As part of the 1830 Photonic Services Switch (PSS) product family, the Nokia 500G Muxponder (D5X500) unit provides two high performance multi-modulation WDM line interfaces, supporting up to five 100G client ports. Based on the industry leading Nokia Photonic Service Engine-2s super coherent DSP, the 500G Muxponder card is ideal for metro, regional, and long haul optical network applications.

The multi-modulation, multi-baud rate 500G Muxponder card supports six different modulation formats, enabling capacities from 50G to 250G per line port. The flexibility to provision and tune the wavelength capacity to each optical route ensures networks are operated at their peak performance, capacity, and lowest cost-per-gigabit. Whether transmitting 100G client services over metro networks or ultra-long haul subsea routes, the Nokia 500G Muxponder provides the ideal solution.

**Benefits**

- Flexible, multi-modulation line ports supporting 50G to 500G enables capacity, optimized to each optical route
- High performance super-coherent PSE-2 optics eliminate the need for costly regeneration nodes
- Industry leading soft-decision forward error correction (SD-FEC) enables superior performance
- 200G 8-QAM wavelength support > 1,800 Km, doubling long haul capacity
- 100G QSPK wavelength optical reach > 3,000 Km over terrestrial networks and > 11,000 Km over subsea networks
- Integrate terrestrial – subsea networks, eliminating costly interconnection sites
- Compatible with standard 50 GHz fixed grid WDM networks and FlexGrid networks
- Full 4800 GHz (96 channel) tuning
- Small size reduces space requirements
- Simplified engineering, ordering, & sparing
The 500G Muxponder card is supported in metro, regional, LH, ULH applications, eliminating the need to engineer, order, & spare different cards based on application.

For protected network applications, the 500G Muxponder card supports both fast 1+1 protection (< 50ms), as well as efficient, GMPLS optical layer restoration.

The 500G Muxponder is available in C-band, L-band, and subsea versions.

Applications

- Metro, regional, long-haul optical transport for high capacity 100GE and OTU4 client services
- Subsea networks
- Carrier, ISP, web, government, enterprise, public networks
- 500G Muxponder supported over all optical networking architectures, terminal, Classic mux/demux ROADM, CD, C-F, & CDC-F ROADMs

Nokia supported products

The 500G Muxponder unit is supported on Nokia 1830 PSS-32, -16/16ii, -8, platforms.

### 500G Muxponder versions

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<td>8DG62538AB</td>
<td>500G Muxponder, C-Band (5xCFP4 client optics)</td>
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<td>D5X500L</td>
<td>8DG63950AA</td>
<td>500G Muxponder, L-Band (5xCFP4 client optics)</td>
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<td>D5X500 Subsea</td>
<td>8DG64067AA</td>
<td>500G Muxponder, subsea (5xCFP4 client optics)</td>
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<td>D5X500Q</td>
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Technical specifications

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| **Line ports** | 2 x WDM coherent multi-modulation line ports  
Full C-band tunable  
Fixed Grid (50 GHz) or FlexGrid |
| **Line capacity (per port)** | 250G DP-16QAM  
200G DP-16QAM  
200G DP-8QAM  
100G DP-QPSK  
100G SP-DP-QPSK (set partition)  
50G DP-BPSK |
| **Client Ports** | 5 x 100G 100GE OTU4 |
| **FEC options** | SD-FEC (25%) |
| **Performance** | Net coding gain 11.7 dB  
CD compensation > 200,000 ps/nm  
PMD 33 ps |
| **OAMP functions** | Integrated Wavetracker OAM  
Integrated test signal generation / monitoring  
Facility / Terminal loopback functions  
G.709 latency measurement  
GCC0 remote management  
Line / client PMs  
LLDP snooping |
| **Protection** | O-SNCP via OPSB  
OCH protection via OPSA  
L0 GMPLS restoration |
| **Power Consumption** | < 370 W |
| **Operating Environment** | Normal 5 C to 40C (41°F to 104°F)  
Short-term -5°C to 50°C (23°F to 122°F)  
Humidity 5% to 85% |
| **Physical** | 2-slot, full height |
| **1830PSS Shelves** | 32, 16/16ii, 8, |
| **Compliance** | UL / CSA 60950-1  
IEC / EN 60950-1  
IEC / EN 60825-1, 60825-2  
GR-63 NEBS  
GR-1089  
FCC 47 CFR15  
EN 300 019, EN 300 132-2, EN 300 386  
ROHS6  
CE Mark |

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