

## 1830 PSD-200

The Nokia 1830 PSD-200 provides network demarcation and multi-service aggregation for Ethernet, OTN, SDH/SONET, and Fibre channel services, using a compact, high-density shelf. The 1830 PSD-200 network interface device (NID) can be used as an edge service aggregator, network demarcation device, or in enterprise data center interconnect (DCI) applications.

The Nokia 1830 Photonic Service Demarcation (PSD) product family enables cost-effective and efficient aggregation and transport of client services across optical edge network segments. The new 1830 PSD-200 expands the family with a total capacity of 200G in a 1RU form factor, supporting high-bandwidth service applications for both communication service provider (CSP) and enterprise scenarios. The 1830 PSD-200 supports encrypted end-to-end services, and when paired with the Nokia 1830 Security Management Server (SMS), the quantum-safe Layer 1 connectivity network solution is automated with secure key management.



### Benefits

- High-performance, multi-service transport delivering up to 200G capacity
- High-density design with low power consumption
- Temperature-hardened footprint, suitable for various indoor and outdoor deployment scenarios
- Front-to-back airflow, compatible with modern telco, colo, and data center cooling designs
- Fast plug-and-play service activation, saving time, reducing operation costs, and speeding up time to revenue.
- Supports a housekeeping port to monitor external alarms in cabinet installations (e.g., door alarm)

### Applications

- Delivers an efficient and flexible combination of 10GE/100GE, OTU2/2e/4, FC 8/16/32G and STM64/OC192 client services
- Compact, high-capacity metro edge applications
- Enterprise data center interconnect (DCI) on ramp applications
- Supports 100G ZR DCO pluggable optics for long-reach scenarios
- Interoperability with Nokia 1830 PSS including using common OAM&P and management

## Product description

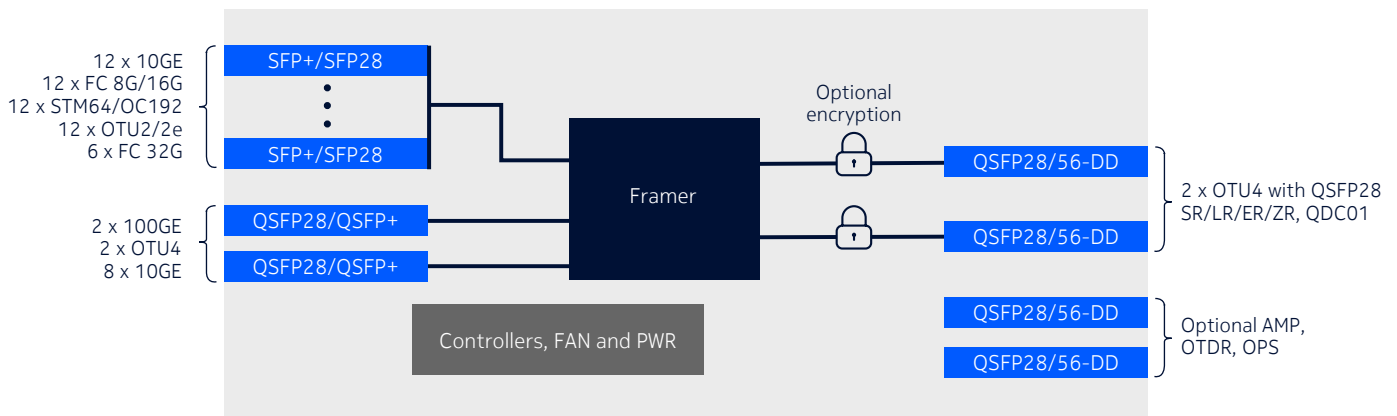
The 1830 PSD-200 offers a multi-service and high-capacity 200G OTN solution, enabling service providers and enterprises to efficiently aggregate and transport a range of client services, including 100GE/OTU4, sub-100G Ethernet, SDH/SONET, and Fibre Channel. As part of Nokia’s Photonic Service Demarcation portfolio, the shelf minimizes footprint and power consumption while delivering the performance required for metro edge applications.

The 1830 PSD-200 is a compact 1RU shelf, measuring 450mm in depth, and features a mounting bracket that supports installation in a variety of rack types, including 19-inch 2-post/4-post, 21-inch ETSI, and 23-inch racks. The 1830 PSD-200 shelf features two power slots that support either AC or DC power feeding in a 1+1 redundant configuration, ensuring high availability and reliability. Additionally, the shelf is designed with a front-to-back airflow pattern, which is maintained by redundant fan modules, providing efficient and reliable cooling.

The 1830 PSD-200 supports both B/W and coherent DCO pluggable optics, as well as bidirectional QSFP28 modules, in two QSFP28/QSFP56-DD OTU4 line ports. It features two QSFP28/QSFP+ client ports and twelve SFP28/SFP+ client ports, allowing a flexible combination of different client service types. The 1830 PSD-200 also includes two QSFP-DD Auxiliary Function (AXF) ports, which can host optional MSA-form-factor modules such as an amplifier, OTDR, or OPS, when needed.

The 1830 PSD-200 is fully managed by Nokia WaveSuite (WS), enabling seamless interworking with the Nokia 1830 PSS portfolio to deliver exceptional performance, flexibility, and operational simplicity. It allows operators to provide SLA-assured services for spur and ring access applications, where space and power are constrained. Additionally, the 1830 PSD-200 offers optional physical (Layer 1) encryption for optical data links, ensuring end-to-end protection against loss of confidentiality over the fiber.

Figure 1. 1830 PSD-200



Unit name	Part #	Description
PSD-200 shelf kit	3KC82909AA	PSD-200 shelf with two PSD FAN
PSD-200 shelf	3KC82908AA	PSD-200 chassis
PSD FAN	3KC82861AA	PSD fan module
PSD PS AC	3KC82939AA	PSD AC power supply
PSD PS DC	3KC82940AA	PSD DC power supply

# Technical specifications

Specifications	PSD-200
Applications	Metro edge, Enterprise DCI 2 x 100G aggregation and transport (n x 100G and sub-100G clients)
Line port	2 x QSFP28/QSFP56-DD OTU4 line ports B/W, bi-directional, DWDM Coherent DCO
Client port	2 x QSFP28/QSFP+      100GE, OTU4, 4x10GE 12 x SFP28/SFP+      10GE, FC 8G/16G/32G, STM64/OC192, OTU2/2e
Auxiliary port	2 x QSFP56-DD      Optional AMP, OTDR, OPS
Protection	ODUk, ODUflex SNCP
Service and protection	Line port service encryption for all client services - Supports AES-256-CTR encryption with AES-256-GMAC authentication ITU-T G.709 Mapping for all supported clients (BMP, GFP, GMP, etc.) PRBS support OTN path delay measurement G.798 defect, supervision, and monitoring
Management DCN	SNMPv3, CLI, WebUI, plug-and-play commissioning Wavesuite (WS) support, 1830 SMS for Encryption management SNMPv3 trap, Syslog event notifications SSHv2 security Standard MIBs and 1830 PSS MIBs Allows integration in operator's OSS/BSS GCC-0/1/2 management RADIUS authentication with 2-Factor-Authentication Housekeeping input Dying gasp notification support
Regulatory and standards compliance	<p><b>EMC compliance:</b></p> <ul style="list-style-type: none"> <li>• FCC 47 CFR Ch.1 Part 15</li> <li>• ETSI EN 300 386 Class</li> <li>• Telcordia GR-1089-CORE (clause 2, 3)</li> </ul> <p><b>Environmental/safety compliance:</b></p> <ul style="list-style-type: none"> <li>• IEC/EN 62368-1, IEC/EN 60950-1</li> <li>• Optical safety <ul style="list-style-type: none"> <li>- IEC 60825-1</li> <li>- IEC 60825-2</li> </ul> </li> </ul> <p><b>North America region:</b></p> <ul style="list-style-type: none"> <li>• Telcordia GR-1089-CORE</li> <li>• Telcordia GR-63-CORE, Earthquake zone 4</li> <li>• Telcordia GR-78-CORE</li> <li>• UL 60950-1, CAN/CSA-C22.2 No. 60950-1</li> </ul> <p><b>European region:</b></p> <ul style="list-style-type: none"> <li>• ETSI EN 300 019 -2-3 Class 3.1</li> <li>• ETSI EN 300 019 -2-1 Class 1.2</li> <li>• ETSI EN 300 019 -2-2 Class 2.3</li> </ul>
Power consumption	190 W (typ)



Specifications	PSD-200
Dimension and weight	Height: 44 mm (1.73 in) Width: 440 mm (17.32 in) Depth: 450 mm (17.72 in) Weight: 9 kg (19.84 lb)
Environmental	<b>Cooling method</b> Front-back airflow, 1+1 fan redundancy <b>Installation option</b> 19 inch 2-post/4-post, ETSI 21-inch and 23-inch rack/cabinet <b>Operating temperature range:</b> <ul style="list-style-type: none"><li>• -5°C to 65°C (23°F to 149°F), max altitude 2,000 m (6,561 ft)</li></ul> Humidity: 5% to 90%, non-condensing <b>AC power (1+1 redundancy)</b> <ul style="list-style-type: none"><li>• 100 V to 240 V AC</li></ul> <b>DC power (1+1 redundancy)</b> <ul style="list-style-type: none"><li>• 48/60 V DC</li></ul>

## About Nokia

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As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

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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Nokia Oyj  
Karakaari 7  
02610 Espoo  
Finland  
Tel. +358 (0) 10 44 88 000

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