

Nokia 1830 PSS-8x/12x 500G 100G/400G Client Card 5MX500

The Nokia 5MX500 client card is a 500G configurable, multiservice unit for the 1830 PSS-8x/12x platforms that offers footprint and power efficiency with pay-as-you-grow, scalable services for client connectivity. The card provides five high-density interfaces for multi-rate services, including 100GE and OTU4, as well as an interface for 400GE client services.

The 5-port card 5MX500 is a member of Nokia's 1830 PSS-x family that is part of the Nokia 1830 Photonic Service Switch (PSS) portfolio. The 1830 PSS-x family of packet/OTN switches mate switching and photonic scale, delivering multi-terabit packet/OTN scale by leveraging the Nokia Transport Switching Engine (TSE) and the Photonic Service Engine (PSE). The 1830 PSS-8x and 1830 PSS-12x are OTN switching solutions, optimized for both metro aggregation and metro core applications. The platforms share common cards and provide the flexibility and efficiency that operators need to support an evolution to higher-capacity services, while minimizing space and power requirements.



Benefits

- Multi-rate, high-capacity services with programmable 100G/400G client interfaces
- Footprint and power efficiency in compact single slot size
- 500 Gb/s transmission capacity per card
- Efficient ODUflex switching and protection
- Client protection using OPSB or Y-cable

Applications

- Business services, wholesale services, and multiservice transport applications
- Scalable, pay-as-you-grow any service point-to-point connectivity
- High-density, high-capacity Ethernet clients
- Flexible OTU4 interfaces programmable as clients or lines
- Beyond 100G applications, including 400GE services

Product description

The 5MX500 is a programmable, 5-port client card for the PSS-8x and PSS-12x platforms with 500 Gb/s per slot transmission capacity. The unit provides high-capacity, high-density multiservice offerings, allowing network operators to migrate to higher service rates.

The 5MX500 is a single slot uplink card, with up to 8 cards supported per PSS-8x shelf and 24 cards supported per PSS-12x shelf. The 5MX500 card supports five programmable QSFP28 client ports for 100GE/OTU4 services, including one port that can be configured for QSFP56-DD 400GE services. When provisioned as OTU4, the ports can be used in line or client configuration.

The client card provides efficient and reliable multi-layer networking using ODUk switching and protection from ODU0 to ODU4, including ODUFlex. ODUFlex offers scalable and flexible OTN service mapping with the same switching and protection.

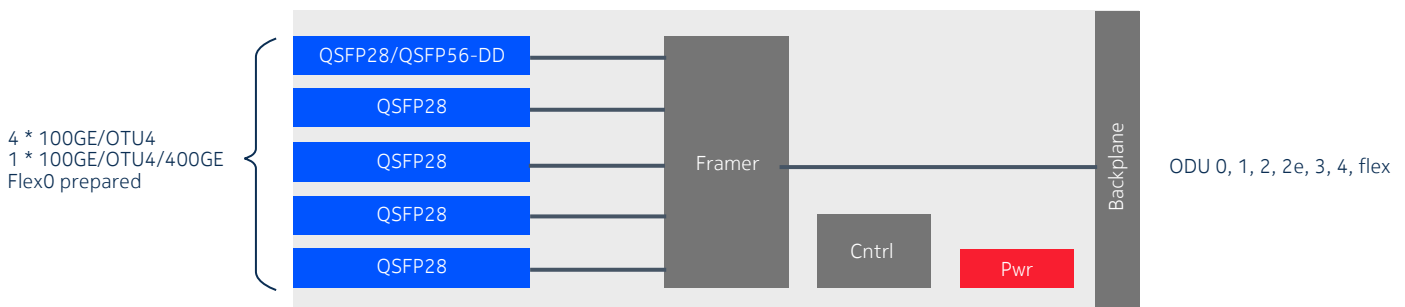
In addition, the card supports robustness features like client Y-cable, OPSB protection, and GMPLS control plane.

The 5MX500 card supports scalable, pay-as-you-grow client options for business services, wholesale services, and multiservice transport. Nokia PSS-8x/12x platforms isolate line cards from client cards for investment and operational decoupling. For example, the 5MX500 client card works efficiently with coherent WDM uplink cards like 2UX500 to provide flexible and reliable end-to-end transport; this significantly and simultaneously scales network capacity and density, making feasible the mass delivery of high-capacity, multi-rate services.

Nokia supported products

The 5MX500 client card is supported on Nokia 1830 PSS-8x and PSS-12x platforms.

Figure 1. 1830 PSS-8x/12x 5MX500



Unit name	Part #	Description
5MX500	3TD00843AA	5-port 500G 100G/400G client card



Technical specifications

Specifications	5MX500
Applications	Business services, wholesale services, multiservice transport
Interfaces	4 x QSFP28 100GE/OTU4/FlexO ¹ 1 x QSFP28/QSFP56-DD 100GE/OTU4/400GE/FlexO ¹
Transmission capacity	500 Gb/s
Power consumption	122 W (typ)
Features	500G capacity 5-port scalable multi-rate 100G / 400G client card Configurable hold-off timer Trail (DMt) and Path (DMp) latency measurement LLDP snooping Beyond 100G (B100G) applications GMPLS control plane
ODUk/flex	ODUk (ODU0/1/2/2e/3/4) switching and protection ODUflex (CBR, GFP-F) switching and protection ODUflex (GFP-F, BMP) mapping
Client protection	OPSB/5 Y-cable
Operating environment	Normal 5°C to 40°C (41°F to 104°F) Short-term -5°C to 50°C (23°F to 122°F) Humidity 5% to 85%
Physical	1-slot, full height
1830 PSS shelves	8x, 12x
Compliance	UL/CSA 62368-1 IEC/EN 62368-1 AS/NZS 62368.1 IEC/EN 60825-1, 60825-2 GR-63 NEBS, GR-1089 ROHS6 CE Mark

¹ FlexO prepared

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Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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