7.41
NETB-CU09	NS-B-LG17	NS	SN5610	U2–U3	2	B		LG17	26.9
NETB-CU09	NS-B-LG18	NS	SN5610	U4–U5	2	B		LG18	26.9
NETB-CU09	CL-B-LG17-R1	CL	SN5610	U8–U9	2	B	1	LG17	26.9
NETB-CU09	CL-B-LG17-R2	CL	SN5610	U10–U11	2	B	2	LG17	26.9
NETB-CU09	CL-B-LG17-R3	CL	SN5610	U12–U13	2	B	3	LG17	26.9
NETB-CU09	CL-B-LG17-R4	CL	SN5610	U14–U15	2	B	4	LG17	26.9
NETB-CU09	CL-B-LG18-R1	CL	SN5610	U18–U19	2	B	1	LG18	26.9
NETB-CU09	CL-B-LG18-R2	CL	SN5610	U20–U21	2	B	2	LG18	26.9
NETB-CU09	CL-B-LG18-R3	CL	SN5610	U22–U23	2	B	3	LG18	26.9
NETB-CU09	CL-B-LG18-R4	CL	SN5610	U24–U25	2	B	4	LG18	26.9
NETB-CU09	PP-NETB-CU09	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU09	NOOB-NETB-CU09	NOOB	SN2201	U38	1				7.41
NETB-CU10	NS-B-LG19	NS	SN5610	U2–U3	2	B		LG19	26.9
NETB-CU10	NS-B-LG20	NS	SN5610	U4–U5	2	B		LG20	26.9
NETB-CU10	CL-B-LG19-R1	CL	SN5610	U8–U9	2	B	1	LG19	26.9
NETB-CU10	CL-B-LG19-R2	CL	SN5610	U10–U11	2	B	2	LG19	26.9
NETB-CU10	CL-B-LG19-R3	CL	SN5610	U12–U13	2	B	3	LG19	26.9
NETB-CU10	CL-B-LG19-R4	CL	SN5610	U14–U15	2	B	4	LG19	26.9
NETB-CU10	CL-B-LG20-R1	CL	SN5610	U18–U19	2	B	1	LG20	26.9
NETB-CU10	CL-B-LG20-R2	CL	SN5610	U20–U21	2	B	2	LG20	26.9
NETB-CU10	CL-B-LG20-R3	CL	SN5610	U22–U23	2	B	3	LG20	26.9
NETB-CU10	CL-B-LG20-R4	CL	SN5610	U24–U25	2	B	4	LG20	26.9
NETB-CU10	PP-NETB-CU10	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU10	NOOB-NETB-CU10	NOOB	SN2201	U38	1				7.41
NETB-CU11	NS-B-LG21	NS	SN5610	U2–U3	2	B		LG21	26.9
NETB-CU11	NS-B-LG22	NS	SN5610	U4–U5	2	B		LG22	26.9
NETB-CU11	CL-B-LG21-R1	CL	SN5610	U8–U9	2	B	1	LG21	26.9
NETB-CU11	CL-B-LG21-R2	CL	SN5610	U10–U11	2	B	2	LG21	26.9
NETB-CU11	CL-B-LG21-R3	CL	SN5610	U12–U13	2	B	3	LG21	26.9
NETB-CU11	CL-B-LG21-R4	CL	SN5610	U14–U15	2	B	4	LG21	26.9
NETB-CU11	CL-B-LG22-R1	CL	SN5610	U18–U19	2	B	1	LG22	26.9
NETB-CU11	CL-B-LG22-R2	CL	SN5610	U20–U21	2	B	2	LG22	26.9
NETB-CU11	CL-B-LG22-R3	CL	SN5610	U22–U23	2	B	3	LG22	26.9
NETB-CU11	CL-B-LG22-R4	CL	SN5610	U24–U25	2	B	4	LG22	26.9
NETB-CU11	PP-NETB-CU11	PP	7U MPO-12 APC 72/U	U30–U36	7				28.0
NETB-CU11	NOOB-NETB-CU11	NOOB	SN2201	U38	1				7.41
NETB-CU12	NS-B-LG23	NS	SN5610	U2–U3	2	B		LG23	26.9

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
SPA-1	SP-A-14	SP	SN5610	U34–U35	2	A			26.9
SPA-1	HCM-SPA-1-7	HCM	1U horizontal manager	U36	1				
SPA-1	SP-A-15	SP	SN5610	U37–U38	2	A			26.9
SPA-1	SP-A-16	SP	SN5610	U39–U40	2	A			26.9
SPA-1	HCM-SPA-1-8	HCM	1U horizontal manager	U41	1				
SPA-1	SP-A-17	SP	SN5610	U42–U43	2	A			26.9
SPA-1	SP-A-18	SP	SN5610	U44–U45	2	A			26.9
SPA-1	HCM-SPA-1-9	HCM	1U horizontal manager	U46	1				
SPA-2	NOOB-SPA-2	NOOB	SN2201	U1	1				7.41
SPA-2	SP-A-19	SP	SN5610	U2–U3	2	A			26.9
SPA-2	SP-A-20	SP	SN5610	U4–U5	2	A			26.9
SPA-2	HCM-SPA-2-1	HCM	1U horizontal manager	U6	1				
SPA-2	SP-A-21	SP	SN5610	U7–U8	2	A			26.9
SPA-2	SP-A-22	SP	SN5610	U9–U10	2	A			26.9
SPA-2	HCM-SPA-2-2	HCM	1U horizontal manager	U11	1				
SPA-2	SP-A-23	SP	SN5610	U12–U13	2	A			26.9
SPA-2	SP-A-24	SP	SN5610	U14–U15	2	A			26.9
SPA-2	HCM-SPA-2-3	HCM	1U horizontal manager	U16	1				
SPA-2	SP-A-25	SP	SN5610	U17–U18	2	A			26.9
SPA-2	SP-A-26	SP	SN5610	U19–U20	2	A			26.9
SPA-2	HCM-SPA-2-4	HCM	1U horizontal manager	U21	1				
SPA-2	SP-A-27	SP	SN5610	U22–U23	2	A			26.9
SPA-2	SP-A-28	SP	SN5610	U24–U25	2	A			26.9
SPA-2	HCM-SPA-2-5	HCM	1U horizontal manager	U26	1				
SPA-2	SP-A-29	SP	SN5610	U27–U28	2	A			26.9
SPA-2	SP-A-30	SP	SN5610	U29–U30	2	A			26.9
SPA-2	HCM-SPA-2-6	HCM	1U horizontal manager	U31	1				
SPA-2	SP-A-31	SP	SN5610	U32–U33	2	A			26.9
SPA-2	SP-A-32	SP	SN5610	U34–U35	2	A			26.9
SPA-2	HCM-SPA-2-7	HCM	1U horizontal manager	U36	1				
SPA-2	SP-A-33	SP	SN5610	U37–U38	2	A			26.9
SPA-2	SP-A-34	SP	SN5610	U39–U40	2	A			26.9
SPA-2	HCM-SPA-2-8	HCM	1U horizontal manager	U41	1				
SPA-2	SP-A-35	SP	SN5610	U42–U43	2	A			26.9
SPA-2	SP-A-36	SP	SN5610	U44–U45	2	A			26.9
SPA-2	HCM-SPA-2-9	HCM	1U horizontal manager	U46	1				
SPA-3	NOOB-SPA-3	NOOB	SN2201	U1	1				7.41
SPA-3	SP-A-37	SP	SN5610	U2–U3	2	A			26.9
SPA-3	SP-A-38	SP	SN5610	U4–U5	2	A			26.9
SPA-3	HCM-SPA-3-1	HCM	1U horizontal manager	U6	1				
SPA-3	SP-A-39	SP	SN5610	U7–U8	2	A			26.9
SPA-3	SP-A-40	SP	SN5610	U9–U10	2	A			26.9
SPA-3	HCM-SPA-3-2	HCM	1U horizontal manager	U11	1				
SPA-3	SP-A-41	SP	SN5610	U12–U13	2	A			26.9
SPA-3	SP-A-42	SP	SN5610	U14–U15	2	A			26.9
SPA-3	HCM-SPA-3-3	HCM	1U horizontal manager	U16	1				
SPA-3	SP-A-43	SP	SN5610	U17–U18	2	A			26.9
SPA-3	SP-A-44	SP	SN5610	U19–U20	2	A			26.9
SPA-3	HCM-SPA-3-4	HCM	1U horizontal manager	U21	1				
SPA-3	SP-A-45	SP	SN5610	U22–U23	2	A			26.9
SPA-3	SP-A-46	SP	SN5610	U24–U25	2	A			26.9
SPA-3	HCM-SPA-3-5	HCM	1U horizontal manager	U26	1				
SPA-3	SP-A-47	SP	SN5610	U27–U28	2	A			26.9
SPA-3	SP-A-48	SP	SN5610	U29–U30	2	A			26.9
SPA-3	HCM-SPA-3-6	HCM	1U horizontal manager	U31	1				
SPA-3	SP-A-49	SP	SN5610	U32–U33	2	A			26.9
SPA-3	SP-A-50	SP	SN5610	U34–U35	2	A			26.9
SPA-3	HCM-SPA-3-7	HCM	1U horizontal manager	U36	1				
SPA-3	SP-A-51	SP	SN5610	U37–U38	2	A			26.9
SPA-3	SP-A-52	SP	SN5610	U39–U40	2	A			26.9
SPA-3	HCM-SPA-3-8	HCM	1U horizontal manager	U41	1				
SPA-3	SP-A-53	SP	SN5610	U42–U43	2	A			26.9
SPA-3	SP-A-54	SP	SN5610	U44–U45	2	A			26.9
SPA-3	HCM-SPA-3-9	HCM	1U horizontal manager	U46	1				
SPB-1	NOOB-SPB-1	NOOB	SN2201	U1	1				7.41
SPB-1	SP-B-01	SP	SN5610	U2–U3	2	B			26.9
SPB-1	SP-B-02	SP	SN5610	U4–U5	2	B			26.9
SPB-1	HCM-SPB-1-1	HCM	1U horizontal manager	U6	1				
SPB-1	SP-B-03	SP	SN5610	U7–U8	2	B			26.9
SPB-1	SP-B-04	SP	SN5610	U9–U10	2	B			26.9
SPB-1	HCM-SPB-1-2	HCM	1U horizontal manager	U11	1				
SPB-1	SP-B-05	SP	SN5610	U12–U13	2	B			26.9
SPB-1	SP-B-06	SP	SN5610	U14–U15	2	B			26.9
SPB-1	HCM-SPB-1-3	HCM	1U horizontal manager	U16	1				
SPB-1	SP-B-07	SP	SN5610	U17–U18	2	B			26.9
SPB-1	SP-B-08	SP	SN5610	U19–U20	2	B			26.9
SPB-1	HCM-SPB-1-4	HCM	1U horizontal manager	U21	1				

Cabinet	Device ID	Role	Model	U	Height U	Plane	Rail	Leaf group	kg
SPB-1	SP-B-09	SP	SN5610	U22–U23	2	B			26.9
SPB-1	SP-B-10	SP	SN5610	U24–U25	2	B			26.9
SPB-1	HCM-SPB-1-5	HCM	1U horizontal manager	U26	1				
SPB-1	SP-B-11	SP	SN5610	U27–U28	2	B			26.9
SPB-1	SP-B-12	SP	SN5610	U29–U30	2	B			26.9
SPB-1	HCM-SPB-1-6	HCM	1U horizontal manager	U31	1				
SPB-1	SP-B-13	SP	SN5610	U32–U33	2	B			26.9
SPB-1	SP-B-14	SP	SN5610	U34–U35	2	B			26.9
SPB-1	HCM-SPB-1-7	HCM	1U horizontal manager	U36	1				
SPB-1	SP-B-15	SP	SN5610	U37–U38	2	B			26.9
SPB-1	SP-B-16	SP	SN5610	U39–U40	2	B			26.9
SPB-1	HCM-SPB-1-8	HCM	1U horizontal manager	U41	1				
SPB-1	SP-B-17	SP	SN5610	U42–U43	2	B			26.9
SPB-1	SP-B-18	SP	SN5610	U44–U45	2	B			26.9
SPB-1	HCM-SPB-1-9	HCM	1U horizontal manager	U46	1				
SPB-2	NOOB-SPB-2	NOOB	SN2201	U1	1				7.41
SPB-2	SP-B-19	SP	SN5610	U2–U3	2	B			26.9
SPB-2	SP-B-20	SP	SN5610	U4–U5	2	B			26.9
SPB-2	HCM-SPB-2-1	HCM	1U horizontal manager	U6	1				
SPB-2	SP-B-21	SP	SN5610	U7–U8	2	B			26.9
SPB-2	SP-B-22	SP	SN5610	U9–U10	2	B			26.9
SPB-2	HCM-SPB-2-2	HCM	1U horizontal manager	U11	1				
SPB-2	SP-B-23	SP	SN5610	U12–U13	2	B			26.9
SPB-2	SP-B-24	SP	SN5610	U14–U15	2	B			26.9
SPB-2	HCM-SPB-2-3	HCM	1U horizontal manager	U16	1				
SPB-2	SP-B-25	SP	SN5610	U17–U18	2	B			26.9
SPB-2	SP-B-26	SP	SN5610	U19–U20	2	B			26.9
SPB-2	HCM-SPB-2-4	HCM	1U horizontal manager	U21	1				
SPB-2	SP-B-27	SP	SN5610	U22–U23	2	B			26.9
SPB-2	SP-B-28	SP	SN5610	U24–U25	2	B			26.9
SPB-2	HCM-SPB-2-5	HCM	1U horizontal manager	U26	1				
SPB-2	SP-B-29	SP	SN5610	U27–U28	2	B			26.9
SPB-2	SP-B-30	SP	SN5610	U29–U30	2	B			26.9
SPB-2	HCM-SPB-2-6	HCM	1U horizontal manager	U31	1				
SPB-2	SP-B-31	SP	SN5610	U32–U33	2	B			26.9
SPB-2	SP-B-32	SP	SN5610	U34–U35	2	B			26.9
SPB-2	HCM-SPB-2-7	HCM	1U horizontal manager	U36	1				
SPB-2	SP-B-33	SP	SN5610	U37–U38	2	B			26.9
SPB-2	SP-B-34	SP	SN5610	U39–U40	2	B			26.9
SPB-2	HCM-SPB-2-8	HCM	1U horizontal manager	U41	1				
SPB-2	SP-B-35	SP	SN5610	U42–U43	2	B			26.9
SPB-2	SP-B-36	SP	SN5610	U44–U45	2	B			26.9
SPB-2	HCM-SPB-2-9	HCM	1U horizontal manager	U46	1				
SPB-3	NOOB-SPB-3	NOOB	SN2201	U1	1				7.41
SPB-3	SP-B-37	SP	SN5610	U2–U3	2	B			26.9
SPB-3	SP-B-38	SP	SN5610	U4–U5	2	B			26.9
SPB-3	HCM-SPB-3-1	HCM	1U horizontal manager	U6	1				
SPB-3	SP-B-39	SP	SN5610	U7–U8	2	B			26.9
SPB-3	SP-B-40	SP	SN5610	U9–U10	2	B			26.9
SPB-3	HCM-SPB-3-2	HCM	1U horizontal manager	U11	1				
SPB-3	SP-B-41	SP	SN5610	U12–U13	2	B			26.9
SPB-3	SP-B-42	SP	SN5610	U14–U15	2	B			26.9
SPB-3	HCM-SPB-3-3	HCM	1U horizontal manager	U16	1				
SPB-3	SP-B-43	SP	SN5610	U17–U18	2	B			26.9
SPB-3	SP-B-44	SP	SN5610	U19–U20	2	B			26.9
SPB-3	HCM-SPB-3-4	HCM	1U horizontal manager	U21	1				
SPB-3	SP-B-45	SP	SN5610	U22–U23	2	B			26.9
SPB-3	SP-B-46	SP	SN5610	U24–U25	2	B			26.9
SPB-3	HCM-SPB-3-5	HCM	1U horizontal manager	U26	1				
SPB-3	SP-B-47	SP	SN5610	U27–U28	2	B			26.9
SPB-3	SP-B-48	SP	SN5610	U29–U30	2	B			26.9
SPB-3	HCM-SPB-3-6	HCM	1U horizontal manager	U31	1				
SPB-3	SP-B-49	SP	SN5610	U32–U33	2	B			26.9
SPB-3	SP-B-50	SP	SN5610	U34–U35	2	B			26.9
SPB-3	HCM-SPB-3-7	HCM	1U horizontal manager	U36	1				
SPB-3	SP-B-51	SP	SN5610	U37–U38	2	B			26.9
SPB-3	SP-B-52	SP	SN5610	U39–U40	2	B			26.9
SPB-3	HCM-SPB-3-8	HCM	1U horizontal manager	U41	1				
SPB-3	SP-B-53	SP	SN5610	U42–U43	2	B			26.9
SPB-3	SP-B-54	SP	SN5610	U44–U45	2	B			26.9
SPB-3	HCM-SPB-3-9	HCM	1U horizontal manager	U46	1				

A3 Cabinet placement (current reference layout)

All 130 cabinets in row order: 90 GPU cabinets (OEM rack envelope 600 × 1200 mm) and 40 network cabinets (800 × 1200 mm). Z bottom is the IT support rail top (Z1128); Z top is the absolute cabinet-top elevation (Z3422); cabinet height 2,294 mm. Previous X and ΔX refer to the previous reference row layout; the building geometry is unchanged (N-204-EN). GPU cabinets served lists the cabinet range of each network unit cabinet.

Cabinet	Type	Plane	X0	X1	Y0	Y1	Z bottom	Z top	Width	Depth	Previous X0	Previous X1	ΔX	Unit	Leaf group(s)	GPU cabinets served	Front zone (mm)
NETA-CU01	Network unit cabinet	A	2355	3155	2150	3350	1128	3422	800	1200	6035	6835	-3680	CU-01	LG01, LG02	R001–R006	2,450 cold aisle
R001	GPU (OEM)		3155	3755	2150	3350	1128	3422	600	1200	6835	7435	-3680	CU-01	LG01		2,450 cold aisle; GPU tray withdrawal zone 1,200
R002	GPU (OEM)		3755	4355	2150	3350	1128	3422	600	1200	7435	8035	-3680	CU-01	LG01		2,450 cold aisle; GPU tray withdrawal zone 1,200
R003	GPU (OEM)		4355	4955	2150	3350	1128	3422	600	1200	8035	8635	-3680	CU-01	LG01		2,450 cold aisle; GPU tray withdrawal zone 1,200
R004	GPU (OEM)		4955	5555	2150	3350	1128	3422	600	1200	8635	9235	-3680	CU-01	LG02		2,450 cold aisle; GPU tray withdrawal zone 1,200
R005	GPU (OEM)		5555	6155	2150	3350	1128	3422	600	1200	9235	9835	-3680	CU-01	LG02		2,450 cold aisle; GPU tray withdrawal zone 1,200
R006	GPU (OEM)		6155	6755	2150	3350	1128	3422	600	1200	9835	10435	-3680	CU-01	LG02		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU01	Network unit cabinet	B	6755	7555	2150	3350	1128	3422	800	1200	10435	11235	-3680	CU-01	LG01, LG02	R001–R006	2,450 cold aisle
NETA-CU02	Network unit cabinet	A	7555	8355	2150	3350	1128	3422	800	1200	11235	12035	-3680	CU-02	LG03, LG04	R007–R012	2,450 cold aisle
R007	GPU (OEM)		8355	8955	2150	3350	1128	3422	600	1200	12035	12635	-3680	CU-02	LG03		2,450 cold aisle; GPU tray withdrawal zone 1,200
R008	GPU (OEM)		8955	9555	2150	3350	1128	3422	600	1200	12635	13235	-3680	CU-02	LG03		2,450 cold aisle; GPU tray withdrawal zone 1,200
R009	GPU (OEM)		9555	10155	2150	3350	1128	3422	600	1200	13235	13835	-3680	CU-02	LG03		2,450 cold aisle; GPU tray withdrawal zone 1,200
R010	GPU (OEM)		10155	10755	2150	3350	1128	3422	600	1200	13835	14435	-3680	CU-02	LG04		2,450 cold aisle; GPU tray withdrawal zone 1,200
R011	GPU (OEM)		10755	11355	2150	3350	1128	3422	600	1200	14435	15035	-3680	CU-02	LG04		2,450 cold aisle; GPU tray withdrawal zone 1,200
R012	GPU (OEM)		11355	11955	2150	3350	1128	3422	600	1200	15035	15635	-3680	CU-02	LG04		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU02	Network unit cabinet	B	11955	12755	2150	3350	1128	3422	800	1200	15635	16435	-3680	CU-02	LG03, LG04	R007–R012	1,050 to fan wall FW-01 (shared: switch withdrawal 1,000 / fan-wall service 850)
NETA-CU03	Network unit cabinet	A	14445	15245	2150	3350	1128	3422	800	1200	17835	18635	-3390	CU-03	LG05, LG06	R013–R018	1,050 to fan wall FW-01 (shared: switch withdrawal 1,000 / fan-wall service 850)
R013	GPU (OEM)		15245	15845	2150	3350	1128	3422	600	1200	18635	19235	-3390	CU-03	LG05		2,450 cold aisle; GPU tray withdrawal zone 1,200
R014	GPU (OEM)		15845	16445	2150	3350	1128	3422	600	1200	19235	19835	-3390	CU-03	LG05		2,450 cold aisle; GPU tray withdrawal zone 1,200
R015	GPU (OEM)		16445	17045	2150	3350	1128	3422	600	1200	19835	20435	-3390	CU-03	LG05		2,450 cold aisle; GPU tray withdrawal zone 1,200
R016	GPU (OEM)		17045	17645	2150	3350	1128	3422	600	1200	20435	21035	-3390	CU-03	LG06		2,450 cold aisle; GPU tray withdrawal zone 1,200
R017	GPU (OEM)		17645	18245	2150	3350	1128	3422	600	1200	21035	21635	-3390	CU-03	LG06		2,450 cold aisle; GPU tray withdrawal zone 1,200
R018	GPU (OEM)		18245	18845	2150	3350	1128	3422	600	1200	21635	22235	-3390	CU-03	LG06		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU03	Network unit cabinet	B	18845	19645	2150	3350	1128	3422	800	1200	22235	23035	-3390	CU-03	LG05, LG06	R013–R018	2,450 cold aisle
NETA-CU04	Network unit cabinet	A	19645	20445	2150	3350	1128	3422	800	1200	23035	23835	-3390	CU-04	LG07, LG08	R019–R024	2,450 cold aisle
R019	GPU (OEM)		20445	21045	2150	3350	1128	3422	600	1200	23835	24435	-3390	CU-04	LG07		2,450 cold aisle; GPU tray withdrawal zone 1,200
R020	GPU (OEM)		21045	21645	2150	3350	1128	3422	600	1200	24435	25035	-3390	CU-04	LG07		2,450 cold aisle; GPU tray withdrawal zone 1,200
R021	GPU (OEM)		21645	22245	2150	3350	1128	3422	600	1200	25035	25635	-3390	CU-04	LG07		2,450 cold aisle; GPU tray withdrawal zone 1,200
R022	GPU (OEM)		22245	22845	2150	3350	1128	3422	600	1200	25635	26235	-3390	CU-04	LG08		2,450 cold aisle; GPU tray withdrawal zone 1,200
R023	GPU (OEM)		22845	23445	2150	3350	1128	3422	600	1200	26235	26835	-3390	CU-04	LG08		2,450 cold aisle; GPU tray withdrawal zone 1,200
R024	GPU (OEM)		23445	24045	2150	3350	1128	3422	600	1200	26835	27435	-3390	CU-04	LG08		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU04	Network unit cabinet	B	24045	24845	2150	3350	1128	3422	800	1200	27435	28235	-3390	CU-04	LG07, LG08	R019–R024	1,050 to fan wall FW-02 (shared: switch withdrawal 1,000 / fan-wall service 850)
NETA-CU05	Network unit cabinet	A	26645	27445	2150	3350	1128	3422	800	1200	29635	30435	-2990	CU-05	LG09, LG10	R025–R030	1,050 to fan wall FW-02 (shared: switch withdrawal 1,000 / fan-wall service 850)
R025	GPU (OEM)		27445	28045	2150	3350	1128	3422	600	1200	30435	31035	-2990	CU-05	LG09		2,450 cold aisle; GPU tray withdrawal zone 1,200
R026	GPU (OEM)		28045	28645	2150	3350	1128	3422	600	1200	31035	31635	-2990	CU-05	LG09		2,450 cold aisle; GPU tray withdrawal zone 1,200
R027	GPU (OEM)		28645	29245	2150	3350	1128	3422	600	1200	31635	32235	-2990	CU-05	LG09		2,450 cold aisle; GPU tray withdrawal zone 1,200
R028	GPU (OEM)		29245	29845	2150	3350	1128	3422	600	1200	32235	32835	-2990	CU-05	LG10		2,450 cold aisle; GPU tray withdrawal zone 1,200
R029	GPU (OEM)		29845	30445	2150	3350	1128	3422	600	1200	32835	33435	-2990	CU-05	LG10		2,450 cold aisle; GPU tray withdrawal zone 1,200
R030	GPU (OEM)		30445	31045	2150	3350	1128	3422	600	1200	33435	34035	-2990	CU-05	LG10		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU05	Network unit cabinet	B	31045	31845	2150	3350	1128	3422	800	1200	34035	34835	-2990	CU-05	LG09, LG10	R025–R030	2,450 cold aisle
NETA-CU06	Network unit cabinet	A	31845	32645	2150	3350	1128	3422	800	1200	34835	35635	-2990	CU-06	LG11, LG12	R031–R036	2,450 cold aisle
R031	GPU (OEM)		32645	33245	2150	3350	1128	3422	600	1200	35635	36235	-2990	CU-06	LG11		2,450 cold aisle; GPU tray withdrawal zone 1,200
R032	GPU (OEM)		33245	33845	2150	3350	1128	3422	600	1200	36235	36835	-2990	CU-06	LG11		2,450 cold aisle; GPU tray withdrawal zone 1,200
R033	GPU (OEM)		33845	34445	2150	3350	1128	3422	600	1200	36835	37435	-2990	CU-06	LG11		2,450 cold aisle; GPU tray withdrawal zone 1,200
R034	GPU (OEM)		34445	35045	2150	3350	1128	3422	600	1200	37435	38035	-2990	CU-06	LG12		2,450 cold aisle; GPU tray withdrawal zone 1,200
R035	GPU (OEM)		35045	35645	2150	3350	1128	3422	600	1200	38035	38635	-2990	CU-06	LG12		2,450 cold aisle; GPU tray withdrawal zone 1,200
R036	GPU (OEM)		35645	36245	2150	3350	1128	3422	600	1200	38635	39235	-2990	CU-06	LG12		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU06	Network unit cabinet	B	36245	37045	2150	3350	1128	3422	800	1200	39235	40035	-2990	CU-06	LG11, LG12	R031–R036	1,050 to fan wall FW-03 (shared: switch withdrawal 1,000 / fan-wall service 850)
NETA-CU07	Network unit cabinet	A	38745	39545	2150	3350	1128	3422	800	1200	41435	42235	-2690	CU-07	LG13, LG14	R037–R042	1,050 to fan wall FW-03 (shared: switch withdrawal 1,000 / fan-wall service 850)
R037	GPU (OEM)		39545	40145	2150	3350	1128	3422	600	1200	42235	42835	-2690	CU-07	LG13		2,450 cold aisle; GPU tray withdrawal zone 1,200
R038	GPU (OEM)		40145	40745	2150	3350	1128	3422	600	1200	42835	43435	-2690	CU-07	LG13		2,450 cold aisle; GPU tray withdrawal zone 1,200
R039	GPU (OEM)		40745	41345	2150	3350	1128	3422	600	1200	43435	44035	-2690	CU-07	LG13		2,450 cold aisle; GPU tray withdrawal zone 1,200
R040	GPU (OEM)		41345	41945	2150	3350	1128	3422	600	1200	44035	44635	-2690	CU-07	LG14		2,450 cold aisle; GPU tray withdrawal zone 1,200
R041	GPU (OEM)		41945	42545	2150	3350	1128	3422	600	1200	44635	45235	-2690	CU-07	LG14		2,450 cold aisle; GPU tray withdrawal zone 1,200
R042	GPU (OEM)		42545	43145	2150	3350	1128	3422	600	1200	45235	45835	-2690	CU-07	LG14		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU07	Network unit cabinet	B	43145	43945	2150	3350	1128	3422	800	1200	45835	46635	-2690	CU-07	LG13, LG14	R037–R042	1,050 to fan wall FW-04 (shared: switch withdrawal 1,000 / fan-wall service 850)
OOB-A	Central network cabinet		45495	46295	2150	3350	1128	3422	800	1200	48185	48985	-2690				1,050 to fan wall FW-04 (shared: switch withdrawal 1,000 / fan-wall service 850)
CVS-A	Central network cabinet		46295	47095	2150	3350	1128	3422	800	1200	48985	49785	-2690				2,450 cold aisle
SPA-1	Central network cabinet		47095	47895	2150	3350	1128	3422	800	1200	49785	50585	-2690				2,450 cold aisle
SPA-2	Central network cabinet		47895	48695	2150	3350	1128	3422	800	1200	50585	51385	-2690				2,450 cold aisle
SPA-3	Central network cabinet		48695	49495	2150	3350	1128	3422	800	1200	51385	52185	-2690				1,050 to fan wall FW-05 (shared: switch withdrawal 1,000 / fan-wall service 850)
SPB-1	Central network cabinet		51145	51945	2150	3350	1128	3422	800	1200	53735	54535	-2590				1,050 to fan wall FW-05 (shared: switch withdrawal 1,000 / fan-wall service 850)
SPB-2	Central network cabinet		51945	52745	2150	3350	1128	3422	800	1200	54535	55335	-2590				2,450 cold aisle

Cabinet	Type	Plane	X0	X1	Y0	Y1	Z bottom	Z top	Width	Depth	Previous X0	Previous X1	ΔX	Unit	Leaf group(s)	GPU cabinets served	Front zone (mm)	
SPB-3	Central network cabinet			52745	53545	2150	3350	1128	3422	800	1200	55335	56135	-2590			2,450 cold aisle	
CVS-B	Central network cabinet			53545	54345	2150	3350	1128	3422	800	1200	56135	56935	-2590			2,450 cold aisle	
OOB-B	Central network cabinet			54345	55145	2150	3350	1128	3422	800	1200	56935	57735	-2590			1,050 to fan wall FW-06 (shared: switch withdrawal 1,000 / fan-wall service 850)	
NETA-CU08	Network unit cabinet	A		56745	57545	2150	3350	1128	3422	800	1200	59285	60085	-2540	CU-08	LG15, LG16	R043–R048	1,050 to fan wall FW-06 (shared: switch withdrawal 1,000 / fan-wall service 850)
R043	GPU (OEM)			57545	58145	2150	3350	1128	3422	600	1200	60085	60685	-2540	CU-08	LG15		2,450 cold aisle; GPU tray withdrawal zone 1,200
R044	GPU (OEM)			58145	58745	2150	3350	1128	3422	600	1200	60685	61285	-2540	CU-08	LG15		2,450 cold aisle; GPU tray withdrawal zone 1,200
R045	GPU (OEM)			58745	59345	2150	3350	1128	3422	600	1200	61285	61885	-2540	CU-08	LG15		2,450 cold aisle; GPU tray withdrawal zone 1,200
R046	GPU (OEM)			59345	59945	2150	3350	1128	3422	600	1200	61885	62485	-2540	CU-08	LG16		2,450 cold aisle; GPU tray withdrawal zone 1,200
R047	GPU (OEM)			59945	60545	2150	3350	1128	3422	600	1200	62485	63085	-2540	CU-08	LG16		2,450 cold aisle; GPU tray withdrawal zone 1,200
R048	GPU (OEM)			60545	61145	2150	3350	1128	3422	600	1200	63085	63685	-2540	CU-08	LG16		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU08	Network unit cabinet	B		61145	61945	2150	3350	1128	3422	800	1200	63685	64485	-2540	CU-08	LG15, LG16	R043–R048	2,450 cold aisle
NETA-CU09	Network unit cabinet	A		61945	62745	2150	3350	1128	3422	800	1200	64485	65285	-2540	CU-09	LG17, LG18	R049–R054	2,450 cold aisle
R049	GPU (OEM)			62745	63345	2150	3350	1128	3422	600	1200	65285	65885	-2540	CU-09	LG17		2,450 cold aisle; GPU tray withdrawal zone 1,200
R050	GPU (OEM)			63345	63945	2150	3350	1128	3422	600	1200	65885	66485	-2540	CU-09	LG17		2,450 cold aisle; GPU tray withdrawal zone 1,200
R051	GPU (OEM)			63945	64545	2150	3350	1128	3422	600	1200	66485	67085	-2540	CU-09	LG17		2,450 cold aisle; GPU tray withdrawal zone 1,200
R052	GPU (OEM)			64545	65145	2150	3350	1128	3422	600	1200	67085	67685	-2540	CU-09	LG18		2,450 cold aisle; GPU tray withdrawal zone 1,200
R053	GPU (OEM)			65145	65745	2150	3350	1128	3422	600	1200	67685	68285	-2540	CU-09	LG18		2,450 cold aisle; GPU tray withdrawal zone 1,200
R054	GPU (OEM)			65745	66345	2150	3350	1128	3422	600	1200	68285	68885	-2540	CU-09	LG18		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU09	Network unit cabinet	B		66345	67145	2150	3350	1128	3422	800	1200	68885	69685	-2540	CU-09	LG17, LG18	R049–R054	1,050 to fan wall FW-07 (shared: switch withdrawal 1,000 / fan-wall service 850)
NETA-CU10	Network unit cabinet	A		68845	69645	2150	3350	1128	3422	800	1200	71085	71885	-2240	CU-10	LG19, LG20	R055–R060	1,050 to fan wall FW-07 (shared: switch withdrawal 1,000 / fan-wall service 850)
R055	GPU (OEM)			69645	70245	2150	3350	1128	3422	600	1200	71885	72485	-2240	CU-10	LG19		2,450 cold aisle; GPU tray withdrawal zone 1,200
R056	GPU (OEM)			70245	70845	2150	3350	1128	3422	600	1200	72485	73085	-2240	CU-10	LG19		2,450 cold aisle; GPU tray withdrawal zone 1,200
R057	GPU (OEM)			70845	71445	2150	3350	1128	3422	600	1200	73085	73685	-2240	CU-10	LG19		2,450 cold aisle; GPU tray withdrawal zone 1,200
R058	GPU (OEM)			71445	72045	2150	3350	1128	3422	600	1200	73685	74285	-2240	CU-10	LG20		2,450 cold aisle; GPU tray withdrawal zone 1,200
R059	GPU (OEM)			72045	72645	2150	3350	1128	3422	600	1200	74285	74885	-2240	CU-10	LG20		2,450 cold aisle; GPU tray withdrawal zone 1,200
R060	GPU (OEM)			72645	73245	2150	3350	1128	3422	600	1200	74885	75485	-2240	CU-10	LG20		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU10	Network unit cabinet	B		73245	74045	2150	3350	1128	3422	800	1200	75485	76285	-2240	CU-10	LG19, LG20	R055–R060	2,450 cold aisle
NETA-CU11	Network unit cabinet	A		74045	74845	2150	3350	1128	3422	800	1200	76285	77085	-2240	CU-11	LG21, LG22	R061–R066	2,450 cold aisle
R061	GPU (OEM)			74845	75445	2150	3350	1128	3422	600	1200	77085	77685	-2240	CU-11	LG21		2,450 cold aisle; GPU tray withdrawal zone 1,200
R062	GPU (OEM)			75445	76045	2150	3350	1128	3422	600	1200	77685	78285	-2240	CU-11	LG21		2,450 cold aisle; GPU tray withdrawal zone 1,200
R063	GPU (OEM)			76045	76645	2150	3350	1128	3422	600	1200	78285	78885	-2240	CU-11	LG21		2,450 cold aisle; GPU tray withdrawal zone 1,200
R064	GPU (OEM)			76645	77245	2150	3350	1128	3422	600	1200	78885	79485	-2240	CU-11	LG22		2,450 cold aisle; GPU tray withdrawal zone 1,200
R065	GPU (OEM)			77245	77845	2150	3350	1128	3422	600	1200	79485	80085	-2240	CU-11	LG22		2,450 cold aisle; GPU tray withdrawal zone 1,200
R066	GPU (OEM)			77845	78445	2150	3350	1128	3422	600	1200	80085	80685	-2240	CU-11	LG22		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU11	Network unit cabinet	B		78445	79245	2150	3350	1128	3422	800	1200	80685	81485	-2240	CU-11	LG21, LG22	R061–R066	1,050 to fan wall FW-08 (shared: switch withdrawal 1,000 / fan-wall service 850)
NETA-CU12	Network unit cabinet	A		81045	81845	2150	3350	1128	3422	800	1200	82885	83685	-1840	CU-12	LG23, LG24	R067–R072	1,050 to fan wall FW-08 (shared: switch withdrawal 1,000 / fan-wall service 850)
R067	GPU (OEM)			81845	82445	2150	3350	1128	3422	600	1200	83685	84285	-1840	CU-12	LG23		2,450 cold aisle; GPU tray withdrawal zone 1,200
R068	GPU (OEM)			82445	83045	2150	3350	1128	3422	600	1200	84285	84885	-1840	CU-12	LG23		2,450 cold aisle; GPU tray withdrawal zone 1,200
R069	GPU (OEM)			83045	83645	2150	3350	1128	3422	600	1200	84885	85485	-1840	CU-12	LG23		2,450 cold aisle; GPU tray withdrawal zone 1,200
R070	GPU (OEM)			83645	84245	2150	3350	1128	3422	600	1200	85485	86085	-1840	CU-12	LG24		2,450 cold aisle; GPU tray withdrawal zone 1,200
R071	GPU (OEM)			84245	84845	2150	3350	1128	3422	600	1200	86085	86685	-1840	CU-12	LG24		2,450 cold aisle; GPU tray withdrawal zone 1,200
R072	GPU (OEM)			84845	85445	2150	3350	1128	3422	600	1200	86685	87285	-1840	CU-12	LG24		2,450 cold aisle; GPU tray withdrawal zone 1,200
NETB-CU12	Network unit cabinet	B																

A4 Network cabinet demands on the existing facility

All 40 network cabinets with the existing UPS paths and generator segments behind the A and B PDUs (design input), equipment, power, heat, airflow, mass and foot load. Planning power = typical × 1.25 (no published SN5610 maximum). Facility supply, cooling and structural capacity are inputs and are not verified here (N-411-EN, N-412-EN, N-951-EN).

Cabinet	Plane	X0	X1	UPS path A (existing)	UPS path B (existing)	Gen. segment A	Gen. segment B	Both paths in one segment	Switches	PDUs	PSU inlets	Input typical kW	Input planning kW	Heat to air kW (planning)	Airflow 15 K m³/h	Equipment kg (FACT)	Empty cabinet kg (CONFIRM)	In-cabinet cable kg (DESIGN)	PDUs kg	Total kg	Foot kN even	Foot kN ×1.5	U used	U free	Fan wall in front						
NETA-CU01	A	2355	3155	UPS7-01	UPS7-02	SEG-A	SEG-A	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU01	B	6755	7555	UPS7-02	UPS7-03	SEG-A	SEG-A	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU02	A	7555	8355	UPS7-01	UPS7-02	SEG-A	SEG-A	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU02	B	11955	12755	UPS7-02	UPS7-03	SEG-A	SEG-A	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-01						
NETA-CU03	A	14445	15245	UPS7-02	UPS7-03	SEG-A	SEG-A	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-01						
NETB-CU03	B	18845	19645	UPS7-03	UPS7-04	SEG-A	SEG-B	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU04	A	19645	20445	UPS7-03	UPS7-04	SEG-A	SEG-B	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU04	B	24045	24845	UPS7-04	UPS7-05	SEG-B	SEG-B	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-02						
NETA-CU05	A	26645	27445	UPS7-04	UPS7-05	SEG-B	SEG-B	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-02						
NETB-CU05	B	31045	31845	UPS7-05	UPS7-06	SEG-B	SEG-B	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU06	A	31845	32645	UPS7-05	UPS7-06	SEG-B	SEG-B	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU06	B	36245	37045	UPS7-06	UPS7-01	SEG-B	SEG-A	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-03						
NETA-CU07	A	38745	39545	UPS7-06	UPS7-01	SEG-B	SEG-A	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-03						
NETB-CU07	B	43145	43945	UPS7-05	UPS7-06	SEG-B	SEG-B	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-04						
OOB-A	central	45495	46295	UPS7-03	UPS7-04	SEG-A	SEG-B	no	5	2	10	2.517	3.146	3.176	653.0	66.0	180	5.6	30.0	281.6	0.69	1.04	9	37	FW-04						
CVS-A	central	46295	47095	UPS7-01	UPS7-02	SEG-A	SEG-A	yes	8	4	30	14.146	17.683	17.743	3649.0	211.7	180	24.5	60.0	476.3	1.17	1.75	19	27							
SPA-1	central	47095	47895	UPS7-01	UPS7-02	SEG-A	SEG-A	yes	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0							
SPA-2	central	47895	48695	UPS7-03	UPS7-04	SEG-A	SEG-B	no	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0							
SPA-3	central	48695	49495	UPS7-05	UPS7-06	SEG-B	SEG-B	yes	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0	FW-05						
SPB-1	central	51145	51945	UPS8-01	UPS8-02	SEG-C	SEG-C	yes	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0	FW-05						
SPB-2	central	51945	52745	UPS8-03	UPS8-04	SEG-C	SEG-D	no	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0							
SPB-3	central	52745	53545	UPS8-05	UPS8-06	SEG-D	SEG-D	yes	19	4	74	36.215	45.269	45.329	9323.0	491.6	180	62.3	60.0	793.9	1.95	2.92	46	0							
CVS-B	central	53545	54345	UPS8-07	UPS8-01	SEG-D	SEG-C	no	8	4	30	14.146	17.683	17.743	3649.0	211.7	180	24.5	60.0	476.3	1.17	1.75	19	27							
OOB-B	central	54345	55145	UPS8-03	UPS8-04	SEG-C	SEG-D	no	5	2	10	2.517	3.146	3.176	653.0	66.0	180	5.6	30.0	281.6	0.69	1.04	9	37	FW-06						
NETA-CU08	A	56745	57545	UPS8-01	UPS8-02	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-06						
NETB-CU08	B	61145	61945	UPS8-02	UPS8-03	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU09	A	61945	62745	UPS8-01	UPS8-02	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU09	B	66345	67145	UPS8-02	UPS8-03	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-07						
NETA-CU10	A	68845	69645	UPS8-02	UPS8-03	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-07						
NETB-CU10	B	73245	74045	UPS8-03	UPS8-04	SEG-C	SEG-D	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU11	A	74045	74845	UPS8-03	UPS8-04	SEG-C	SEG-D	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU11	B	78445	79245	UPS8-04	UPS8-05	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-08						
NETA-CU12	A	81045	81845	UPS8-04	UPS8-05	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-08						
NETB-CU12	B	85445	86245	UPS8-05	UPS8-06	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU13	A	86245	87045	UPS8-05	UPS8-06	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU13	B	90645	91445	UPS8-06	UPS8-07	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-09						
NETA-CU14	A	93245	94045	UPS8-06	UPS8-07	SEG-D	SEG-D	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18	FW-09						
NETB-CU14	B	97645	98445	UPS8-07	UPS8-01	SEG-D	SEG-C	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETA-CU15	A	98445	99245	UPS8-07	UPS8-01	SEG-D	SEG-C	no	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
NETB-CU15	B	102845	103645	UPS8-01	UPS8-02	SEG-C	SEG-C	yes	11	4	42	18.58	23.225	23.285	4789.0	304.4	180	28.0	60.0	572.4	1.4	2.11	28	18							
Total (40)									470	156	1784	808.0	1010.0	1012.4	208212																

A5 Port usage per switch

All 470 switches with data ports (every switch in the network cabinets; patch panels and cable managers carry no ports). Role, model and port basis per role are in the key, with the sum of the per-switch figures. Spare ports are reported, not reserved as expansion capacity.

Role	Meaning	Model	Port basis	Switches	Downlink ports	Uplink ports	Data ports used	Spare ports	Management ports used
NS	North–south (NS) leaf	SN5610	128 x 400G logical (64 OSFP 800G split)	60	3240	1680	4920	2760	60
CL	Compute rail leaf	SN5610	128 x 400G logical (64 OSFP 800G split)	240	12960	12960	25920	4800	240
NOOB	Cabinet management switch	SN2201	48 x 1G RJ45 + 4 x 100G QSFP28	40	586	80	586	1334	0
SP	Compute spine	SN5610	128 x 400G logical (64 OSFP 800G split)	108	12960	0	12960	864	108
CS	North–south spine (CVS)	SN5610	128 x 400G logical (64 OSFP 800G split)	14	1680	0	1680	112	14
OA	OOB aggregation	SN4600C	64 x 100G QSFP28	8	440	0	440	72	8
Total				470	31866	14720	46506	9942	430

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
NS-A-LG01	NS	NETA-CU01	A	54	28	82	46	1.929	1
CL-A-LG01-R1	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG01-R2	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG01-R3	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG01-R4	CL	NETA-CU01	A	54	54	108	20	1.0	1
NS-A-LG02	NS	NETA-CU01	A	54	28	82	46	1.929	1
CL-A-LG02-R1	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG02-R2	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG02-R3	CL	NETA-CU01	A	54	54	108	20	1.0	1
CL-A-LG02-R4	CL	NETA-CU01	A	54	54	108	20	1.0	1
NOOB-NETA-CU01	NOOB	NETA-CU01		14	2	14	34	7.0	
NS-B-LG01	NS	NETB-CU01	B	54	28	82	46	1.929	1
CL-B-LG01-R1	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG01-R2	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG01-R3	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG01-R4	CL	NETB-CU01	B	54	54	108	20	1.0	1
NS-B-LG02	NS	NETB-CU01	B	54	28	82	46	1.929	1
CL-B-LG02-R1	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG02-R2	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG02-R3	CL	NETB-CU01	B	54	54	108	20	1.0	1
CL-B-LG02-R4	CL	NETB-CU01	B	54	54	108	20	1.0	1
NOOB-NETB-CU01	NOOB	NETB-CU01		14	2	14	34	7.0	
NS-A-LG03	NS	NETA-CU02	A	54	28	82	46	1.929	1
CL-A-LG03-R1	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG03-R2	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG03-R3	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG03-R4	CL	NETA-CU02	A	54	54	108	20	1.0	1
NS-A-LG04	NS	NETA-CU02	A	54	28	82	46	1.929	1
CL-A-LG04-R1	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG04-R2	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG04-R3	CL	NETA-CU02	A	54	54	108	20	1.0	1
CL-A-LG04-R4	CL	NETA-CU02	A	54	54	108	20	1.0	1
NOOB-NETA-CU02	NOOB	NETA-CU02		14	2	14	34	7.0	
NS-B-LG03	NS	NETB-CU02	B	54	28	82	46	1.929	1
CL-B-LG03-R1	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG03-R2	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG03-R3	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG03-R4	CL	NETB-CU02	B	54	54	108	20	1.0	1
NS-B-LG04	NS	NETB-CU02	B	54	28	82	46	1.929	1
CL-B-LG04-R1	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG04-R2	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG04-R3	CL	NETB-CU02	B	54	54	108	20	1.0	1
CL-B-LG04-R4	CL	NETB-CU02	B	54	54	108	20	1.0	1
NOOB-NETB-CU02	NOOB	NETB-CU02		14	2	14	34	7.0	
NS-A-LG05	NS	NETA-CU03	A	54	28	82	46	1.929	1
CL-A-LG05-R1	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG05-R2	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG05-R3	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG05-R4	CL	NETA-CU03	A	54	54	108	20	1.0	1
NS-A-LG06	NS	NETA-CU03	A	54	28	82	46	1.929	1
CL-A-LG06-R1	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG06-R2	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG06-R3	CL	NETA-CU03	A	54	54	108	20	1.0	1
CL-A-LG06-R4	CL	NETA-CU03	A	54	54	108	20	1.0	1
NOOB-NETA-CU03	NOOB	NETA-CU03		14	2	14	34	7.0	
NS-B-LG05	NS	NETB-CU03	B	54	28	82	46	1.929	1
CL-B-LG05-R1	CL	NETB-CU03	B	54	54	108	20	1.0	1
CL-B-LG05-R2	CL	NETB-CU03	B	54	54	108	20	1.0	1
CL-B-LG05-R3	CL	NETB-CU03	B	54	54	108	20	1.0	1
CL-B-LG05-R4	CL	NETB-CU03	B	54	54	108	20	1.0	1
NS-B-LG06	NS	NETB-CU03	B	54	28	82	46	1.929	1
CL-B-LG06-R1	CL	NETB-CU03	B	54	54	108	20	1.0	1

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
CL-B-LG06-R2	CL	NETB-CU03	B	54	54	108	20	1.0	1
CL-B-LG06-R3	CL	NETB-CU03	B	54	54	108	20	1.0	1
CL-B-LG06-R4	CL	NETB-CU03	B	54	54	108	20	1.0	1
NOOB-NETB-CU03	NOOB	NETB-CU03		14	2	14	34	7.0	
NS-A-LG07	NS	NETA-CU04	A	54	28	82	46	1.929	1
CL-A-LG07-R1	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG07-R2	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG07-R3	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG07-R4	CL	NETA-CU04	A	54	54	108	20	1.0	1
NS-A-LG08	NS	NETA-CU04	A	54	28	82	46	1.929	1
CL-A-LG08-R1	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG08-R2	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG08-R3	CL	NETA-CU04	A	54	54	108	20	1.0	1
CL-A-LG08-R4	CL	NETA-CU04	A	54	54	108	20	1.0	1
NOOB-NETA-CU04	NOOB	NETA-CU04		14	2	14	34	7.0	
NS-B-LG07	NS	NETB-CU04	B	54	28	82	46	1.929	1
CL-B-LG07-R1	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG07-R2	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG07-R3	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG07-R4	CL	NETB-CU04	B	54	54	108	20	1.0	1
NS-B-LG08	NS	NETB-CU04	B	54	28	82	46	1.929	1
CL-B-LG08-R1	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG08-R2	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG08-R3	CL	NETB-CU04	B	54	54	108	20	1.0	1
CL-B-LG08-R4	CL	NETB-CU04	B	54	54	108	20	1.0	1
NOOB-NETB-CU04	NOOB	NETB-CU04		14	2	14	34	7.0	
NS-A-LG09	NS	NETA-CU05	A	54	28	82	46	1.929	1
CL-A-LG09-R1	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG09-R2	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG09-R3	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG09-R4	CL	NETA-CU05	A	54	54	108	20	1.0	1
NS-A-LG10	NS	NETA-CU05	A	54	28	82	46	1.929	1
CL-A-LG10-R1	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG10-R2	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG10-R3	CL	NETA-CU05	A	54	54	108	20	1.0	1
CL-A-LG10-R4	CL	NETA-CU05	A	54	54	108	20	1.0	1
NOOB-NETA-CU05	NOOB	NETA-CU05		14	2	14	34	7.0	
NS-B-LG09	NS	NETB-CU05	B	54	28	82	46	1.929	1
CL-B-LG09-R1	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG09-R2	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG09-R3	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG09-R4	CL	NETB-CU05	B	54	54	108	20	1.0	1
NS-B-LG10	NS	NETB-CU05	B	54	28	82	46	1.929	1
CL-B-LG10-R1	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG10-R2	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG10-R3	CL	NETB-CU05	B	54	54	108	20	1.0	1
CL-B-LG10-R4	CL	NETB-CU05	B	54	54	108	20	1.0	1
NOOB-NETB-CU05	NOOB	NETB-CU05		14	2	14	34	7.0	
NS-A-LG11	NS	NETA-CU06	A	54	28	82	46	1.929	1
CL-A-LG11-R1	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG11-R2	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG11-R3	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG11-R4	CL	NETA-CU06	A	54	54	108	20	1.0	1
NS-A-LG12	NS	NETA-CU06	A	54	28	82	46	1.929	1
CL-A-LG12-R1	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG12-R2	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG12-R3	CL	NETA-CU06	A	54	54	108	20	1.0	1
CL-A-LG12-R4	CL	NETA-CU06	A	54	54	108	20	1.0	1
NOOB-NETA-CU06	NOOB	NETA-CU06		14	2	14	34	7.0	
NS-B-LG11	NS	NETB-CU06	B	54	28	82	46	1.929	1
CL-B-LG11-R1	CL	NETB-CU06	B	54	54	108	20	1.0	1
CL-B-LG11-R2	CL	NETB-CU06	B	54	54	108	20	1.0	1

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
CL-B-LG11-R3	CL	NETB-CU06	B	54	54	108	20	1.0	1
CL-B-LG11-R4	CL	NETB-CU06	B	54	54	108	20	1.0	1
NS-B-LG12	NS	NETB-CU06	B	54	28	82	46	1.929	1
CL-B-LG12-R1	CL	NETB-CU06	B	54	54	108	20	1.0	1
CL-B-LG12-R2	CL	NETB-CU06	B	54	54	108	20	1.0	1
CL-B-LG12-R3	CL	NETB-CU06	B	54	54	108	20	1.0	1
CL-B-LG12-R4	CL	NETB-CU06	B	54	54	108	20	1.0	1
NOOB-NETB-CU06	NOOB	NETB-CU06		14	2	14	34	7.0	
NS-A-LG13	NS	NETA-CU07	A	54	28	82	46	1.929	1
CL-A-LG13-R1	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG13-R2	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG13-R3	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG13-R4	CL	NETA-CU07	A	54	54	108	20	1.0	1
NS-A-LG14	NS	NETA-CU07	A	54	28	82	46	1.929	1
CL-A-LG14-R1	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG14-R2	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG14-R3	CL	NETA-CU07	A	54	54	108	20	1.0	1
CL-A-LG14-R4	CL	NETA-CU07	A	54	54	108	20	1.0	1
NOOB-NETA-CU07	NOOB	NETA-CU07		14	2	14	34	7.0	
NS-B-LG13	NS	NETB-CU07	B	54	28	82	46	1.929	1
CL-B-LG13-R1	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG13-R2	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG13-R3	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG13-R4	CL	NETB-CU07	B	54	54	108	20	1.0	1
NS-B-LG14	NS	NETB-CU07	B	54	28	82	46	1.929	1
CL-B-LG14-R1	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG14-R2	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG14-R3	CL	NETB-CU07	B	54	54	108	20	1.0	1
CL-B-LG14-R4	CL	NETB-CU07	B	54	54	108	20	1.0	1
NOOB-NETB-CU07	NOOB	NETB-CU07		14	2	14	34	7.0	
NS-A-LG15	NS	NETA-CU08	A	54	28	82	46	1.929	1
CL-A-LG15-R1	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG15-R2	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG15-R3	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG15-R4	CL	NETA-CU08	A	54	54	108	20	1.0	1
NS-A-LG16	NS	NETA-CU08	A	54	28	82	46	1.929	1
CL-A-LG16-R1	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG16-R2	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG16-R3	CL	NETA-CU08	A	54	54	108	20	1.0	1
CL-A-LG16-R4	CL	NETA-CU08	A	54	54	108	20	1.0	1
NOOB-NETA-CU08	NOOB	NETA-CU08		14	2	14	34	7.0	
NS-B-LG15	NS	NETB-CU08	B	54	28	82	46	1.929	1
CL-B-LG15-R1	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG15-R2	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG15-R3	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG15-R4	CL	NETB-CU08	B	54	54	108	20	1.0	1
NS-B-LG16	NS	NETB-CU08	B	54	28	82	46	1.929	1
CL-B-LG16-R1	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG16-R2	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG16-R3	CL	NETB-CU08	B	54	54	108	20	1.0	1
CL-B-LG16-R4	CL	NETB-CU08	B	54	54	108	20	1.0	1
NOOB-NETB-CU08	NOOB	NETB-CU08		14	2	14	34	7.0	
NS-A-LG17	NS	NETA-CU09	A	54	28	82	46	1.929	1
CL-A-LG17-R1	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG17-R2	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG17-R3	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG17-R4	CL	NETA-CU09	A	54	54	108	20	1.0	1
NS-A-LG18	NS	NETA-CU09	A	54	28	82	46	1.929	1
CL-A-LG18-R1	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG18-R2	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG18-R3	CL	NETA-CU09	A	54	54	108	20	1.0	1
CL-A-LG18-R4	CL	NETA-CU09	A	54	54	108	20	1.0	1

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
NOOB-NETA-CU09	NOOB	NETA-CU09			14	2	14	34	7.0
NS-B-LG17	NS	NETB-CU09	B		54	28	82	46	1.929
CL-B-LG17-R1	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG17-R2	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG17-R3	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG17-R4	CL	NETB-CU09	B		54	54	108	20	1.0
NS-B-LG18	NS	NETB-CU09	B		54	28	82	46	1.929
CL-B-LG18-R1	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG18-R2	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG18-R3	CL	NETB-CU09	B		54	54	108	20	1.0
CL-B-LG18-R4	CL	NETB-CU09	B		54	54	108	20	1.0
NOOB-NETB-CU09	NOOB	NETB-CU09			14	2	14	34	7.0
NS-A-LG19	NS	NETA-CU10	A		54	28	82	46	1.929
CL-A-LG19-R1	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG19-R2	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG19-R3	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG19-R4	CL	NETA-CU10	A		54	54	108	20	1.0
NS-A-LG20	NS	NETA-CU10	A		54	28	82	46	1.929
CL-A-LG20-R1	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG20-R2	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG20-R3	CL	NETA-CU10	A		54	54	108	20	1.0
CL-A-LG20-R4	CL	NETA-CU10	A		54	54	108	20	1.0
NOOB-NETA-CU10	NOOB	NETA-CU10			14	2	14	34	7.0
NS-B-LG19	NS	NETB-CU10	B		54	28	82	46	1.929
CL-B-LG19-R1	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG19-R2	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG19-R3	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG19-R4	CL	NETB-CU10	B		54	54	108	20	1.0
NS-B-LG20	NS	NETB-CU10	B		54	28	82	46	1.929
CL-B-LG20-R1	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG20-R2	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG20-R3	CL	NETB-CU10	B		54	54	108	20	1.0
CL-B-LG20-R4	CL	NETB-CU10	B		54	54	108	20	1.0
NOOB-NETB-CU10	NOOB	NETB-CU10			14	2	14	34	7.0
NS-A-LG21	NS	NETA-CU11	A		54	28	82	46	1.929
CL-A-LG21-R1	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG21-R2	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG21-R3	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG21-R4	CL	NETA-CU11	A		54	54	108	20	1.0
NS-A-LG22	NS	NETA-CU11	A		54	28	82	46	1.929
CL-A-LG22-R1	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG22-R2	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG22-R3	CL	NETA-CU11	A		54	54	108	20	1.0
CL-A-LG22-R4	CL	NETA-CU11	A		54	54	108	20	1.0
NOOB-NETA-CU11	NOOB	NETA-CU11			14	2	14	34	7.0
NS-B-LG21	NS	NETB-CU11	B		54	28	82	46	1.929
CL-B-LG21-R1	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG21-R2	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG21-R3	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG21-R4	CL	NETB-CU11	B		54	54	108	20	1.0
NS-B-LG22	NS	NETB-CU11	B		54	28	82	46	1.929
CL-B-LG22-R1	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG22-R2	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG22-R3	CL	NETB-CU11	B		54	54	108	20	1.0
CL-B-LG22-R4	CL	NETB-CU11	B		54	54	108	20	1.0
NOOB-NETB-CU11	NOOB	NETB-CU11			14	2	14	34	7.0
NS-A-LG23	NS	NETA-CU12	A		54	28	82	46	1.929
CL-A-LG23-R1	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG23-R2	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG23-R3	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG23-R4	CL	NETA-CU12	A		54	54	108	20	1.0
NS-A-LG24	NS	NETA-CU12	A		54	28	82	46	1.929
CL-A-LG24-R1	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG24-R2	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG24-R3	CL	NETA-CU12	A		54	54	108	20	1.0
CL-A-LG24-R4	CL	NETA-CU12	A		54	54	108	20	1.0
NOOB-NETA-CU12	NOOB	NETA-CU12			14	2	14	34	7.0
NS-B-LG23	NS	NETB-CU12	B		54	28	82	46	1.929
CL-B-LG23-R1	CL	NETB-CU12	B		54	54	108	20	1.0
CL-B-LG23-R2	CL	NETB-CU12	B		54	54	108	20	1.0
CL-B-LG23-R3	CL	NETB-CU12	B		54	54	108	20	1.0
CL-B-LG23-R4	CL	NETB-CU12	B		54	54	108	20	1.0
NS-B-LG24	NS	NETB-CU12	B		54	28	82	46	1.929
CL-B-LG24-R1	CL	NETB-CU12	B		54	54	108	20	1.0
CL-B-LG24-R2	CL	NETB-CU12	B		54	54	108	20	1.0
CL-B-LG24-R3	CL	NETB-CU12	B		54	54	108	20	1.0

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
CL-B-LG24-R4	CL	NETB-CU12	B		54	54	108	20	1.0
NOOB-NETB-CU12	NOOB	NETB-CU12			14	2	14	34	7.0
NS-A-LG25	NS	NETA-CU13	A		54	28	82	46	1.929
CL-A-LG25-R1	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG25-R2	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG25-R3	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG25-R4	CL	NETA-CU13	A		54	54	108	20	1.0
NS-A-LG26	NS	NETA-CU13	A		54	28	82	46	1.929
CL-A-LG26-R1	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG26-R2	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG26-R3	CL	NETA-CU13	A		54	54	108	20	1.0
CL-A-LG26-R4	CL	NETA-CU13	A		54	54	108	20	1.0
NOOB-NETA-CU13	NOOB	NETA-CU13			14	2	14	34	7.0
NS-B-LG25	NS	NETB-CU13	B		54	28	82	46	1.929
CL-B-LG25-R1	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG25-R2	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG25-R3	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG25-R4	CL	NETB-CU13	B		54	54	108	20	1.0
NS-B-LG26	NS	NETB-CU13	B		54	28	82	46	1.929
CL-B-LG26-R1	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG26-R2	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG26-R3	CL	NETB-CU13	B		54	54	108	20	1.0
CL-B-LG26-R4	CL	NETB-CU13	B		54	54	108	20	1.0
NOOB-NETB-CU13	NOOB	NETB-CU13			14	2	14	34	7.0
NS-A-LG27	NS	NETA-CU14	A		54	28	82	46	1.929
CL-A-LG27-R1	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG27-R2	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG27-R3	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG27-R4	CL	NETA-CU14	A		54	54	108	20	1.0
NS-A-LG28	NS	NETA-CU14	A		54	28	82	46	1.929
CL-A-LG28-R1	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG28-R2	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG28-R3	CL	NETA-CU14	A		54	54	108	20	1.0
CL-A-LG28-R4	CL	NETA-CU14	A		54	54	108	20	1.0
NOOB-NETA-CU14	NOOB	NETA-CU14			14	2	14	34	7.0
NS-B-LG27	NS	NETB-CU14	B		54	28	82	46	1.929
CL-B-LG27-R1	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG27-R2	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG27-R3	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG27-R4	CL	NETB-CU14	B		54	54	108	20	1.0
NS-B-LG28	NS	NETB-CU14	B		54	28	82	46	1.929
CL-B-LG28-R1	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG28-R2	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG28-R3	CL	NETB-CU14	B		54	54	108	20	1.0
CL-B-LG28-R4	CL	NETB-CU14	B		54	54	108	20	1.0
NOOB-NETB-CU14	NOOB	NETB-CU14			14	2	14	34	7.0
NS-A-LG29	NS	NETA-CU15	A		54	28	82	46	1.929
CL-A-LG29-R1	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG29-R2	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG29-R3	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG29-R4	CL	NETA-CU15	A		54	54	108	20	1.0
NS-A-LG30	NS	NETA-CU15	A		54	28	82	46	1.929
CL-A-LG30-R1	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG30-R2	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG30-R3	CL	NETA-CU15	A		54	54	108	20	1.0
CL-A-LG30-R4	CL	NETA-CU15	A		54	54	108	20	1.0
NOOB-NETA-CU15	NOOB	NETA-CU15			14	2	14	34	7.0
NS-B-LG29	NS	NETB-CU15	B		54	28	82	46	1.929
CL-B-LG29-R1	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG29-R2	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG29-R3	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG29-R4	CL	NETB-CU15	B		54	54	108	20	1.0
NS-B-LG30	NS	NETB-CU15	B		54	28	82	46	1.929
CL-B-LG30-R1	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG30-R2	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG30-R3	CL	NETB-CU15	B		54	54	108	20	1.0
CL-B-LG30-R4	CL	NETB-CU15	B		54	54	108	20	1.0
NOOB-NETB-CU15	NOOB	NETB-CU15			14	2	14	34	7.0
SP-A-01	SP	SPA-1	A		120	0	120	8	1
SP-A-02	SP	SPA-1	A		120	0	120	8	1
SP-A-03	SP	SPA-1	A		120	0	120	8	1
SP-A-04	SP	SPA-1	A		120	0	120	8	1
SP-A-05	SP	SPA-1	A		120	0	120	8	1
SP-A-06	SP	SPA-1	A		120	0	120	8	1
SP-A-07	SP	SPA-1	A		120	0	120	8	1
SP-A-08	SP	SPA-1	A		120	0	120	8	1

Device	Role	Cabinet	Plane
--------	------	---------	-------

Device	Role	Cabinet	Plane	Down	Up	Used	Spare	Down/up	Mgmt
SP-B-15	SP	SPB-1	B	120	0	120	8		1
SP-B-16	SP	SPB-1	B	120	0	120	8		1
SP-B-17	SP	SPB-1	B	120	0	120	8		1
SP-B-18	SP	SPB-1	B	120	0	120	8		1
NOOB-SPB-1	NOOB	SPB-1		22	2	22	26	11.0	
SP-B-19	SP	SPB-2	B	120	0	120	8		1
SP-B-20	SP	SPB-2	B	120	0	120	8		1
SP-B-21	SP	SPB-2	B	120	0	120	8		1
SP-B-22	SP	SPB-2	B	120	0	120	8		1
SP-B-23	SP	SPB-2	B	120	0	120	8		1
SP-B-24	SP	SPB-2	B	120	0	120	8		1
SP-B-25	SP	SPB-2	B	120	0	120	8		1
SP-B-26	SP	SPB-2	B	120	0	120	8		1
SP-B-27	SP	SPB-2	B	120	0	120	8		1
SP-B-28	SP	SPB-2	B	120	0	120	8		1
SP-B-29	SP	SPB-2	B	120	0	120	8		1
SP-B-30	SP	SPB-2	B	120	0	120	8		1
SP-B-31	SP	SPB-2	B	120	0	120	8		1
SP-B-32	SP	SPB-2	B	120	0	120	8		1
SP-B-33	SP	SPB-2	B	120	0	120	8		1
SP-B-34	SP	SPB-2	B	120	0	120	8		1
SP-B-35	SP	SPB-2	B	120	0	120	8		1
SP-B-36	SP	SPB-2	B	120	0	120	8		1
NOOB-SPB-2	NOOB	SPB-2		22	2	22	26	11.0	
SP-B-37	SP	SPB-3	B	120	0	120	8		1
SP-B-38	SP	SPB-3	B	120	0	120	8		1
SP-B-39	SP	SPB-3	B	120	0	120	8		1
SP-B-40	SP	SPB-3	B	120	0	120	8		1
SP-B-41	SP	SPB-3	B	120	0	120	8		1
SP-B-42	SP	SPB-3	B	120	0	120	8		1
SP-B-43	SP	SPB-3	B	120	0	120	8		1
SP-B-44	SP	SPB-3	B	120	0	120	8		1
SP-B-45	SP	SPB-3	B	120	0	120	8		1
SP-B-46	SP	SPB-3	B	120	0	120	8		1
SP-B-47	SP	SPB-3	B	120	0	120	8		1
SP-B-48	SP	SPB-3	B	120	0	120	8		1
SP-B-49	SP	SPB-3	B	120	0	120	8		1
SP-B-50	SP	SPB-3	B	120	0	120	8		1
SP-B-51	SP	SPB-3	B	120	0	120	8		1
SP-B-52	SP	SPB-3	B	120	0	120	8		1
SP-B-53	SP	SPB-3	B	120	0	120	8		1
SP-B-54	SP	SPB-3	B	120	0	120	8		1
NOOB-SPB-3	NOOB	SPB-3		22	2	22	26	11.0	
CS-B-1	CS	CVS-B	B	120	0	120	8		1
CS-B-2	CS	CVS-B	B	120	0	120	8		1
CS-B-3	CS	CVS-B	B	120	0	120	8		1
CS-B-4	CS	CVS-B	B	120	0	120	8		1
CS-B-5	CS	CVS-B	B	120	0	120	8		1
CS-B-6	CS	CVS-B	B	120	0	120	8		1
CS-B-7	CS	CVS-B	B	120	0	120	8		1
NOOB-CVS-B	NOOB	CVS-B		11	2	11	37	5.5	
OA-B-1	OA	OOB-B	B	60	0	60	4		1
OA-B-2	OA	OOB-B	B	60	0	60	4		1
OA-B-3	OA	OOB-B	B	60	0	60	4		1
OA-B-4	OA	OOB-B	B	40	0	40	24		1
NOOB-OOB-B	NOOB	OOB-B		6	2	6	42	3.0	

A6 Optical modules

Module	Description (FACT)	Location	Quantity (cages)	Manufacturer reach (m)	Design use	Longest channel (m)	Mixed cages	Counted in
MMA1B00-C100D	100G SR4 QSFP28, 100 m on OM4	OOB 100G uplinks (both ends)	880	100	OOB 100G uplinks; checked against 100 m on OM4 (this module only)	63.95	0	Network device power
MMA1Z00-NS400	400G SR4 QSFP112, 50 m	BlueField-3 (DPU) side	3240	50	45 m design threshold (400G/800G multimode family)	10.34	0	GPU rack side — inclusion in GPU rack TDP to be confirmed by OEM
MMA4Z00-NS	800G 2×SR4 OSFP, 50 m (reach stated with two patch panels)	Switch side, multimode	17860	50	45 m design threshold; reach stated with two patch panels	44.35	0	Network device power
MMA4Z00-NS-FLT	800G 2×SR4 OSFP flat-top, 50 m	GPU compute-tray NIC side	6480	50	45 m design threshold	10.07	0	GPU rack side — inclusion in GPU rack TDP to be confirmed by OEM
MMS4X00-NS	800G 2×DR4 OSFP, 100 m single-mode (reach stated with two patch panels)	Switch side, single-mode	4880	100	Cages whose longer half-port exceeds 45 m; reach stated with two patch panels	61.4	0	Network device power

- Quantities are by cage. Both half-ports of a cage use the same module type; mixed cages = 0 for every module.
- All 31,280 optical links are within the reach stated for the selected module, with at most one patch panel per channel. OM4 100 m applies only to MMA1B00-C100D. Manufacturer optical loss budget, cable and termination products and field test acceptance: CONFIRM.

A7 Link summary and complete link listing of leaf group LG01

Link class summary: all 39,066 port-level link records grouped by class, module, medium and tray (N-901-EN, N-902-EN).

Class code	Class	Module A	Module B	Medium	Tray	Links	Shortest m	Longest m	Max. panels	Reach m
CV	NS leaf → CVS	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TA	560	16.17	44.0	1	50
CV	NS leaf → CVS	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TB	560	16.62	44.35	1	50
CV	NS leaf → CVS	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TA	280	47.36	61.4	1	100
CV	NS leaf → CVS	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TB	280	46.12	58.95	1	100
DL	DPU → NS leaf	MMA1Z00-NS400	MMA4Z00-NS	OM4 MPO-12 APC jumper	TL	3,240	6.09	10.34	0	50
LS	Compute leaf → spine	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TA	4,320	14.45	43.23	1	50
LS	Compute leaf → spine	MMA4Z00-NS	MMA4Z00-NS	OM4 trunk (fan-out legs at spine)	TB	4,320	14.8	43.68	1	50
LS	Compute leaf → spine	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TA	2,160	43.95	60.33	1	100
LS	Compute leaf → spine	MMS4X00-NS	MMS4X00-NS	OS2 trunk (fan-out legs at spine)	TB	2,160	44.7	61.08	1	100
MG	Network cabinet 1G management	—	—	Cat6A patch (in-cabinet)	in-cabinet	510	1.5	1.5	0	
MG	Network cabinet 1G management	—	—	Cat6A patch (in-cabinet PDU management)	in-cabinet	76	1.5	1.5	0	
NL	NIC → compute leaf	MMA4Z00-NS-FLT	MMA4Z00-NS	OM4 MPO-12 APC jumper	TL	12,960	5.2	10.07	0	50
OI	GPU rack in-rack 1G (OEM)	—	—	Cat6A patch (in-cabinet)	in-cabinet	7,200	2.0	2.0	0	
OU	OOB 100G uplink	MMA1B00-C100D	MMA1B00-C100D	OM4 MPO-12 jumper / trunk leg	TA	220	6.51	63.95	0	100
OU	OOB 100G uplink	MMA1B00-C100D	MMA1B00-C100D	OM4 MPO-12 jumper / trunk leg	TB	220	6.91	58.99	0	100
						39,066				

Complete link listing of leaf group LG01

Leaf group LG01 serves GPU cabinets R001–R003 (54 compute trays) from unit cabinets NETA-CU01 and NETB-CU01. Selection: every record of the port-level link table that has an endpoint on one of the 10 switches of leaf group LG01 (CL-A-LG01-R1, CL-A-LG01-R2, CL-A-LG01-R3, CL-A-LG01-R4, CL-B-LG01-R1, CL-B-LG01-R2, CL-B-LG01-R3, CL-B-LG01-R4, NS-A-LG01, NS-B-LG01). 1,038 of the 39,066 records are selected; each appears exactly once, sorted by link ID within its class: NL NIC → compute leaf 432; LS Compute leaf → spine 432; DL DPU → NS leaf 108; CV NS leaf → CVS 56; MG Network cabinet 1G management 10. The other 29 leaf groups follow the same port pattern with their own link IDs; all records are counted in the class summary.

Code	Meaning
Class	NL NIC → compute leaf · LS compute leaf → spine · DL DPU → NS leaf · CV NS leaf → CVS · MG network cabinet 1G management · OU OOB 100G uplink · OI GPU rack in-rack 1G (OEM)
Module A / B	F MMA4Z00-NS-FLT · M MMA4Z00-NS · S MMS4X00-NS · Q MMA1Z00-NS400 · C MMA1B00-C100D · – none (copper)
Medium	J4 OM4 MPO-12 APC jumper · T4 OM4 trunk (fan-out legs at spine) · T2 OS2 trunk (fan-out legs at spine) · L4 OM4 MPO-12 jumper / trunk leg · CU Cat6A patch (in-cabinet) · CP Cat6A patch (in-cabinet PDU management)
Tray	TL jumper tray (both planes) · TA plane-A trunk tray · TB plane-B trunk tray · – in-cabinet
m / PP	Channel length in m / patch panels in the channel

NL NIC → compute leaf: 432 links, IDs L000001–L000538

Link	CI	End A	End B	Mod	Med	Tray	m	PP
L000001	NL	R001-CT01:NIC1:P1/1	CL-A-LG01-R1:P1/1	F/M	J4	TL	6.31	0
L000002	NL	R001-CT01:NIC1:P1/2	CL-B-LG01-R1:P1/1	F/M	J4	TL	9.31	0
L000003	NL	R001-CT01:NIC2:P1/1	CL-A-LG01-R2:P1/1	F/M	J4	TL	6.22	0
L000004	NL	R001-CT01:NIC2:P1/2	CL-B-LG01-R2:P1/1	F/M	J4	TL	9.22	0
L000005	NL	R001-CT01:NIC3:P1/1	CL-A-LG01-R3:P1/1	F/M	J4	TL	6.13	0
L000006	NL	R001-CT01:NIC3:P1/2	CL-B-LG01-R3:P1/1	F/M	J4	TL	9.13	0
L000007	NL	R001-CT01:NIC4:P1/1	CL-A-LG01-R4:P1/1	F/M	J4	TL	6.05	0
L000008	NL	R001-CT01:NIC4:P1/2	CL-B-LG01-R4:P1/1	F/M	J4	TL	9.05	0
L000011	NL	R001-CT02:NIC1:P1/1	CL-A-LG01-R1:P1/2	F/M	J4	TL	6.27	0
L000012	NL	R001-CT02:NIC1:P1/2	CL-B-LG01-R1:P1/2	F/M	J4	TL	9.27	0
L000013	NL	R001-CT02:NIC2:P1/1	CL-A-LG01-R2:P1/2	F/M	J4	TL	6.18	0
L000014	NL	R001-CT02:NIC2:P1/2	CL-B-LG01-R2:P1/2	F/M	J4	TL	9.18	0
L000015	NL	R001-CT02:NIC3:P1/1	CL-A-LG01-R3:P1/2	F/M	J4	TL	6.09	0
L000016	NL	R001-CT02:NIC3:P1/2	CL-B-LG01-R3:P1/2	F/M	J4	TL	9.09	0
L000017	NL	R001-CT02:NIC4:P1/1	CL-A-LG01-R4:P1/2	F/M	J4	TL	6.00	0
L000018	NL	R001-CT02:NIC4:P1/2	CL-B-LG01-R4:P1/2	F/M	J4	TL	9.00	0
L000021	NL	R001-CT03:NIC1:P1/1	CL-A-LG01-R1:P2/1	F/M	J4	TL	6.22	0
L000022	NL	R001-CT03:NIC1:P1/2	CL-B-LG01-R1:P2/1	F/M	J4	TL	9.22	0
L000023	NL	R001-CT03:NIC2:P1/1	CL-A-LG01-R2:P2/1	F/M	J4	TL	6.13	0
L000024	NL	R001-CT03:NIC2:P1/2	CL-B-LG01-R2:P2/1	F/M	J4	TL	9.13	0
L000025	NL	R001-CT03:NIC3:P1/1	CL-A-LG01-R3:P2/1	F/M	J4	TL	6.05	0
L000026	NL	R001-CT03:NIC3:P1/2	CL-B-LG01-R3:P2/1	F/M	J4	TL	9.05	0
L000027	NL	R001-CT03:NIC4:P1/1	CL-A-LG01-R4:P2/1	F/M	J4	TL	5.96	0
L000028	NL	R001-CT03:NIC4:P1/2	CL-B-LG01-R4:P2/1	F/M	J4	TL	8.96	0
L000031	NL	R001-CT04:NIC1:P1/1	CL-A-LG01-R1:P2/2	F/M	J4	TL	6.18	0
L000032	NL	R001-CT04:NIC1:P1/2	CL-B-LG01-R1:P2/2	F/M	J4	TL	9.18	0
L000033	NL	R001-CT04:NIC2:P1/1	CL-A-LG01-R2:P2/2	F/M	J4	TL	6.09	0
L000034	NL	R001-CT04:NIC2:P1/2	CL-B-LG01-R2:P2/2	F/M	J4	TL	9.09	0
L000035	NL	R001-CT04:NIC3:P1/1	CL-A-LG01-R3:P2/2	F/M	J4	TL	6.00	0
L000036	NL	R001-CT04:NIC3:P1/2	CL-B-LG01-R3:P2/2	F/M	J4	TL	9.00	0
L000037	NL	R001-CT04:NIC4:P1/1	CL-A-LG01-R4:P2/2	F/M	J4	TL	5.91	0
L000038	NL	R001-CT04:NIC4:P1/2	CL-B-LG01-R4:P2/2	F/M	J4	TL	8.91	0
L000041	NL	R001-CT05:NIC1:P1/1	CL-A-LG01-R1:P3/1	F/M	J4	TL	6.13	0
L000042	NL	R001-CT05:NIC1:P1/2	CL-B-LG01-R1:P3/1	F/M	J4	TL	9.13	0
L000043	NL	R001-CT05:NIC2:P1/1	CL-A-LG01-R2:P3/1	F/M	J4	TL	6.05	0
L000044	NL	R001-CT05:NIC2:P1/2	CL-B-LG01-R2:P3/1	F/M	J4	TL	9.05	0
L000045	NL	R001-CT05:NIC3:P1/1	CL-A-LG01-R3:P3/1	F/M	J4	TL	5.96	0
L000046	NL	R001-CT05:NIC3:P1/2	CL-B-LG01-R3:P3/1	F/M	J4	TL	8.96	0
L000047	NL	R001-CT05:NIC4:P1/1	CL-A-LG01-R4:P3/1	F/M	J4	TL	5.87	0
L000048	NL	R001-CT05:NIC4:P1/2	CL-B-LG01-R4:P3/1	F/M	J4	TL	8.87	0
L000051	NL	R001-CT06:NIC1:P1/1	CL-A-LG01-R1:P3/2	F/M	J4	TL	6.09	0
L000052	NL	R001-CT06:NIC1:P1/2	CL-B-LG01-R1:P3/2	F/M	J4	TL	9.09	0
L000053	NL	R001-CT06:NIC2:P1/1	CL-A-LG01-R2:P3/2	F/M	J4	TL	6.00	0
L000054	NL	R001-CT06:NIC2:P1/2	CL-B-LG01-R2:P3/2	F/M	J4	TL	9.00	0
L000055	NL	R001-CT06:NIC3:P1/1	CL-A-LG01-R3:P3/2	F/M	J4	TL	5.91	0
L000056	NL	R001-CT06:NIC3:P1/2	CL-B-LG01-R3:P3/2	F/M	J4	TL	8.91	0
L000057	NL	R001-CT06:NIC4:P1/1	CL-A-LG01-R4:P3/2	F/M	J4	TL	5.82	0
L000058	NL	R001-CT06:NIC4:P1/2	CL-B-LG01-R4:P3/2	F/M	J4	TL	8.82	0
L000061	NL	R001-CT07:NIC1:P1/1	CL-A-LG01-R1:P4/1	F/M	J4	TL	6.05	0
L000062	NL	R001-CT07:NIC1:P1/2	CL-B-LG01-R1:P4/1	F/M	J4	TL	9.05	0
L000063	NL	R001-CT07:NIC2:P1/1	CL-A-LG01-R2:P4/1	F/M	J4	TL	5.96	0
L000064	NL	R001-CT07:NIC2:P1/2	CL-B-LG01-R2:P4/1	F/M	J4	TL	8.96	0
L000065	NL	R001-CT07:NIC3:P1/1	CL-A-LG01-R3:P4/1	F/M	J4	TL	5.87	0
L000066	NL	R001-CT07:NIC3:P1/2	CL-B-LG01-R3:P4/1	F/M	J4	TL	8.87	0
L000067	NL	R001-CT07:NIC4:P1/1	CL-A-LG01-R4:P4/1	F/M	J4	TL	5.78	0

Link	CI	End A	End B	Mod	Med	Tray	m	PP
L000068	NL	R001-CT07:NIC4:P1/2	CL-B-LG01-R4:P4/1	F/M	J4	TL	8.78	0
L000071	NL	R001-CT08:NIC1:P1/1	CL-A-LG01-R1:P4/2	F/M	J4	TL	6.00	0
L000072	NL	R001-CT08:NIC1:P1/2	CL-B-LG01-R1:P4/2	F/M	J4	TL	9.00	0
L000073	NL	R001-CT08:NIC2:P1/1	CL-A-LG01-R2:P4/2	F/M	J4	TL	5.91	0
L000074	NL	R001-CT08:NIC2:P1/2	CL-B-LG01-R2:P4/2	F/M	J4	TL	8.91	0
L000075	NL	R001-CT08:NIC3:P1/1	CL-A-LG01-R3:P4/2	F/M	J4	TL	5.82	0
L000076	NL	R001-CT08:NIC3:P1/2	CL-B-LG01-R3:P4/2	F/M	J4	TL	8.82	0
L000077	NL	R001-CT08:NIC4:P1/1	CL-A-LG01-R4:P4/2	F/M	J4	TL	5.73	0
L000078	NL	R001-CT08:NIC4:P1/2	CL-B-LG01-R4:P4/2	F/M	J4	TL	8.73	0
L000081	NL	R001-CT09:NIC1:P1/1	CL-A-LG01-R1:P5/1	F/M	J4	TL	5.96	0
L000082	NL	R001-CT09:NIC1:P1/2	CL-B-LG01-R1:P5/1	F/M	J4	TL	8.96	0
L000083	NL	R001-CT09:NIC2:P1/1	CL-A-LG01-R2:P5/1	F/M	J4	TL	5.87	0
L000084	NL	R001-CT09:NIC2:P1/2	CL-B-LG01-R2:P5/1	F/M	J4	TL	8.87	0
L000085	NL	R001-CT09:NIC3:P1/1	CL-A-LG01-R3:P5/1	F/M	J4	TL	5.78	0
L000086	NL	R001-CT09:NIC3:P1/2	CL-B-LG01-R3:P5/1	F/M	J4	TL	8.78	0
L000087	NL	R001-CT09:NIC4:P1/1	CL-A-LG01-R4:P5/1	F/M	J4	TL	5.69	0
L000088	NL	R001-CT09:NIC4:P1/2	CL-B-LG01-R4:P5/1	F/M	J4	TL	8.69	0
L000091	NL	R001-CT10:NIC1:P1/1	CL-A-LG01-R1:P5/2	F/M	J4	TL	5.91	0
L000092	NL	R001-CT10:NIC1:P1/2	CL-B-LG01-R1:P5/2	F/M	J4	TL	8.91	0
L000093	NL	R001-CT10:NIC2:P1/1	CL-A-LG01-R2:P5/2	F/M	J4	TL	5.82	0
L000094	NL	R001-CT10:NIC2:P1/2	CL-B-LG01-R2:P5/2	F/M	J4	TL	8.82	0
L000095	NL	R001-CT10:NIC3:P1/1	CL-A-LG01-R3:P5/2	F/M	J4	TL	5.73	0
L000096	NL	R001-CT10:NIC3:P1/2	CL-B-LG01-R3:P5/2	F/M	J4	TL	8.73	0
L000097	NL	R001-CT10:NIC4:P1/1	CL-A-LG01-R4:P5/2	F/M	J4	TL	5.65	0
L000098	NL	R001-CT10:NIC4:P1/2	CL-B-LG01-R4:P5/2	F/M	J4	TL	8.65	0
L000101	NL	R001-CT11:NIC1:P1/1	CL-A-LG01-R1:P6/1	F/M	J4	TL	7.07	0
L000102	NL	R001-CT11:NIC1:P1/2	CL-B-LG01-R1:P6/1	F/M	J4	TL	10.07	0
L000103	NL	R001-CT11:NIC2:P1/1	CL-A-LG01-R2:P6/1	F/M	J4	TL	6.98	0
L000104	NL	R001-CT11:NIC2:P1/2	CL-B-LG01-R2:P6/1	F/M	J4	TL	9.98	0
L000105	NL	R001-CT11:NIC3:P1/1	CL-A-LG01-R3:P6/1	F/M	J4	TL	6.89	0
L000106	NL	R001-CT11:NIC3:P1/2	CL-B-LG01-R3:P6/1	F/M	J4	TL	9.89	0
L000107	NL	R001-CT11:NIC4:P1/1	CL-A-LG01-R4:P6/1	F/M	J4	TL	6.80	0
L000108	NL	R001-CT11:NIC4:P1/2	CL-B-LG01-R4:P6/1	F/M	J4	TL	9.80	0
L000111	NL	R001-CT12:NIC1:P1/1	CL-A-LG01-R1:P6/2	F/M	J4	TL	7.02	0
L000112	NL	R001-CT12:NIC1:P1/2	CL-B-LG01-R1:P6/2	F/M	J4	TL	10.02	0
L000113	NL	R001-CT12:NIC2:P1/1	CL-A-LG01-R2:P6/2	F/M	J4	TL	6.94	0
L000114	NL	R001-CT12:NIC2:P1/2	CL-B-LG01-R2:P6/2	F/M	J4	TL	9.94	0
L000115	NL	R001-CT12:NIC3:P1/1	CL-A-LG01-R3:P6/2	F/M	J4	TL	6.85	0
L000116	NL	R001-CT12:NIC3:P1/2	CL-B-LG01-R3:P6/2	F/M	J4	TL	9.85	0
L000117	NL	R001-CT12:NIC4:P1/1	CL-A-LG01-R4:P6/2	F/M	J4	TL	6.76	0
L000118	NL	R001-CT12:NIC4:P1/2	CL-B-LG01-R4:P6/2	F/M	J4	TL	9.76	0
L000121	NL	R001-CT13:NIC1:P1/1	CL-A-LG01-R1:P7/1	F/M	J4	TL	6.98	0
L000122	NL	R001-CT13:NIC1:P1/2	CL-B-LG01-R1:P7/1	F/M	J4	TL	9.98	0
L000123	NL	R001-CT13:NIC2:P1/1	CL-A-LG01-R2:P7/1	F/M	J4	TL	6.89	0
L000124	NL	R001-CT13:NIC2:P1/2	CL-B-LG01-R2:P7/1	F/M	J4	TL	9.89	0
L000125	NL	R001-CT13:NIC3:P1/1	CL-A-LG01-R3:P7/1	F/M	J4	TL	6.80	0
L000126	NL	R001-CT13:NIC3:P1/2	CL-B-LG01-R3:P7/1	F/M	J4	TL	9.80	0
L000127	NL	R001-CT13:NIC4:P1/1	CL-A-LG01-R4:P7/1	F/M	J4	TL	6.71	0
L000128	NL	R001-CT13:NIC4:P1/2	CL-B-LG01-R4:P7/1	F/M	J4	TL	9.71	0
L000131	NL	R001-CT14:NIC1:P1/1	CL-A-LG01-R1:P7/2	F/M	J4	TL	6.94	0
L000132	NL	R001-CT14:NIC1:P1/2	CL-B-LG01-R1:P7/2	F/M	J4	TL	9.94	0
L000133	NL	R001-CT14:NIC2:P1/1	CL-A-LG01-R2:P7/2	F/M	J4	TL	6.85	0
L000134	NL	R001-CT14:NIC2:P1/2	CL-B-LG01-R2:P7/2	F/M	J4	TL	9.85	0
L000135	NL	R001-CT14:NIC3:P1/1	CL-A-LG01-R3:P7/2	F/M	J4	TL	6.76	0
L000136	NL	R001-CT14:NIC3:P1/2	CL-B-LG01-R3:P7/2	F/M	J4	TL	9.76	0
L000137	NL	R001-CT14:NIC4:P1/1	CL-A-LG01-R4:P7/2	F/M	J4	TL	6.67	0

K&K DATA SERVICE INC. · inquiry@kkdatasvc.com

Link	CI	End A	End B	Mod	Med	Tray	m	PP	Link	CI	End A	End B	Mod	Med	Tray	m	PP	Link	CI	End A	End B	Mod	Med	Tray	m	PP	Link	CI	End A	End B	Mod	Med	Tray	m	PP
L016279	LS	CL-A-LG01-R2:P45/1	SP-A-25:P1/2	S/S	T2	TA	53.76	1	L016358	LS	CL-A-LG01-R3:P57/2	SP-A-50:P2/1	S/S	T2	TA	53.72	1	L023541	LS	CL-B-LG01-R1:P43/1	SP-B-21:P1/1	S/S	T2	TB	54.35	1	L023620	LS	CL-B-LG01-R2:P55/2	SP-B-46:P1/2	S/S	T2	TB	54.30	1
L016280	LS	CL-A-LG01-R2:P45/2	SP-A-26:P1/2	S/S	T2	TA	53.67	1	L016359	LS	CL-A-LG01-R3:P58/1	SP-A-51:P2/1	S/S	T2	TA	53.59	1	L023542	LS	CL-B-LG01-R1:P43/2	SP-B-22:P1/1	S/S	T2	TB	54.26	1	L023621	LS	CL-B-LG01-R2:P56/1	SP-B-47:P1/2	S/S	T2	TB	54.17	1
L016281	LS	CL-A-LG01-R2:P46/1	SP-A-27:P1/2	S/S	T2	TA	53.54	1	L016360	LS	CL-A-LG01-R3:P58/2	SP-A-52:P2/1	S/S	T2	TA	53.50	1	L023543	LS	CL-B-LG01-R1:P44/1	SP-B-23:P1/1	S/S	T2	TB	54.12	1	L023622	LS	CL-B-LG01-R2:P56/2	SP-B-48:P1/2	S/S	T2	TB	54.08	1
L016282	LS	CL-A-LG01-R2:P46/2	SP-A-28:P1/2	S/S	T2	TA	53.45	1	L016361	LS	CL-A-LG01-R3:P59/1	SP-A-53:P2/1	S/S	T2	TA	53.36	1	L023544	LS	CL-B-LG01-R1:P44/2	SP-B-24:P1/1	S/S	T2	TB	54.04	1	L023623	LS	CL-B-LG01-R2:P57/1	SP-B-49:P1/2	S/S	T2	TB	53.95	1
L016283	LS	CL-A-LG01-R2:P47/1	SP-A-29:P1/2	S/S	T2	TA	53.32	1	L016362	LS	CL-A-LG01-R3:P59/2	SP-A-54:P2/1	S/S	T2	TA	53.27	1	L023545	LS	CL-B-LG01-R1:P45/1	SP-B-25:P1/1	S/S	T2	TB	53.90	1	L023624	LS	CL-B-LG01-R2:P57/2	SP-B-50:P1/2	S/S	T2	TB	53.86	1
L016284	LS	CL-A-LG01-R2:P47/2	SP-A-30:P1/2	S/S	T2	TA	53.23	1	L016363	LS	CL-A-LG01-R4:P33/1	SP-A-01:P2/2	S/S	T2	TA	53.45	1	L023546	LS	CL-B-LG01-R1:P45/2	SP-B-26:P1/1	S/S	T2	TB	53.81	1	L023625	LS	CL-B-LG01-R2:P58/1	SP-B-51:P1/2	S/S	T2	TB	53.72	1
L016285	LS	CL-A-LG01-R2:P48/1	SP-A-31:P1/2	S/S	T2	TA	53.10	1	L016364	LS	CL-A-LG01-R4:P33/2	SP-A-02:P2/2	S/S	T2	TA	53.36	1	L023547	LS	CL-B-LG01-R1:P46/1	SP-B-27:P1/1	S/S	T2	TB	53.68	1	L023626	LS	CL-B-LG01-R2:P58/2	SP-B-52:P1/2	S/S	T2	TB	53.64	1
L016286	LS	CL-A-LG01-R2:P48/2	SP-A-32:P1/2	S/S	T2	TA	53.01	1	L016365	LS	CL-A-LG01-R4:P34/1	SP-A-03:P2/2	S/S	T2	TA	53.23	1	L023548	LS	CL-B-LG01-R1:P46/2	SP-B-28:P1/1	S/S	T2	TB	53.59	1	L023627	LS	CL-B-LG01-R2:P59/1	SP-B-53:P1/2	S/S	T2	TB	53.50	1
L016287	LS	CL-A-LG01-R2:P49/1	SP-A-33:P1/2	S/S	T2	TA	52.87	1	L016366	LS	CL-A-LG01-R4:P34/2	SP-A-04:P2/2	S/S	T2	TA	53.14	1	L023549	LS	CL-B-LG01-R1:P47/1	SP-B-29:P1/1	S/S	T2	TB	53.46	1	L023628	LS	CL-B-LG01-R2:P59/2	SP-B-54:P1/2	S/S	T2	TB	53.41	1
L016288	LS	CL-A-LG01-R2:P49/2	SP-A-34:P1/2	S/S	T2	TA	52.79	1	L016367	LS	CL-A-LG01-R4:P35/1	SP-A-05:P2/2	S/S	T2	TA	53.01	1	L023550	LS	CL-B-LG01-R1:P47/2	SP-B-30:P1/1	S/S	T2	TB	53.37	1	L023629	LS	CL-B-LG01-R3:P33/1	SP-B-01:P2/1	S/S	T2	TB	53.59	1
L016289	LS	CL-A-LG01-R2:P50/1	SP-A-35:P1/2	S/S	T2	TA	52.65	1	L016368	LS	CL-A-LG01-R4:P35/2	SP-A-06:P2/2	S/S	T2	TA	52.92	1	L023551	LS	CL-B-LG01-R1:P48/1	SP-B-31:P1/1	S/S	T2	TB	53.24	1	L023630	LS	CL-B-LG01-R3:P33/2	SP-B-02:P2/1	S/S	T2	TB	53.50	1
L016290	LS	CL-A-LG01-R2:P50/2	SP-A-36:P1/2	S/S	T2	TA	52.56	1	L016369	LS	CL-A-LG01-R4:P36/1	SP-A-07:P2/2	S/S	T2	TA	52.79	1	L023552	LS	CL-B-LG01-R1:P48/2	SP-B-32:P1/1	S/S	T2	TB	53.15	1	L023631	LS	CL-B-LG01-R3:P34/1	SP-B-03:P2/1	S/S	T2	TB	53.37	1
L016291	LS	CL-A-LG01-R2:P51/1	SP-A-37:P1/2	S/S	T2	TA	55.23	1	L016370	LS	CL-A-LG01-R4:P36/2	SP-A-08:P2/2	S/S	T2	TA	52.70	1	L023553	LS	CL-B-LG01-R1:P49/1	SP-B-33:P1/1	S/S	T2	TB	53.01	1	L023632	LS	CL-B-LG01-R3:P34/2	SP-B-04:P2/1	S/S	T2	TB	53.28	1
L016292	LS	CL-A-LG01-R2:P51/2	SP-A-38:P1/2	S/S	T2	TA	55.14	1	L016371	LS	CL-A-LG01-R4:P37/1	SP-A-09:P2/2	S/S	T2	TA	52.56	1	L023554	LS	CL-B-LG01-R1:P49/2	SP-B-34:P1/1	S/S	T2	TB	52.92	1	L023633	LS	CL-B-LG01-R3:P35/1	SP-B-05:P2/1	S/S	T2	TB	53.15	1
L016293	LS	CL-A-LG01-R2:P52/1	SP-A-39:P1/2	S/S	T2	TA	55.01	1	L016372	LS	CL-A-LG01-R4:P37/2	SP-A-10:P2/2	S/S	T2	TA	52.47	1	L023555	LS	CL-B-LG01-R1:P50/1	SP-B-35:P1/1	S/S	T2	TB	52.79	1	L023634	LS	CL-B-LG01-R3:P35/2	SP-B-06:P2/1	S/S	T2	TB	53.06	1
L016294	LS	CL-A-LG01-R2:P52/2	SP-A-40:P1/2	S/S	T2	TA	54.92	1	L016373	LS	CL-A-LG01-R4:P38/1	SP-A-11:P2/2	S/S	T2	TA	52.34	1	L023556	LS	CL-B-LG01-R1:P50/2	SP-B-36:P1/1	S/S	T2	TB	52.70	1	L023635	LS	CL-B-LG01-R3:P36/1	SP-B-07:P2/1	S/S	T2	TB	52.92	1
L016295	LS	CL-A-LG01-R2:P53/1	SP-A-41:P1/2	S/S	T2	TA	54.79	1	L016374	LS	CL-A-LG01-R4:P38/2	SP-A-12:P2/2	S/S	T2	TA	52.25	1	L023557	LS	CL-B-LG01-R1:P51/1	SP-B-37:P1/1	S/S	T2	TB	55.37	1	L023636	LS	CL-B-LG01-R3:P36/2	SP-B-08:P2/1	S/S	T2	TB	52.84	1
L016296	LS	CL-A-LG01-R2:P53/2	SP-A-42:P1/2	S/S	T2	TA	54.70	1	L016375	LS	CL-A-LG01-R4:P39/1	SP-A-13:P2/2	S/S	T2	TA	52.12	1	L023558	LS	CL-B-LG01-R1:P51/2	SP-B-38:P1/1	S/S	T2	TB	55.28	1	L023637	LS	CL-B-LG01-R3:P37/1	SP-B-09:P2/1	S/S	T2	TB	52.70	1
L016297	LS	CL-A-LG01-R2:P54/1	SP-A-43:P1/2	S/S	T2	TA	54.56	1	L016376	LS	CL-A-LG01-R4:P39/2	SP-A-14:P2/2	S/S	T2	TA	52.03	1	L023559	LS	CL-B-LG01-R1:P52/1	SP-B-39:P1/1	S/S	T2	TB	55.15	1	L023638	LS	CL-B-LG01-R3:P37/2	SP-B-10:P2/1	S/S	T2	TB	52.61	1
L016298	LS	CL-A-LG01-R2:P54/2	SP-A-44:P1/2	S/S	T2	TA	54.47	1	L016377	LS	CL-A-LG01-R4:P40/1	SP-A-15:P2/2	S/S	T2	TA	51.90	1	L023560	LS	CL-B-LG01-R1:P52/2	SP-B-40:P1/1	S/S	T2	TB	55.06	1	L023639	LS	CL-B-LG01-R3:P38/1	SP-B-11:P2/1	S/S	T2	TB	52.48	1
L016299	LS	CL-A-LG01-R2:P55/1	SP-A-45:P1/2	S/S	T2	TA	54.34	1	L016378	LS	CL-A-LG01-R4:P40/2	SP-A-16:P2/2	S/S	T2	TA	51.81	1	L023561	LS	CL-B-LG01-R1:P53/1	SP-B-41:P1/1	S/S	T2	TB	54.92	1	L023640	LS	CL-B-LG01-R3:P38/2	SP-B-12:P2/1	S/S	T2	TB	52.39	1
L016300	LS	CL-A-LG01-R2:P55/2	SP-A-46:P1/2	S/S	T2	TA	54.25	1	L016379	LS	CL-A-LG01-R4:P41/1	SP-A-17:P2/2	S/S	T2	TA	51.67	1	L023562	LS	CL-B-LG01-R1:P53/2	SP-B-42:P1/1	S/S	T2	TB	54.84	1	L023641	LS	CL-B-LG01-R3:P39/1	SP-B-13:P2/1	S/S	T2	TB	52.26	1
L016301	LS	CL-A-LG01-R2:P56/1	SP-A-47:P1/2	S/S	T2	TA	54.12	1	L016380	LS	CL-A-LG01-R4:P41/2	SP-A-18:P2/2	S/S	T2	TA	51.59	1	L023563	LS	CL-B-LG01-R1:P54/1	SP-B-43:P1/1	S/S	T2	TB	54.70	1	L023642	LS	CL-B-LG01-R3:P39/2	SP-B-14:P2/1	S/S	T2	TB	52.17	1
L016302	LS	CL-A-LG01-R2:P56/2	SP-A-48:P1/2	S/S	T2	TA	54.03	1	L016381	LS	CL-A-LG01-R4:P42/1	SP-A-19:P2/2	S/S	T2	TA	54.25	1	L023564	LS	CL-B-LG01-R1:P54/2	SP-B-44:P1/1	S/S	T2	TB	54.61	1	L023643	LS	CL-B-LG01-R3:P40/1	SP-B-15:P2/1	S/S	T2	TB	52.04	1
L016303	LS	CL-A-LG01-R2:P57/1	SP-A-49:P1/2	S/S	T2	TA	53.90	1	L016382	LS	CL-A-LG01-R4:P42/2	SP-A-20:P2/2	S/S	T2	TA	54.16	1	L023565	LS	CL-B-LG01-R1:P55/1	SP-B-45:P1/1	S/S	T2	TB	54.48	1	L023644	LS	CL-B-LG01-R3:P40/2	SP-B-16:P2/1	S/S	T2	TB	51.95	1
L016304	LS	CL-A-LG01-R2:P57/2	SP-A-50:P1/2	S/S	T2	TA	53.81	1	L016383	LS	CL-A-LG01-R4:P43/1	SP-A-21:P2/2	S/S	T2	TA	54.03	1	L023566	LS	CL-B-LG01-R1:P55/2	SP-B-46:P1/1	S/S	T2	TB	54.39	1	L023645	LS	CL-B-LG01-R3:P41/1	SP-B-17:P2/1	S/S	T2	TB	51.81	1
L016305	LS	CL-A-LG01-R2:P58/1	SP-A-51:P1/2	S/S	T2	TA	53.67	1	L016384	LS	CL-A-LG01-R4:P43/2	SP-A-22:P2/2	S/S	T2	TA	53.94	1	L023567	LS	CL-B-LG01-R1:P56/1	SP-B-47:P1/1	S/S	T2	TB	54.26	1	L023646	LS	CL-B-LG01-R3:P41/2	SP-B-18:P2/1	S/S	T2	TB	51.72	1
L016306	LS	CL-A-LG01-R2:P58/2	SP-A-52:P1/2	S/S	T2	TA	53.59	1	L016385	LS	CL-A-LG01-R4:P44/1	SP-A-23:P2/2	S/S	T2	TA	53.81	1	L023568	LS	CL-B-LG01-R1:P56/2	SP-B-48:P1/1	S/S	T2	TB	54.17	1	L023647	LS	CL-B-LG01-R3:P42/1	SP-B-19:P2/1	S/S	T2	TB	54.39	1
L016307	LS	CL-A-LG01-R2:P59/1	SP-A-53:P1/2	S/S	T2	TA	53.45	1	L016386	LS	CL-A-LG01-R4:P44/2	SP-A-24:P2/2	S/S	T2	TA	53.72	1	L023569	LS	CL-B-LG01-R1:P57/1	SP-B-49:P1/1	S/S	T2	TB	54.04	1	L023648	LS	CL-B-LG01-R3:P42/2	SP-B-20:P2/1	S/S	T2	TB	54.30	1
L016308	LS	CL-A-LG01-R2:P59/2	SP-A-54:P1/2	S/S	T2	TA	53.36	1	L016387	LS	CL-A-LG01-R4:P45/1	SP-A-25:P2/2	S/S	T2	TA	53.59	1	L023570	LS	CL-B-LG01-R1:P57/2	SP-B-50:P1/1	S/S	T2	TB	53.95	1	L023649	LS	CL-B-LG01-R3:P43/1	SP-B-21:P2/1	S/S	T2	TB	54.17	1
L016309	LS	CL-A-LG01-R3:P33/1	SP-A-01:P2/1	S/S	T2	TA	53.54	1	L016388	LS	CL-A-LG01-R4:P45/2	SP-A-26:P2/2	S/S	T2	TA	53.50	1	L023571	LS	CL-B-LG01-R1:P58/1	SP-B-51:P1/1	S/S	T2	TB	53.81	1	L023650	LS	CL-B-LG01-R3:P43/2	SP-B-22:P2/1	S/S	T2	TB	54.08	1
L016310	LS	CL-A-LG01-R3:P33/2	SP-A-02:P2/1	S/S	T2	TA	53.45	1	L016389	LS	CL-A-LG01-R4:P46/1	SP-A-27:P2/2	S/S	T2	TA	53.36	1	L023572	LS	CL-B-LG01-R1:P58/2	SP-B-52:P1/1	S/S	T2	TB	53.72	1	L023651	LS	CL-B-LG01-R3:P44/1	SP-B-23:P2/1	S/S	T2	TB	53.95	1
L016311	LS	CL-A-LG01-R3:P34/1	SP-A-03:P2/1	S/S	T2	TA	53.32	1	L016390	LS	CL-A-LG01-R4:P46/2	SP-A-28:P2/2	S/S	T2	TA	53.27	1	L023573	LS	CL-B-LG01-R1:P59/1	SP-B-53:P1/1	S/S	T2	TB	53.59	1	L023652	LS	CL-B-LG01-R3:P44/2	SP-B-24:P2/1	S/S	T2	TB	53.86	1
L016312	LS	CL-A-LG01-R3:P34/2	SP-A-04:P2/1	S/S	T2	TA	53.23	1	L016391	LS	CL-A-LG01-R4:P47/1	SP-A-29:P2/2	S/S	T2	TA	53.14	1	L023574	LS	CL-B-LG01-R1:P59/2	SP-B-54:P1/1	S/S	T2	TB	53.50	1	L023653	LS	CL-B-LG01-R3:P45/1	SP-B-25:P2/1	S/S	T2	TB	53.72	1
L016313	LS	CL-A-LG01-R3:P35/1	SP-A-05:P2/1	S/S	T2	TA	53.10	1	L016392	LS	CL-A-LG01-R4:P47/2	SP-A-30:P2/2	S/S	T2	TA	53.05	1	L023575	LS	CL-B-LG01-R2:P33/1	SP-B-01:P1/2	S/S	T2	TB	53.68	1	L023654	LS	CL-B-LG01-R3:P45/2	SP-B-26:P2/1	S/S	T2	TB	53.64	1
L016314	LS	CL-A-LG01-R3:P35/2	SP-A-06:P2/1	S/S	T2	TA	53.01	1	L016393	LS	CL-A-LG01-R4:P48/1	SP-A-31:P2/2	S/S	T2	TA	52.92	1	L023576	LS	CL-B-LG01-R2:P33/2	SP-B-02:P1/2	S/S	T2	TB	53.59	1	L023655	LS							

Link	CI	End A	End B	Mod	Med	Tray	m	PP
L023699	LS	CL-B-LG01-R4:P41/1	SP-B-17:P2/2	S/S	T2	TB	51.72	1
L023700	LS	CL-B-LG01-R4:P41/2	SP-B-18:P2/2	S/S	T2	TB	51.64	1
L023701	LS	CL-B-LG01-R4:P42/1	SP-B-19:P2/2	S/S	T2	TB	54.30	1
L023702	LS	CL-B-LG01-R4:P42/2	SP-B-20:P2/2	S/S	T2	TB	54.21	1
L023703	LS	CL-B-LG01-R4:P43/1	SP-B-21:P2/2	S/S	T2	TB	54.08	1
L023704	LS	CL-B-LG01-R4:P43/2	SP-B-22:P2/2	S/S	T2	TB	53.99	1
L023705	LS	CL-B-LG01-R4:P44/1	SP-B-23:P2/2	S/S	T2	TB	53.86	1
L023706	LS	CL-B-LG01-R4:P44/2	SP-B-24:P2/2	S/S	T2	TB	53.77	1
L023707	LS	CL-B-LG01-R4:P45/1	SP-B-25:P2/2	S/S	T2	TB	53.64	1
L023708	LS	CL-B-LG01-R4:P45/2	SP-B-26:P2/2	S/S	T2	TB	53.55	1
L023709	LS	CL-B-LG01-R4:P46/1	SP-B-27:P2/2	S/S	T2	TB	53.41	1
L023710	LS	CL-B-LG01-R4:P46/2	SP-B-28:P2/2	S/S	T2	TB	53.32	1
L023711	LS	CL-B-LG01-R4:P47/1	SP-B-29:P2/2	S/S	T2	TB	53.19	1
L023712	LS	CL-B-LG01-R4:P47/2	SP-B-30:P2/2	S/S	T2	TB	53.10	1
L023713	LS	CL-B-LG01-R4:P48/1	SP-B-31:P2/2	S/S	T2	TB	52.97	1
L023714	LS	CL-B-LG01-R4:P48/2	SP-B-32:P2/2	S/S	T2	TB	52.88	1
L023715	LS	CL-B-LG01-R4:P49/1	SP-B-33:P2/2	S/S	T2	TB	52.75	1
L023716	LS	CL-B-LG01-R4:P49/2	SP-B-34:P2/2	S/S	T2	TB	52.66	1
L023717	LS	CL-B-LG01-R4:P50/1	SP-B-35:P2/2	S/S	T2	TB	52.52	1
L023718	LS	CL-B-LG01-R4:P50/2	SP-B-36:P2/2	S/S	T2	TB	52.44	1
L023719	LS	CL-B-LG01-R4:P51/1	SP-B-37:P2/2	S/S	T2	TB	55.10	1
L023720	LS	CL-B-LG01-R4:P51/2	SP-B-38:P2/2	S/S	T2	TB	55.01	1
L023721	LS	CL-B-LG01-R4:P52/1	SP-B-39:P2/2	S/S	T2	TB	54.88	1
L023722	LS	CL-B-LG01-R4:P52/2	SP-B-40:P2/2	S/S	T2	TB	54.79	1
L023723	LS	CL-B-LG01-R4:P53/1	SP-B-41:P2/2	S/S	T2	TB	54.66	1
L023724	LS	CL-B-LG01-R4:P53/2	SP-B-42:P2/2	S/S	T2	TB	54.57	1
L023725	LS	CL-B-LG01-R4:P54/1	SP-B-43:P2/2	S/S	T2	TB	54.44	1
L023726	LS	CL-B-LG01-R4:P54/2	SP-B-44:P2/2	S/S	T2	TB	54.35	1
L023727	LS	CL-B-LG01-R4:P55/1	SP-B-45:P2/2	S/S	T2	TB	54.21	1
L023728	LS	CL-B-LG01-R4:P55/2	SP-B-46:P2/2	S/S	T2	TB	54.12	1
L023729	LS	CL-B-LG01-R4:P56/1	SP-B-47:P2/2	S/S	T2	TB	53.99	1
L023730	LS	CL-B-LG01-R4:P56/2	SP-B-48:P2/2	S/S	T2	TB	53.90	1
L023731	LS	CL-B-LG01-R4:P57/1	SP-B-49:P2/2	S/S	T2	TB	53.77	1
L023732	LS	CL-B-LG01-R4:P57/2	SP-B-50:P2/2	S/S	T2	TB	53.68	1
L023733	LS	CL-B-LG01-R4:P58/1	SP-B-51:P2/2	S/S	T2	TB	53.55	1
L023734	LS	CL-B-LG01-R4:P58/2	SP-B-52:P2/2	S/S	T2	TB	53.46	1
L023735	LS	CL-B-LG01-R4:P59/1	SP-B-53:P2/2	S/S	T2	TB	53.32	1
L023736	LS	CL-B-LG01-R4:P59/2	SP-B-54:P2/2	S/S	T2	TB	53.24	1

DL DPU → NS leaf: 108 links, IDs L000009–L000540

Link	CI	End A	End B	Mod	Med	Tray	m	PP
L000009	DL	R001-CT01:DPU:P1	NS-A-LG01:P1/1	Q/M	J4	TL	6.58	0
L000010	DL	R001-CT01:DPU:P2	NS-B-LG01:P1/1	Q/M	J4	TL	9.58	0
L000019	DL	R001-CT02:DPU:P1	NS-A-LG01:P1/2	Q/M	J4	TL	6.53	0
L000020	DL	R001-CT02:DPU:P2	NS-B-LG01:P1/2	Q/M	J4	TL	9.53	0
L000029	DL	R001-CT03:DPU:P1	NS-A-LG01:P2/1	Q/M	J4	TL	6.49	0
L000030	DL	R001-CT03:DPU:P2	NS-B-LG01:P2/1	Q/M	J4	TL	9.49	0
L000039	DL	R001-CT04:DPU:P1	NS-A-LG01:P2/2	Q/M	J4	TL	6.45	0
L000040	DL	R001-CT04:DPU:P2	NS-B-LG01:P2/2	Q/M	J4	TL	9.45	0
L000049	DL	R001-CT05:DPU:P1	NS-A-LG01:P3/1	Q/M	J4	TL	6.40	0
L000050	DL	R001-CT05:DPU:P2	NS-B-LG01:P3/1	Q/M	J4	TL	9.40	0
L000059	DL	R001-CT06:DPU:P1	NS-A-LG01:P3/2	Q/M	J4	TL	6.36	0
L000060	DL	R001-CT06:DPU:P2	NS-B-LG01:P3/2	Q/M	J4	TL	9.36	0
L000069	DL	R001-CT07:DPU:P1	NS-A-LG01:P4/1	Q/M	J4	TL	6.31	0
L000070	DL	R001-CT07:DPU:P2	NS-B-LG01:P4/1	Q/M	J4	TL	9.31	0
L000079	DL	R001-CT08:DPU:P1	NS-A-LG01:P4/2	Q/M	J4	TL	6.27	0
L000080	DL	R001-CT08:DPU:P2	NS-B-LG01:P4/2	Q/M	J4	TL	9.27	0
L000089	DL	R001-CT09:DPU:P1	NS-A-LG01:P5/1	Q/M	J4	TL	6.22	0
L000090	DL	R001-CT09:DPU:P2	NS-B-LG01:P5/1	Q/M	J4	TL	9.22	0
L000099	DL	R001-CT10:DPU:P1	NS-A-LG01:P5/2	Q/M	J4	TL	6.18	0
L000100	DL	R001-CT10:DPU:P2	NS-B-LG01:P5/2	Q/M	J4	TL	9.18	0
L000109	DL	R001-CT11:DPU:P1	NS-A-LG01:P6/1	Q/M	J4	TL	7.34	0
L000110	DL	R001-CT11:DPU:P2	NS-B-LG01:P6/1	Q/M	J4	TL	10.34	0
L000119	DL	R001-CT12:DPU:P1	NS-A-LG01:P6/2	Q/M	J4	TL	7.29	0
L000120	DL	R001-CT12:DPU:P2	NS-B-LG01:P6/2	Q/M	J4	TL	10.29	0
L000129	DL	R001-CT13:DPU:P1	NS-A-LG01:P7/1	Q/M	J4	TL	7.25	0
L000130	DL	R001-CT13:DPU:P2	NS-B-LG01:P7/1	Q/M	J4	TL	10.25	0
L000139	DL	R001-CT14:DPU:P1	NS-A-LG01:P7/2	Q/M	J4	TL	7.20	0
L000140	DL	R001-CT14:DPU:P2	NS-B-LG01:P7/2	Q/M	J4	TL	10.20	0
L000149	DL	R001-CT15:DPU:P1	NS-A-LG01:P8/1	Q/M	J4	TL	7.16	0
L000150	DL	R001-CT15:DPU:P2	NS-B-LG01:P8/1	Q/M	J4	TL	10.16	0
L000159	DL	R001-CT16:DPU:P1	NS-A-LG01:P8/2	Q/M	J4	TL	7.11	0
L000160	DL	R001-CT16:DPU:P2	NS-B-LG01:P8/2	Q/M	J4	TL	10.11	0
L000169	DL	R001-CT17:DPU:P1	NS-A-LG01:P9/1	Q/M	J4	TL	7.07	0
L000170	DL	R001-CT17:DPU:P2	NS-B-LG01:P9/1	Q/M	J4	TL	10.07	0
L000179	DL	R001-CT18:DPU:P1	NS-A-LG01:P9/2	Q/M	J4	TL	7.02	0
L000180	DL	R001-CT18:DPU:P2	NS-B-LG01:P9/2	Q/M	J4	TL	10.02	0
L000189	DL	R002-CT01:DPU:P1	NS-A-LG01:P10/1	Q/M	J4	TL	7.18	0
L000190	DL	R002-CT01:DPU:P2	NS-B-LG01:P10/1	Q/M	J4	TL	8.98	0
L000199	DL	R002-CT02:DPU:P1	NS-A-LG01:P10/2	Q/M	J4	TL	7.13	0
L000200	DL	R002-CT02:DPU:P2	NS-B-LG01:P10/2	Q/M	J4	TL	8.93	0
L000209	DL	R002-CT03:DPU:P1	NS-A-LG01:P11/1	Q/M	J4	TL	7.09	0
L000210	DL	R002-CT03:DPU:P2	NS-B-LG01:P11/1	Q/M	J4	TL	8.89	0
L000219	DL	R002-CT04:DPU:P1	NS-A-LG01:P11/2	Q/M	J4	TL	7.05	0
L000220	DL	R002-CT04:DPU:P2	NS-B-LG01:P11/2	Q/M	J4	TL	8.85	0
L000229	DL	R002-CT05:DPU:P1	NS-A-LG01:P12/1	Q/M	J4	TL	7.00	0
L000230	DL	R002-CT05:DPU:P2	NS-B-LG01:P12/1	Q/M	J4	TL	8.80	0
L000239	DL	R002-CT06:DPU:P1	NS-A-LG01:P12/2	Q/M	J4	TL	6.96	0
L000240	DL	R002-CT06:DPU:P2	NS-B-LG01:P12/2	Q/M	J4	TL	8.76	0
L000249	DL	R002-CT07:DPU:P1	NS-A-LG01:P13/1	Q/M	J4	TL	6.91	0
L000250	DL	R002-CT07:DPU:P2	NS-B-LG01:P13/1	Q/M	J4	TL	8.71	0
L000259	DL	R002-CT08:DPU:P1	NS-A-LG01:P13/2	Q/M	J4	TL	6.87	0
L000260	DL	R002-CT08:DPU:P2	NS-B-LG01:P13/2	Q/M	J4	TL	8.67	0
L000269	DL	R002-CT09:DPU:P1	NS-A-LG01:P14/1	Q/M	J4	TL	6.82	0
L000270	DL	R002-CT09:DPU:P2	NS-B-LG01:P14/1	Q/M	J4	TL	8.62	0
L000279	DL	R002-CT10:DPU:P1	NS-A-LG01:P14/2	Q/M	J4	TL	6.78	0
L000280	DL	R002-CT10:DPU:P2	NS-B-LG01:P14/2	Q/M	J4	TL	8.58	0
L000289	DL	R002-CT11:DPU:P1	NS-A-LG01:P15/1	Q/M	J4	TL	7.94	0
L000290	DL	R002-CT11:DPU:P2	NS-B-LG01:P15/1	Q/M	J4	TL	9.74	0
L000299	DL	R002-CT12:DPU:P1	NS-A-LG01:P15/2	Q/M	J4	TL	7.89	0
L000300	DL	R002-CT12:DPU:P2	NS-B-LG01:P15/2	Q/M	J4	TL	9.69	0
L000309	DL	R002-CT13:DPU:P1	NS-A-LG01:P16/1	Q/M	J4	TL	7.85	0
L000310	DL	R002-CT13:DPU:P2	NS-B-LG01:P16/1	Q/M	J4	TL	9.65	0
L000319	DL	R002-CT14:DPU:P1	NS-A-LG01:P16/2	Q/M	J4	TL	7.80	0
L000320	DL	R002-CT14:DPU:P2	NS-B-LG01:P16/2	Q/M	J4	TL	9.60	0
L000329	DL	R002-CT15:DPU:P1	NS-A-LG01:P17/1	Q/M	J4	TL	7.76	0
L000330	DL	R002-CT15:DPU:P2	NS-B-LG01:P17/1	Q/M	J4	TL	9.56	0
L000339	DL	R002-CT16:DPU:P1	NS-A-LG01:P17/2	Q/M	J4	TL	7.71	0
L000340	DL	R002-CT16:DPU:P2	NS-B-LG01:P17/2	Q/M	J4	TL	9.51	0
L000349	DL	R002-CT17:DPU:P1	NS-A-LG01:P18/1	Q/M	J4	TL	7.67	0
L000350	DL	R002-CT17:DPU:P2	NS-B-LG01:P18/1	Q/M	J4	TL	9.47	0
L000359	DL	R002-CT18:DPU:P1	NS-A-LG01:P18/2	Q/M	J4	TL	7.62	0
L000360	DL	R002-CT18:DPU:P2	NS-B-LG01:P18/2	Q/M	J4	TL	9.42	0
L000369	DL	R003-CT01:DPU:P1	NS-A-LG01:P19/1	Q/M	J4	TL	7.78	0
L000370	DL	R003-CT01:DPU:P2	NS-B-LG01:P19/1	Q/M	J4	TL	8.38	0
L000379	DL	R003-CT02:DPU:P1	NS-A-LG01:P19/2	Q/M	J4	TL	7.73	0
L000380	DL	R003-CT02:DPU:P2	NS-B-LG01:P19/2	Q/M	J4	TL	8.33	0
L000389	DL	R003-CT03:DPU:P1	NS-A-LG01:P20/1	Q/M	J4	TL	7.69	0
L000390	DL	R003-CT03:DPU:P2	NS-B-LG01:P20/1	Q/M	J4	TL	8.29	0

Link	CI	End A	End B	Mod	Med	Tray	m	PP
L000399	DL	R003-CT04:DPU:P1	NS-A-LG01:P20/2	Q/M	J4	TL	7.65	0
L000400	DL	R003-CT04:DPU:P2	NS-B-LG01:P20/2	Q/M	J4	TL	8.25	0
L000409	DL	R003-CT05:DPU:P1	NS-A-LG01:P21/1	Q/M	J4	TL	7.60	0
L000410	DL	R003-CT05:DPU:P2	NS-B-LG01:P21/1	Q/M	J4	TL	8.20	0
L000419	DL	R003-CT06:DPU:P1	NS-A-LG01:P21/2	Q/M	J4	TL	7.56	0
L000420	DL	R003-CT06:DPU:P2	NS-B-LG01:P21/2	Q/M	J4	TL	8.16	0
L000429	DL	R003-CT07:DPU:P1	NS-A-LG01:P22/1	Q/M	J4	TL	7.51	0
L000430	DL	R003-CT07:DPU:P2	NS-B-LG01:P22/1	Q/M	J4	TL	8.11	0
L000439	DL	R003-CT08:DPU:P1	NS-A-LG01:P22/2	Q/M	J4	TL	7.47	0
L000440	DL	R003-CT08:DPU:P2	NS-B-LG01:P22/2	Q/M	J4	TL	8.07	0
L000449	DL	R003-CT09:DPU:P1	NS-A-LG01:P23/1	Q/M	J4	TL	7.42	0
L000450	DL	R003-CT09:DPU:P2	NS-B-LG01:P23/1	Q/M	J4	TL	8.02	0
L000459	DL	R003-CT10:DPU:P1	NS-A-LG01:P23/2	Q/M	J4	TL	7.38	0
L000460	DL	R003-CT10:DPU:P2	NS-B-LG01:P23/2	Q/M	J4	TL	7.98	0
L000469	DL	R003-CT11:DPU:P1	NS-A-LG01:P24/1	Q/M	J4	TL	8.54	0
L000470	DL	R003-CT11:DPU:P2	NS-B-LG01:P24/1	Q/M	J4	TL	9.14	0
L000479	DL	R003-CT12:DPU:P1	NS-A-LG01:P24/2	Q/M	J4	TL	8.49	0
L000480	DL	R003-CT12:DPU:P2	NS-B-LG01:P24/2	Q/M	J4	TL	9.09	0
L000489	DL	R003-CT13:DPU:P1	NS-A-LG01:P25/1	Q/M	J4	TL	8.45	0
L000490	DL	R003-CT13:DPU:P2	NS-B-LG01:P25/1	Q/M	J4	TL	9.05	0
L000499	DL	R003-CT14:DPU:P1	NS-A-LG01:P25/2	Q/M	J4	TL	8.40	0
L000500	DL	R003-CT14:DPU:P2	NS-B-LG01:P25/2	Q/M	J4	TL	9.00	0
L000509	DL	R003-CT15:DPU:P1	NS-A-LG01:P26/1	Q/M	J4	TL	8.36	0
L000510	DL	R003-CT15:DPU:P2	NS-B-LG01:P26/1	Q/M	J4	TL	8.96	0
L000519	DL	R003-CT16:DPU:P1	NS-A-LG01:P26/2	Q/M	J4	TL	8.31	0
L000520	DL	R003-CT16:DPU:P2	NS-B-LG01:P26/2	Q/M	J4	TL	8.91	0
L000529	DL	R003-CT17:DPU:P1	NS-A-LG01:P27/1	Q/M	J4	TL	8.27	0
L000530	DL	R003-CT17:DPU:P2	NS-B-LG01:P27/1	Q/M	J4	TL	8.87	0
L000539	DL	R003-CT18:DPU:P1	NS-A-LG01:P27/2	Q/M	J4	TL	8.27	0
L000540	DL	R003-CT18:DPU:P2	NS-B-LG01:P27/2	Q/M	J4	TL	8.82	0

A8 Trays, trunks and cable units

Tray sections at the maximum-occupancy and typical positions (N-502-EN)

Tray	Case	X (mm)	Width (mm)	Depth (mm)	Y0 (mm)	Y1 (mm)	Bottom Z (mm)	Cables	Cable area (mm²)	Fill (%)	Fill limit (%)	Cable load (kg/m)
TL	Maximum occupancy	2755	400	100	2900	3300	3550	540	3817.0	9.5	40.0	6.48
TL	Typical (median)	41045	400	100	2900	3300	3550	540	3817.0	9.5	40.0	6.48
TA	Maximum occupancy	49095	600	200	3450	4050	3900	341	30559.0	25.5	40.0	39.48
TA	Typical (median)	78845	600	200	3450	4050	3900	168	15262.0	12.7	40.0	19.71
TB	Maximum occupancy	54745	600	200	2150	2750	3900	336	30524.0	25.4	40.0	39.42
TB	Typical (median)	78845	600	200	2150	2750	3900	168	15262.0	12.7	40.0	19.71

Trunks by destination and cable counting units (N-503-EN)

Tray	Destination cabinet	MPO-12 legs	Trunks	Fibres
TA	CVS-A	840	60	10,080
TA	SPA-1	2,160	120	25,920
TA	SPA-2	2,160	120	25,920
TA	SPA-3	2,160	120	25,920
TB	CVS-B	840	60	10,080

Tray	Destination cabinet	MPO-12 legs	Trunks	Fibres
TB	SPB-1	2,160	120	25,920
TB	SPB-2	2,160	120	25,920
TB	SPB-3	2,160	120	25,920
Total		14,640	840	175,680

Unit	Definition	Status
Jumper	MPO-12 APC jumper, OD 3.0 mm	DESIGN
Trunk	18 × MPO-12 legs / 216 fibres, OD 13.0 mm envelope	DESIGN; product CONFIRM
Static bend radius	10 × OD (trunk 13 mm → 130 mm)	DESIGN
Installation bend radius	20 × OD	DESIGN
Tray fill limit	40 % of cross-section area	DESIGN; EOR CONFIRM
End slack	0.5 m per end	DESIGN

- Plane-A trunks use TA only, plane-B trunks use TB only; NIC and DPU jumpers use TL.
- Trunks = Σ roundup(legs per leaf–destination pair ÷ 18). Destinations CVS-A / CVS-B are the north–south spine cabinets.
- The fill profile along X is plotted on N-503-EN; maximum fill TA 25.5 % at X49095, TB 25.4 % at X54745, TL 9.5 %.

A9 Failure domains

Affected endpoints per event (N-103-EN, N-801-EN). Monthly 99.999 % is a design target (24.192 / 25.056 / 25.920 / 26.784 s for 28 / 29 / 30 / 31-day months), not a measured result. "One plane unreachable" does not mean zero interruption; recovery times are measured at commissioning. Generator-segment rows are risk cases after battery depletion. Single UPS output rows are results of the reference connectivity mapping of network cabinets to UPS paths, not operating tests. Common causes that remain: one CX-8 NIC uses one OSFP cage for both planes; the TL tray carries the jumpers of both planes; 27 of 40 network cabinets have both UPS paths in one generator segment.

Level	Event	Object	NICs: host power lost	NICs: both planes unreachable	NICs: one plane unreachable	NICs: both planes	BF3 trays: host lost	BF3 trays: no path	BF3 trays: one port	OOB racks: host lost	OOB racks: no path	OOB racks: one path	Min. leaf uplink fraction	NS capacity A (fraction)	NS capacity B (fraction)
Cable	One NIC→leaf jumper broken	L000001	0	0	1	6479	0	0	0	0	0	0	1.0	1.0	1.0
Cable	One leaf→spine link broken	L016201	0	0	0	6480	0	0	0	0	0	0	0.9815	1.0	1.0
Port / module	One leaf port cage (optical module) failed	CL-A-LG01-R1:P1	0	0	2	6478	0	0	0	0	0	0	1.0	1.0	1.0
Port / NIC	One CX-8 NIC (both half-ports share one cage) failed	R001-CT01-NIC1	0	1	0	6479	0	0	0	0	0	0	1.0	1.0	1.0
Device	One compute leaf failed	CL-A-LG01-R1	0	0	54	6426	0	0	0	0	0	0	1.0	1.0	1.0
Device	One compute spine failed	SP-A-01	0	0	0	6480	0	0	0	0	0	0	0.9815	1.0	1.0
Device	One north–south leaf failed	NS-A-LG01	0	0	0	6480	0	0	54	0	0	0	1.0	0.9667	1.0
Cabinet	One plane-A network cabinet lost (NETA-CU08)	NETA-CU08	0	0	432	6048	0	0	108	0	0	0	1.0	0.9333	1.0
Cabinet	Spine cabinet SPA-1 lost	SPA-1	0	0	0	6480	0	0	0	0	0	0	0.6667	1.0	1.0
Plane	Entire plane A lost (all A leaf/spine/NS leaf/CVS)	plane A	0	0	6480	0	0	0	1620	0	0	0	1.0	0.0	1.0
Tray (whole run)	All links in tray TA lost (whole trunk run damaged)	TA	0	0	6480	0	0	0	1620	0	0	0	0.0	0.0	1.0
Tray (whole run)	All links in tray TB lost (whole trunk run damaged)	TB	0	0	6480	0	0	0	1620	0	0	0	0.0	1.0	0.0
Tray (local cut)	TA cut at X30000 (unit CU-05, cabinet R029 X29845–30445); links passing the cut lost	TA@X30000	0	0	2160	4320	0	0	540	0	0	0	0.0	0.6667	1.0
Tray (local cut)	TB cut at X30000 (unit CU-05, cabinet R029 X29845–30445); links passing the cut lost	TB@X30000	0	0	1728	4752	0	0	432	0	0	0	0.0	1.0	0.7333
Tray (whole run)	All jumpers in the TL section of unit CU-08 lost	TL@CU-08	0	432	0	6048	0	108	0	0	0	0	1.0	1.0	1.0
Tray (local cut)	TL cut at X59945 (between R045 and R046)	TL@X59945	0	0	432	6048	0	0	108	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-01	UPS7-01	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-02	UPS7-02	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-03	UPS7-03	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-04	UPS7-04	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-05	UPS7-05	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS7-06	UPS7-06	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-01	UPS8-01	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-02	UPS8-02	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-03	UPS8-03	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-04	UPS8-04	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-05	UPS8-05	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-06	UPS8-06	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Single UPS path	Single UPS output lost: UPS8-07	UPS8-07	0	0	0	6480	0	0	0	0	0	0	1.0	1.0	1.0
Generator segment (common)	Generator segment SEG-A lost (after battery depletion; risk case)	SEG-A	1008	0	288	5184	252	0	1368	14	0	0	0.6667	0.0	0.8667
Generator segment (common)	Generator segment SEG-B lost (after battery depletion; risk case)	SEG-B	1008	0	720	4752	252	0	180	14	0	0	0.6667	0.8667	0.8
Generator segment (common)	Generator segment SEG-C lost (after battery depletion; risk case)	SEG-C	1008	0	720	4752	252	0	180	14	0	0	0.6667	0.8	0.8
Generator segment (common)	Generator segment SEG-D lost (after battery depletion; risk case)	SEG-D	1512	0	216	4752	378	0	54	21	0	0	0.6667	0.8	0.8

A10 Spatial conditions and clearances

Y clearances

Clearance	From Y (mm)	To Y (mm)	Clear (mm)	Basis
Cabinet front (cold aisle) to fan-wall rear / column-flange line	3350		5800	2450 Y5800 = fan-wall rear edge and column-flange line (flange Y5825, partition axis Y6000); 2,650 to the partition axis
Network cabinet front to fan-wall face (where a fan wall faces)	3350		4400	1050 Fan wall Y4400–5800 (1,400 deep)
GPU/network cabinet rear to CDU front (CDU envelope O4)	1150		2150	1000 CDU ≤950 deep from Y200
Network cabinet rear to wall zone (no CDU behind)	200		2150	1950 Y200 wall-zone line

Cross aisles (previous and current reference layout)

Aisle	Previous X0 (mm)	Previous width (mm)	Current X0 (mm)	Current width (mm)	Widened (mm)
END-W	4835	1200	1155	1200	0
XP-02	16435	1400	12755	1690	290
XP-04	28235	1400	24845	1800	400
XP-06	40035	1400	37045	1700	300
XP-C1	46635	1550	43945	1550	0
XP-C2	52185	1550	49495	1650	100
XP-C3	57735	1550	55145	1600	50
XP-09	69685	1400	67145	1700	300
XP-11	81485	1400	79245	1800	400
XP-13	93285	1400	91445	1800	400
END-E	105085	1200	103645	1200	0
Total					2240

Fan walls and the network cabinets facing them (1,050 mm shared front zone)

Fan wall	Aisle	X0 (mm)	X1 (mm)	Network cabinets in front	Front zone (mm)
FW-01	XP-02	12100.0	15100.0	NETB-CU02, NETA-CU03	1050
FW-02	XP-04	24245.0	27245.0	NETB-CU04, NETA-CU05	1050
FW-03	XP-06	36395.0	39395.0	NETB-CU06, NETA-CU07	1050
FW-04	XP-C1	43220.0	46220.0	NETB-CU07, OOB-A	1050
FW-05	XP-C2	48820.0	51820.0	SPA-3, SPB-1	1050
FW-06	XP-C3	54445.0	57445.0	OOB-B, NETA-CU08	1050
FW-07	XP-09	66495.0	69495.0	NETB-CU09, NETA-CU10	1050
FW-08	XP-11	78645.0	81645.0	NETB-CU11, NETA-CU12	1050
FW-09	XP-13	90845.0	93845.0	NETB-CU13, NETA-CU14	1050

Section cuts

Section	X (mm)	Through	Fan wall in cut
A-A	58145.0	CDU-08A and GPU cabinets R043/R044 boundary; no fan wall in the cut	no
B-B	78845.0	Network cabinet NETB-CU11 and fan wall FW-08	yes
C-C	48295.0	Central spine cabinet SPA-2 (TA/TB trunk entry)	no

Spatial conditions (facility coordination reference)

Ref.	Condition	Drawing	Status
SC-01	1,050 mm front zone at 18 network cabinets facing fan walls: switch withdrawal (1,000) and fan-wall service (850) at different times	N-312-EN	DESIGN
SC-02	GPU tray withdrawal 1,200 mm in front of every GPU cabinet; no fan wall faces a GPU cabinet	N-311-EN	DESIGN
SC-03	Rear access 1,000 mm to the CDU front, or 1,950 mm to the wall zone	N-201-EN to N-203-EN	DESIGN
SC-04	Cross-aisle adjustment of 2,240 mm relative to the previous layout; building geometry unchanged	N-204-EN	DESIGN
SC-05	Current door positions not supplied; to be checked against fan walls and front zones	N-001-EN	CONFIRM
SC-06	Cabinet 800 × 1,200 × 2,294 mm on rails at Z1128; cabinet top Z3422; rail posts 750 mm	N-401-EN	DESIGN
SC-07	Tray levels TL Z3550, TA/TB Z3900; more than 3 m from cabinet top to roof-beam underside	N-502-EN	DESIGN
SC-08	IT support rails, joists, tray hangers and roof purlins: capacity by the structural engineer; floor board is not an equipment support	N-311-EN	CONFIRM
SC-09	Partition penetrations for power branches into the under-floor A/B channels	N-501-EN	CONFIRM
SC-10	Door perforation and blanking panels for front-to-rear airflow	N-401-EN	CONFIRM

A11 Network equipment interface requirements

Requirements that the network equipment places on the existing facility systems (N-951-EN; design brief Section 6). Facility capability is an input and is not verified here; no spare or expansion capacity is claimed.

Interface	Requirement	Status
Cabinet	800 × 1200 × 2294 mm, 48U (46U usable); cabinet top Z3422 on rails top Z1128; empty cabinet 180 kg	DESIGN / CONFIRM
Rails	NVIDIA 930-9SKIT-00L0-00A, posts 600–800 mm (750 used); front post 100 mm behind the door	FACT / DESIGN
Front access	Switch withdrawal 1,000 mm; at fan walls the 1,050 mm zone is shared in time with fan-wall service 850 mm	DESIGN
Rear access	1,000 mm zone to CDU front or 1,950 mm to wall zone; PSU and fan replacement from the rear	DESIGN
GPU cabinet front	Tray withdrawal 1,200 mm (Y3350–4550); no fan wall faces GPU cabinets	DESIGN
Power	156 rack PDUs, 3-phase 400Y/230 V; SN5610 PSU1/2 → A1/A2, PSU3/4 → B1/B2; A and B from two different existing UPS paths	DESIGN
Input power	808.0 kW typical / 1,010.0 kW planning (network cabinets incl. PDU losses in heat)	DESIGN
Heat and air	1,012.4 kW to room air; 208,212 m³/h at 15 K; front-to-rear airflow	DESIGN
Switch inlet air	≤35 °C (SN5610 manufacturer inlet limit)	FACT
Mass	Heaviest cabinet 794 kg (SPA-1); 1.95 kN per foot, 2.92 kN with ×1.5; rail and joist capacity by structural engineer	CONFIRM
Fibre trays	TL 400×100 Z3550; TA/TB 600×200 Z3900; cable load up to 39.48 kg/m + tray 15 kg/m; hangers at 1.5 m	DESIGN / CONFIRM
Power branches	Under-floor channels A (Y2750) and B (Y3250); partition penetrations	CONFIRM
North–south	EXT-IF-NS-A/B: 8 spare 400G per CVS (56 per side) via 4U border MPO panel; upstream outside this design (configuration option)	CONFIRM
Management	EXT-IF-OOB: spare 100G ports on OA-A/B-1..4; upstream, addressing and zoning outside this design (configuration option)	CONFIRM
Doors	Current door positions not supplied; check against fan walls and front zones	CONFIRM