

# 1830 PSS D6AD2T4H Muxponder

The high capacity, high performance Nokia D6AD2T4H muxponder provides an ideal solution for 400GE / 800GE aggregation applications over metro, regional, and long haul networks. Based on Nokia's latest generation Photonic Service Engine (PSE-6s) coherent optics, the D6AD2T4H includes 2 x WDM line ports, supporting up to 2.4 Tb/s bandwidth.

The Nokia 1830 Photonic Service Switch (PSS) product family provides versatile solutions for aggregation and transport of client services over access, metro, regional and long-haul optical networks. The new D6AD2T4H muxponder is supported in the 1830 PSS-16ii system, providing aggregation of 400GE/800GE client services, as well 100GE/OTU4 clients via breakout cable.



#### **Benefits**

- High performance transport for 400GE/800GE interfaces, along with 100G clients via breakout cable
- Advanced probabilistic shaped modulation (PCS) and FEC based on Nokia latest generation PSE-6s technology
- Chip-to-chip interface enables client bandwidth sharing across 2 x WDM line ports
- High capacity transport from metro to LH/ULH distances
- Backward compatibility with existing PSE-Vs based transponders
- Supported on 1830 PSS-16ii system

#### **Applications**

- High capacity (2.4 Tb/s) muxponder for DCl, metro, regional, long haul, subsea applications
- Aggregation and transport of 400GE / 800GE router interfaces over optical networks
- Aggregation of 24x100GE/OTU4 interfaces, via breakout cable
- Mixed 100GE/OTU4, 400GE, and 800GE services over same line wavelength – up to 1.2 Tb/s per WDM line port
- Transport 3 x 800GE router services over (2) x 1.2 Tb/s WDM line ports, via n x 400GE/800GE client ports



### Product description

The D6AD2T4H is a high-performance muxponder for aggregating 400GE/800GE client services. The unit supports two WDM coherent line ports, incorporating the latest generation Nokia PSE coherent optics.

The D6AD2T4H muxponder is designed for use in 1830 PSS -16ii platforms. The unit includes four 400G client ports and two dual-rate 400G/800G ports. In addition, up to 24x100GE/OTU4 services are supported via breakout cables. The two WDM line ports support up to 1.2 Tb/s line rates per port, with provisioned baud rate and probabilistic constellation shaping (PCS) to maximize wavelength capacity over each network route.

The WDM coherent line interfaces utilize Nokia's latest generation photonic service engine,

incorporating Nokia's sixth generation coherent DSP and CSTAR silicon optics. The PSE-6s incorporates advanced probabilistic constellation shaping (PCS), advanced forward error correction (FEC), and fine baud rate tuning. The PSE-6s also includes a chip-to-chip interface enabling bandwidth sharing between client ports and the two WDM line ports. Bandwidth sharing maximizes optical reach, especially when transporting odd numbers of client interfaces. As an example, 3x400GE clients can transported as 2x600G line wavelengths. The D6AD2T4 is optimized for metro, regional, longhaul, and subsea applications, where high-capacity and highperformance optical reach are required.

## Nokia supported products

The D6AD2T4H unit is supported on Nokia 1830 PSS-16ii platform.

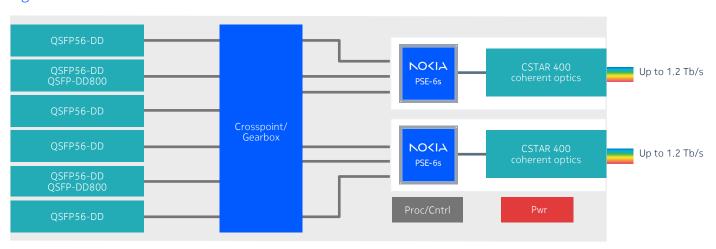


Figure 1. 1830 PSS D6AD2T4H



Unit	Part #	Description
D6AD2T4H	3KC71964AA	n x 400GE/800GE Muxponder
D6AD2T4L	3KC72384AA	n x 400GE/800GE Muxponder, L-Band

Specifications	D6AD2T4H		
Application	Metro, Regional, LH, Subsea		
	n x 400GE/800GE Muxponder		
	Up to 24 x 100GE/OTU4 support, via breakout cables		
	Mixed 100G /400G / 800G transport		
Line Port	2 x WDM line ports, 130 Gbaud		
	Up to 1.2 Tb/s per line port		
	Probabilistic Constellation Shaping (PCS Gen3), Shaped-QAM16, Shaped-QAM64		
	Nokia SD-FEC (15%, 25%, variable)		
	Continuous baudrate adjustment via baudrate flexible profiles		
	Non-linear compensation		
	Bandwidth line port sharing via chip-to-chip interface		
	Full C-band with 0.1 GHz central frequency tunning		
Client ports	4 x QSFP56-DD 400GE (4x100GE/OTU4 via breakout cable)		
	2 x QSFP56-DD/QSFP800 400GE/800GE (4x100GE/OTU4 via breakout cable)		
Features	Integrated test signal with loopbacks		
	Comprehensive analog and digital PMs with fast telemetry		
	Client / Line GCC0		
	LLDP snooping		
Protection	O-SNCP (OPSB5) / OCHP (OPSUM) optical channel protection		
	OLP / OMSP optical line protection		
	LO Restoration (GMPLS)		
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	2-slot, full-height		
Power consumption	346 W (typical)		

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