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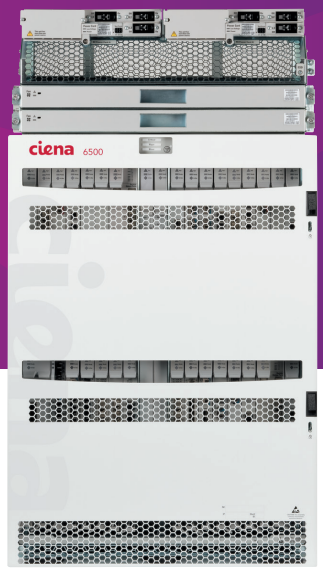
DATA SHEET

6500-S32

6500 Packet-Optical Platform



Designed for high-capacity networking, the 6500-S32 Packet-Optical Platform converges comprehensive Ethernet, TDM, and WDM capabilities with unconstrained hybrid packet/OTN switching and an intelligent control plane to maximize the bandwidth efficiency and flexibility of the overall network.

The 6500-S32 is a 22RU chassis tailored for high-density applications in the network core, supporting a wide variety of services including the full mix of Ethernet, OTN, SDH/SONET, Fibre Channel, video, and transparent DWDM services. To offer flexible deployment options, the 6500-S32 is equipped with 32 service card-carrying slots that can be customized to support 2.5G to 100G switched or DWDM applications. Various line and equipment protection options are available, including common equipment redundancy, enabling a range of differentiated service offerings for increased network availability.

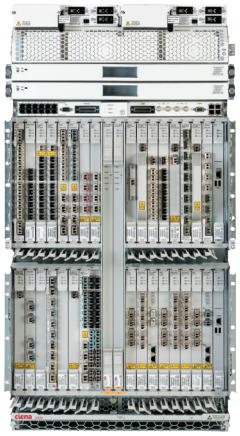


Figure 1. 6500-S32 packet/OTN switched configuration with integrated three-way ROADM

The 6500-S32 supports the complete suite of photonic architectures including directionless, colorless, contentionless, and flexible grid Reconfigurable Add-Drop Multiplexers (ROADMs) for the power to send any service anywhere in the network, dynamically. A full range of Wavelength Selective Switch (WSS) cards and filters provide optimized performance and cost for varying degree branching sites.

The 6500-S32 offers 3.2 Tb/s of integrated packet/OTN centralized switching with the ability to adjust the amount of packet and/or OTN capacity as required—ideal for any-to-any network connectivity flexibility. For applications with predictable point-to-point connectivity, the shelf also

Features and Benefits

- Utilizes 3.2 Tb/s of unrestricted hybrid packet/OTN switching for the most efficient use of network resources
- Supports the full suite of photonic architectures for service transport over 2.5G, 10G, 40G, 100G, and 200G wavelengths
- Enables simplified operations and reduced sparing costs through seamless networking flexibility with the entire 6500 family
- Supports both muxponder- and central fabric-based packet/OTN switching solutions, enabling cost-optimized configurations
- Offers industry-leading 10G, 40G/100G coherent and intelligent control plane capabilities for scale and service differentiation
- Provides a range of differentiated service offerings through various line and equipment protection options

supports muxponder-based packet and OTN switching, enabling cost-optimized solutions for these specific service connectivity requirements. These capabilities combine with sub-wavelength grooming to ensure the most efficient bandwidth utilization and scaling of the network.

Ciena's OneConnect Intelligent Control Plane allows the network to automate and distribute many functions formerly performed through a combination of centralized management systems and manual processes. Operators can leverage both photonic and OTN OneConnect control planes on the 6500-S32 for several advantages, including:

- Accurate inventory of equipment and bandwidth resources
- Faster service provisioning and turn-up
- Tunable SLAs via flexible protection and restoration options
- Network optimization and maintenance

Additionally, Ciena's OneControl Unified Management System provides comprehensive end-to-end network and service management. Through a unified GUI and common management model, operators can rapidly deploy new service offerings that cut across domains and coordinate across network protocol layers to ensure efficient use of critical network assets.

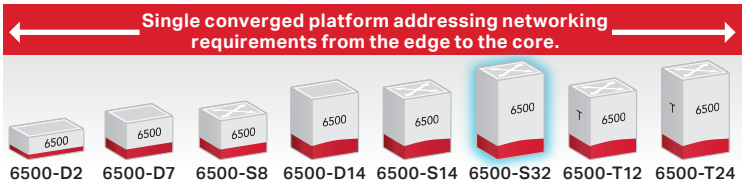


Figure 2. 6500 family

The 6500-S32 is part of the 6500 family, which offers four chassis form factors to provide flexible, cost-optimized configurations to best match site-specific requirements. Tailored for high-capacity applications, the 6500-S32 offers packet/OTN switching with industry-leading coherent and control plane capabilities, enabling cost-effective delivery of a flexible range of services across the network.

Technical Information Section 6500-S32 Packet-Optical

Power Options	Redundant breakered/fused 3x60A power cards Redundant breakered/fused 4x60A power cards (NTK603AB only)
Capacity	SONET/SDH: 640 Gb/s SONET/SDH XC: 640G Packet/OTN: 3.2 Tb/s Packet/OTN XC: up to 3.2T System: Up to 19.2 Tb/s WDM: 2.5G/10G/40G/100G/200G DWDM, 2.5G CWDM Wavelength support: 96 wavelengths in C-band, full band tunable optics
Number of service card slots	32
Supported service interface cards	
Packet/OTN switched modules	10x10G PKT/OTN 1x100G + 2x40G PKT/OTN 100G DWDM PKT/OTN 40G DWDM PKT/OTN 16x2.7G OTN 48xGbE
Photonic Modules	Full suite of passive filters, 50GHz, 100GHz, flexible grid ROADMs, EDFAs, Smart Raman, and Colorless, Directionless, Contentionless, Coherent Select Architecture
Transponders/Muxponders	Coherent 100GE/OTU4 transponder Coherent 100G muxponder (10x10G) Coherent 100G/150G/200G line cards: metro, regional, long haul, ultra long haul, enhanced PMD, submarine FIPS-certified AES-256 wire-speed coherent 100G/200G encryption solution Coherent 200G client card: 2x100GE or 5x40GE/10GE Coherent 100G client cards: 10x10GE, 10x10G multi-rate, 2x40G+2x10G, 100GbE/OTU4 client Coherent 40G line cards: metro, regional, long haul, ultra long haul, enhanced PMD, submarine, colorless Coherent 40G client cards: 4x10G multi-rate, 40G multi-rate 10G: 4x10G multi-rate OTR with FIPS-certified AES-256 wire-speed encryption Ethernet: 152G eMOTR, 68G eMOTR Edge, 30G L2MOTR OTN modules: 8-port OTN Flex MOTR (10G), 1+8 port OTN Flex MOTR (20G) SONET/SDH 10G ADM-on-a-blade: SuperMux
Environmental Characteristics	
Operating Temperature	+41°F to +104°F (+5°C to +40°C) normal +23°F to +122°F (-5°C to +50°C) short term
Relative Humidity	5% to 85% (non-condensing)
Earthquake/seismic	Zone 4
Physical Characteristics	
Physical Dimensions	38.5 in (H) x 19.6 in (W) x 10.9 in (D) (977mm x 498mm x 278mm)