

1830 Photonic Service Switches (PSSs): PSS-4II, PSS-8, PSS-16II and PSS-32

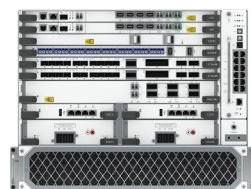
Seamlessly meet traffic growth and new service demands while minimizing total cost of ownership for your optical network

The 1830 PSS is a widely deployed optical transport platform, ideal for metro edge, metro core, regional and long-haul applications in telecommunication provider and mission-critical enterprise networks. It is available in four sub-300 mm deep shelf options: the 2 RU Nokia PSS-4II, the 3 RU Nokia PSS-8, the 8/9 RU Nokia PSS-16II and the 14 RU Nokia PSS-32.

The 1830 PSS family supports a wide range of Layer 1 cards, including the latest embedded (140 GBaud 1.2 Tb/s PSE-6s) and pluggable (ICE-X 800ZR+) coherent technologies. It also supports lower-speed coherent options, including the 600 Gb/s PSE-Vs, PSE-Vc-enabled 400ZR/ZR+ and 100ZR.

1830 PSS platforms also support advanced optical line system (OLS) functionality, including 32-degree ROADM-on-a-blade, C and L bands and multiple colorless-directionless-contentionless (CDC) add/drop options, including cost-effective low-port-count multicast switch (MCS) architectures, high-port-count MCS and scalable MxN wavelength-selective switches (WSSs).

Key additional capabilities include a multi-layer GMPLS control plane, integrated packet transport, advanced synchronization, and quantum-safe encryption. Comprehensive management and automation capabilities are provided by Nokia WaveSuite.



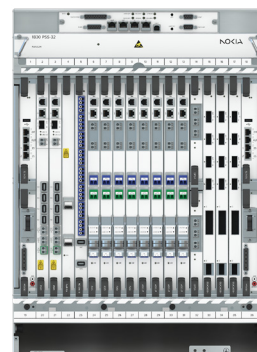
1830 PSS-16II



1830 PSS-8



1830 PSS-4II



1830 PSS-32

Features

- Next-generation coherent support, including 1.2 Tb/s PSE-6s, 600 Gb/s PSE-Vs, ICE-X 800ZR+, PSE-Vc 400ZR+ and 100ZR
- Next-generation OLS features include C and L bands, flexible grid, 4D/9D/20D/32D ROADM-on-a-blade and a wide range of CDC add/drop options
- Feature-rich, multi-layer GMPLS control plane, with fast restoration and network protection options, including O-SNCP and OCH-P
- Packet aggregation with Carrier Ethernet and MPLS-TP protocol support, including extensive QoS, OAM and resilience features to ensure SLA compliance
- Integrated, highly scalable synchronization capabilities that meet the stringent requirements of mobile networks and other mission-critical applications, while also enabling synchronization-as-a-service offerings

Benefits

- Reduce cost, space and power with next-generation coherent technology and compact optical line system cards, including ROADM-on-a-blade
- Simplify operations with zero-touch provisioning (ZTP), Link Layer Discovery Protocol (LLDP), GMPLS, cable verification, and the ability to manage multiple shelves as a single network element
- Minimize network downtime with redundant controllers, fans and power, multiple optical and packet protection schemes, and GMPLS-enabled fast restoration
- Protect your network from security threats with certified AES-256 encryption and flexible key distribution as part of Nokia's quantum-safe networking (QSN) solution
- Deploy in a wide range of environments with multiple shelf options, sub-300 mm depth, all-front access, flexible airflow, AC/DC power and extended temperature range (ETR) support, including 4D ROADM and in-line amplifier (ILA)

Product descriptions

1830 PSS-4II

Optimized for metro edge applications, the 1830 PSS-4II shelf is 2RU high and less than 300 mm deep. It supports all-front access, an extended temperature range, redundant AC/DC power and redundant fans. It provides two full-size card slots or four half-size card slots, and supports 1830 PSS family L0, L1 and L2 cards, including 4D ROADM-on-a-blade, packet switching, OTN ADM, 100ZR, PSE-Vc 400ZR+ and ICE-X 800ZR+.

1830 PSS-8

The 1830 PSS-8 is ideal for a wide range of metro applications and for long-haul ILAs. It is 3RU high and less than 300 mm deep. It supports all-front access, extended temperature range, and redundant AC/DC power, fans and controllers. It provides four full-size card slots or eight half-size card slots and supports a wide range of 1830 PSS family L0, L1 and L2 cards.

1830 PSS-16II

The 1830 PSS-16II is designed for a wide range of applications, including metro core and long-haul. It is 8 RU (DC shelf) or 9 RU (AC/DC shelf) high and less than 300 mm deep. It supports redundant AC/DC power, fans and controllers. It is all-front access and provides eight full-size card slots or sixteen half-size card slots. It supports a wide range of 1830 PSS family L0, L1 and L2 cards, including PSE-6s 140 GBaud 1.2 T per wavelength cards.

1830 PSS-32

The 1830 PSS-32 is ideal for large ROADM configurations and those with large numbers of traffic cards. It is 14 RU high and less than 300 mm deep. It is all-front access and provides sixteen full-size card slots or thirty-two half-size card slots.



Technical specifications

Shelf	1830 PSS-4II	1830 PSS-8	1830 PSS-16II	1830 PSS-32
Height	87.5 mm/3.4 in. (2RU)	133 mm/5.2 in. (3RU)	DC: 354.8 mm/14.0 in. (8RU) AC/DC: 399 mm/15.7 in. (9RU)	622 mm/24.5 in. (14RU)
Width	442 mm/17.4 in.	438 mm/17.2 in.	440 mm/17.3 in.	439 mm/17.2 in.
Depth	243.7 mm/9.6 in.	259 mm/10.2 in.	DC: 293 mm/11.5 in. AC/DC shelf: 290 mm/11.4 in.	279 mm/11.0 in.
Airflow (optional)	Right-to-left (front-to-back)	Right-to-left (front- to-back in 23 in. racks).	Front-to-left (front-to-back in 23 in. racks)	Front-to-top (front-to-back).
Weight	4.4 kg/9.7 lb	5.6 kg/12.35 lb	DC shelf 11.6 kg (25.7 lb) AC/DC: 13.1 kg (28.87 lb)	13.0 kg/28/66 lb
Full slots	2	4	8	16
Half slots	4	8	16	32
All-front access	Y	Y	Y	Y
L0 cards	Y	Y	Y	Y
L1 cards	Y	Y	Y	Y
L2 cards	Y	Y	Y	Y
DC power (-48 V, -60 V)	Y	Y	Y	Y
AC power (110 V/220 V)	Y	Y	Y	N
Redundant power	Y	Y	Y	Y
Redundant controllers	N	Y	Y	Y
Redundant fans	Y	Y	Y	Y
Long-term temp range*	-5° C to +65° C	-40° C to +65° C	5° C to 40° C	5° C to 40° C
Short-term temp range*			-5° C to 55° C	-5° C to 55° C
Humidity	5% to 85%	5% to 85%	5% to 85%	5% to 85%
Multi-shelf management (max shelves per NE node)	8 (PSS-4II)	8 (PSS-8)	24 (PSS-8/16II/32)	24 (PSS-8/16II/32)

About Nokia

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