



CTDI Products: End-to-End Solutions

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Xgen8000™ ONT

Supporting today's highest speed business communications along with high capacity backhaul applications, the **Xgen8000 ONT** product family delivers a rich feature set combining the reliability of TDM with the flexibility of enhanced Ethernet services. The Xgen8000 ONT supports full-featured Gigabit services over fiber or copper interfaces, along with 2 T1/E1 interfaces for TDM support or backhaul transport. QoS and prioritization functionality support business-grade data services and SLAs, while offering the flexibility to support multiple services and multiple subscribers per port. The Xgen8000's compact, temperature hardened design and extended-reach Gigabit Ethernet capabilities allow it to deliver high value business and backhaul services wherever needed.

Benefits

- Services supported: Voice, TDM services including backhaul, IP Video and Data
- Multiple subscriber/multiple service from single port, single ONT
- Advanced data services via symmetrical high speed throughput, bandwidth guarantees and VLAN service segregation.
- Bidirectional wire-speed data rate
- Support and monitor RF devices such as MicroNode RFoG ONUs
- Subscriber and service provisioning via DPC™ DOCSIS PON controller
- Comprehensive remote management facilitates activation and diagnostics
- Quick installation and turn-up via pre-provisioning of the ONT
- High reliability: temperature hardening and optional PON redundancy
- Flexible installation: indoor or outdoor mounting, long reach operating range
- Standards compliant



CTDI Product Sales ~ 866-953-9030 ~ www.CTDI.com



Xgen8000™ ONT

Specifications

Physical

- Wall or shelf mount: 8.75" H x 1.5" W x 9.25" D
22.2cm H x 3.8cm W x 23.5cm D
- Weight: 2 lbs/0.9kg

Indicators/External Alarms

- PON/unit status multi-color LED
- 2 external alarm inputs
- Port status indicators

Optical Characteristics

PON Interface

- SC/APC optical PHY (single-mode fiber)
- 1.25 Gigabit Ethernet PON
- Operating range: 0 to 75km (loss limited)

Optional Dual PON capability

- Dual optical transceivers
- Automatic switchover on LOS
- Automatic re-ranging
- Working/protect link status indicators
- Manual lockout and force controls

Downstream PON (receiver)

- Optical receiver dynamic range: 0 to -24 dBm
- Optical receive wavelength: 1490nm ±10nm
- Configurable RSSI (receive signal strength indicator) range: -15 to -25dBm

Return Path PON (transmitter)

- Class 1 laser
- Optical output power level: 1 dBm ±1dB
- Optical wavelength: 1310nm ±50nm

Ethernet Data Ports

- 1 x 10/100/1000BaseT RJ45 data port
- 1 x 1000BaseFX SFP port
- Industry standard SFP modules (multi-mode or single-mode)
- Auto speed detect
- Full duplex, half duplex (auto or manual)
- Guaranteed and best effort bandwidth controls for downstream
- Guaranteed and best effort bandwidth controls for upstream
- Bandwidth selectivity: 64Kbps to 960Mbps in 64Kbps increments
- 100m reach on CAT5 cable
- >70km reach using SFP optical transceiver

Data switching features

- Port bridging & trunking
- VLAN trunking
- 1 VLAN plus 3 "special services" per port
- IGMP V2, IGMP proxy and snooping with "fast leave"
- Diffserv & QoS prioritization
- Transparent LAN services using Q-in-Q or VLAN stacking

Port statistics

- Transmit packets/octets
- Receive packets/octets
- Receive errors
- Collisions
- Packet discard reason

T1/E1 Ports (optional)

Interfaces

- 2 x RJ48 connectors

Framing options

- SF (Super Frame)
- ESF (Extended Super Frame)
- Unframed E1 mode
- CRC E1, MF E1 modes
- CRC-MF E1 mode
- Basic E1 mode

Line coding

- B8ZS
- AMI
- HDB3 E1 line coding

Synchronization

- System clocked (synchronous mode)

Other

- Loopback diagnostics
- Configurable LBO (Line Build-Out)
- GR824 performance monitoring
- Red/yellow alarm support

Management/Operations

- Remote control capable
- Alarms with configurable severity
- Optical power threshold alarms
- Software download
- Remote configuration
- TDM line testing, loop back
- Auto ONT discovery
- DPC™ DOCSIS controller support
- Real time data port statistics

Power and Environmental

- 40°C to +65°C Operating temperature
- 5 to 95% humidity (non-condensing)
- 10 to 16VDC input power
- 18 watts maximum

Standards, Certifications, and Patents

- TUV listed, CE mark and FDA certified for safety
- Meets or exceeds FCC Part 15a for emissions
- ANSI T1.403, T1.231, T1.408
- ITU-T G.703, G.704, G.706, G.823, G.824
- Telcordia TA5, TR194, TR54016, TR62411
- IEEE 802.3p, 802.3Q, 802.1ad: QinQ, RFC2495, 802.3ah, 802.3U, 802.3ab
- MEF 9, 14
- IGMP V2 for IP video support
- Patents
 - United States (US Pat 7 031 343)
 - Taiwan (#90128223)
 - China (ZL01821736.2)



Ordering information

Part #	Description
ONUX8110	1 Gig Ethernet Xgen ONT
ONUX8140	1 Gig Ethernet, 2 T1/E1 Xgen ONT
ONUX8210	1 Gig Ethernet, 2 PON Xgen ONT
ONUX8240	1 Gig Ethernet, 2 T1/E1, 2 PON Xgen ONT

Compatible SFP Transceivers for Xgen 8000

Part #	Description
OPT2100	1000base-X, SFP, 850nm, MM, 200m
OPT2200	1000base-X, SFP, 1310nm, SM, 20km
OPT2300	1000base-X, SFP, 1550nm, SM, 70km

Compatible Power Systems

Part #	Description
PSB8000	12VDC, 24W UPS (Charger & 7.2AH battery)
PSB8002	12VDC, 24W UPS hardened (Charger & 7.2AH battery)
PSB1005	12VDC, 24W brick, plug-mounted
PSB1006	12VDC, 24W brick, international plug-mounted
PSB1009	12VDC, 30W hardened UPS for OSPE202 (240VAC)
PSB1010	12VDC, 30W hardened UPS for OSPE202 (120VAC)
BAT1002	12VDC, 7.2AH battery for OSPE202 and PSB8000 series

Compatible Enclosures

The Xgen8000 is designed to operate without enclosures using a wall mount adapter. It may be also be mounted in the following CTDI enclosures.

Part #	Description
OSPE202	All-in-One metal enclosure
ADPTR03	Wall mount adapter
ADPTR06	Universal snap-on mounting adapter



CTDI
PRODUCTS

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