

CN 4200™ FlexSelect

Advanced Services Platform

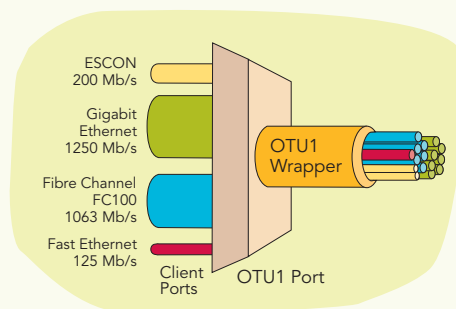


THE CN 4200 FLEXSELECT ADVANCED SERVICES PLATFORM IS A NEW GENERATION MULTISERVICE TRANSPORT AND AGGREGATION PLATFORM capable of supporting any transport protocol—including Time Division Multiplexing (TDM), Ethernet, storage or video—on any available port, even when on the same line card. The first in the industry to offer user programmable line ports, the CN 4200 allows services of up to 10 Gb/s to be provisioned, upgraded or changed with point-and-click ease—without introducing new modules. With embedded support for industry-standard protocols and third party interoperability, the CN 4200 not only protects your existing investments but also offers a simple and risk-free path to meet changing IT and networking demands. Unlike other service platforms, the CN 4200 was built from the ground up to make the worldwide migration from TDM to packet services simple, practical and cost-effective.

UNPRECEDENTED FLEXIBILITY With the configurable modules of Ciena’s FlexiPort software, any mix of services in a single slot is supported. Designed to meet the changing needs of end user applications, each individual port can be remotely programmed for any supported service type and data rate for provisioning, upgrading (i.e., from 1 Gb/s to 2 Gb/s Fibre Channel) or even changing (i.e., from SONET/SDH to GbE) services at any time. Further flexibility is provided through software-defined personalities—like transponder, muxponder, Add/Drop Multiplexer (ADM), or cross-connect—and with support of pluggable SFPs that are available to meet any network requirement.

OPTIMAL COST EFFICIENCY Benefit from savings enabled from fewer hardware elements and innovative technologies—including advanced switching and grooming, and remote programmability. Sub-wavelength grooming and a fixed Optical Add/Drop Multiplexer (OADM) provide 78% greater efficiency than competing ROADMs solutions. Remote programmability reduces provisioning times by 95%, eliminates truck rolls and saves planning and engineering costs. Additionally, using FlexiPort technology reduces sparing costs by 66%.

AUTOMATED NETWORK AND SERVICE MANAGEMENT ON-Center™, Ciena’s industry-leading network management solution suite, now includes Service Level Manager—enabling granular service level monitoring for managing client services in addition to point-and-click provisioning for managing networks. The CN 4200 also features FlexSelect OS, Ciena’s intelligent control plane technology, for even greater levels of network automation.



FEATURES & BENEFITS

- » Flexible solution for delivering lower-speed multiservice data services transport
- » High density multiservice transport platform supporting CWDM/DWDM
- » Managed aggregation, grooming, and transport of up to 24 any-rate signals from 30 Mb/s to 10.7 Gb/s, including SONET/SDH, Ethernet, storage and video protocols
- » Flexible sub-rate grooming, add/drop and multiplexing to network interfaces
- » Flexible assignment of ports as client or network ports
- » OTU1/OTU2 DWDM network links with pluggable DWDM optics
- » Sub-SONET/SDH protection switching (<15 ms), with 1+1 protection for 99.999% service availability
- » Extensive performance monitoring and surveillance of remote devices
- » Add/drop, drop and continue, hairpin, multicast, and loopbacks at service level
- » Front chassis accessibility for all connections and servicing

STANDARDS-BASED SOLUTIONS MAXIMIZE INVESTMENT PROTECTION Using ITU G.709 standards-based technology (also known as Digital Wrapper) the CN 4200 grooms multiple optical services running on any port, onto higher-speed wavelengths. These higher-speed wavelengths, OTU1 (2.7 Gb/s) or OTU2 (10.7 Gb/s) signals, carry any mix of individual services up to 10 Gb/s. Standards-based protocols supported include: 10/100/1000 Ethernet, 10 Gb/s Ethernet, OC-3/12/48/192 or STM1/4/16/64, FC/FICON™, ESCON®, OTU1, OTU2.

Technical Information

SYSTEM LEVEL

Optical interfaces

SFP Transceivers (Multi-rate) _____ 1000BT (Cat5e) for client-side only, 850 nm (MMF) for client-side only, 1310 nm (SMF) up to 35km reach
ITU 694.1 DWDM (SMF) (≤120 km), ITU 694.2 CWDM (SMF) (≤120 km)

Spectral grids for WDM applications:

CWDM wavelength grid (G.694.2) _____ 80 and 120 km reach: 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 nm
DWDM wavelength grid (G.694.1) _____ 46 wavelengths on 100 GHz boundaries

XFP Transceivers (10 Gb/s) _____ 850 nm (MMF) for client-side only, 1310 nm (SMF) up to 10km reach
ITU 694.1 DWDM (SMF) (≤55 km)*,
ITU 694.1 DWDM (SMF) (≤80 km)*: - DWDM wavelength grid (G.694.1); - 46 wavelengths on 100 GHz

Discrete Transceivers (10 Gb/s)

Fixed wavelength DWDM transceiver _____ 46 ITU 694.1 wavelengths on 100 GHz (SMF) (≤90 km)
Tunable wavelength DWDM transceiver _____ 92 ITU 694.1 wavelengths on 50 GHz (SMF) (≤90 km)

LINE CARD SPECIFICATIONS

_____ M6S line cards carry six full-duplex SFP-based multi-rate ports with a maximum OTU1 line rate.
F10 line cards feature XFP based and fully tunable optics for 10 Gb/s Ethernet, OC-192/STM-64, 10G FC and OTU2

MANAGEMENT AND CONTROL

_____ Standard SONET/SDH OTN (GCCO) management planes
SNMP v1 (RFCs 1155-1157); SNMP v2c; SNMP v3
CLI; Embedded Signaling and Control Channel; Telnet; HTTP; FTP

POWER REQUIREMENTS

DC Power _____ -36V to -72V DC
AC Power _____ 180V to 264V AC for 240V AC/50 Hz; or 90 to 132V AC for 115V AC/60 Hz; auto-sensing

AGENCY APPROVALS

ETSI/CE _____ ETS 300 019/IEC 68, EN 300 386/EN 55022, EN 61000, ETS 300 753, EN 60950
NEBS Level 3 _____ GR-63, GR-1089
Safety _____ UL 60950, CSA C22.2 60950, FCC Part 15, Class A

ENVIRONMENTAL CHARACTERISTICS

Ambient Temperature _____ +5° C to +50° C; -5° C to +55° C short term
Relative Humidity _____ 5% to 85% (non-condensing)
Altitude _____ 13,000 ft; 4000 m
HVAC _____ Cooling available for maximum 375 W heat dissipation (DC power) or 170 W (AC power)

PHYSICAL CHARACTERISTICS

	Side Exhaust Configuration	Front Exhaust Configuration	Rear Exhaust Configuration
Height	7.0 in (178 mm)	7.0 in (178 mm)	7.0 in (178 mm)
Width	17.5 in (445 mm)	19.5 in (495 mm)	19.5 in (495 mm)
Depth	11.8 in (300 mm)	11.8 in (300 mm)	12 in (305 mm)
Weight	23 lbs; 10.5 kg (max.)		

*Preliminary, subject to change



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