



CTDI Products: End-to-End Solutions

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Xgen1000™ ONT

Supporting today's business communications, the **Xgen1000 ONT** delivers the reliability of TDM with the flexibility of Ethernet services. With both high speed data and toll-grade T1/E1 ports, and support for multiple services and subscribers per port, the Xgen1000 ONT allows the Service Provider to deliver next-gen broadband services via its optical access network. QoS and prioritization functionality support business-grade data services and SLAs, along with IP video, voice, and TDM services. The Xgen1000's compact, temperature hardened design and extended-reach Gigabit Ethernet capabilities allow it to deliver high value business services wherever needed.

Benefits

- Services supported: VoIP, TDM T1/E1, IP Video and Data
- Multiple subscriber/multiple service support from single ONT
- Hardware efficiency: Multiple services from any Ethernet port
- Advanced data services via symmetrical high speed throughput, bandwidth guarantees, and VLAN service segregation
- Wire speed, full bidirectional data rate on each port
- Support and monitor RF devices such as MicroNode™ RFoG ONUs
- High reliability: temperature hardening and optional PON redundancy
- Subscriber and service provisioning without OSS changes via DPC™ DOCSIS PON controller
- Comprehensive remote management facilitates activation and diagnostics
- Quick installation and turn-up via pre-provisioning of the ONT
- Flexible installation: indoor or outdoor mounting, long reach operating range, temperature hardened design
- Standards compliant



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



Xgen1000™ ONT

Specifications

Physical

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

Indicators/External Alarms

- PON/unit status multi-color LED
- TDM port status
- Ethernet port status
- 3 inputs for external alarm – Intrusion, high water, MicroNode
- Low battery/charger status alarm input
- Low optical power input alarm
- Low RF video power alarm

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 optic transceivers
- Automatic switchover on LOS
- Automatic re-ranging
- Working/protect link status indicator
- Manual lockout and force controls

Downstream PON (receiver)

- Dynamic range: 0 to -24 dBm
- 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: 1dBm ±1dB
- Optical output wavelength:
1310nm ±50nm

Ethernet Data Ports

- 4 x 10/100baseT Ethernet data ports
- RJ45 connectors with link state and activity indicators
- Automatic speed detection
- Full or half duplex
(automatic or manual setting)
- Guaranteed and best-effort bandwidth controls
- Bandwidth selectivity: 64Kb to 100Mb in 64Kb increments
- Each port supports 100Mbps full duplex
- Reach at 100Mbps:
100 meters on CAT5 cable

Data switching features

- Port bridging
- Port trunking
- VLAN trunking
- 1 VLAN + 3 “special services” per port
- IGMP V2 support
- IGMP proxy and snooping with “fast leave”
- Diffserv and 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 mode
- MF E1 mode
- 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

Management/Operations Functionality

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

Power and Environmental

- Operating temperature range:
-40°C to +65°C
- Humidity: 5% to 95% (non-condensing)
- Operating voltage: 10 to 16VDC (12VDC nominal)
- Operating power: 20 watts (max)
- Optional battery back-up for critical and lifeline applications



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Specifications

Standards, Certifications, and Patents

- TUV listed, CE mark and FDA certified for safety
- Meets or exceeds FCC part 15b for emissions
- RoHS
- ANSI T1.403, T1.231, T1.408
- ITU-T G.703, G.704, G.706, G.823, G.824
- Telcordia TA5, TR194, TR54016, TR62411, GR909
- IEEE 802.3p, 802.3Q, 802.1ad: QinQ, RFC2495, 802.3ah, 802.3U, 802.3ab
- MEF 9, 14
- IGMP V2 for IP video
- Patents
- United States (US Pat 7 031 343)
- Taiwan (#90128223)
- China (ZL01821736.2)



Ordering information

Part #	Description
ONUX1110	4 fast Ethernet ports
ONUX1140	4 fast Ethernet ports, 2 T1/E1
ONUX1210	4 fast Ethernet ports , dual PON ports
ONUX1240	4 fast Ethernet ports, 2 T1/E1, dual PON ports

Compatible power systems

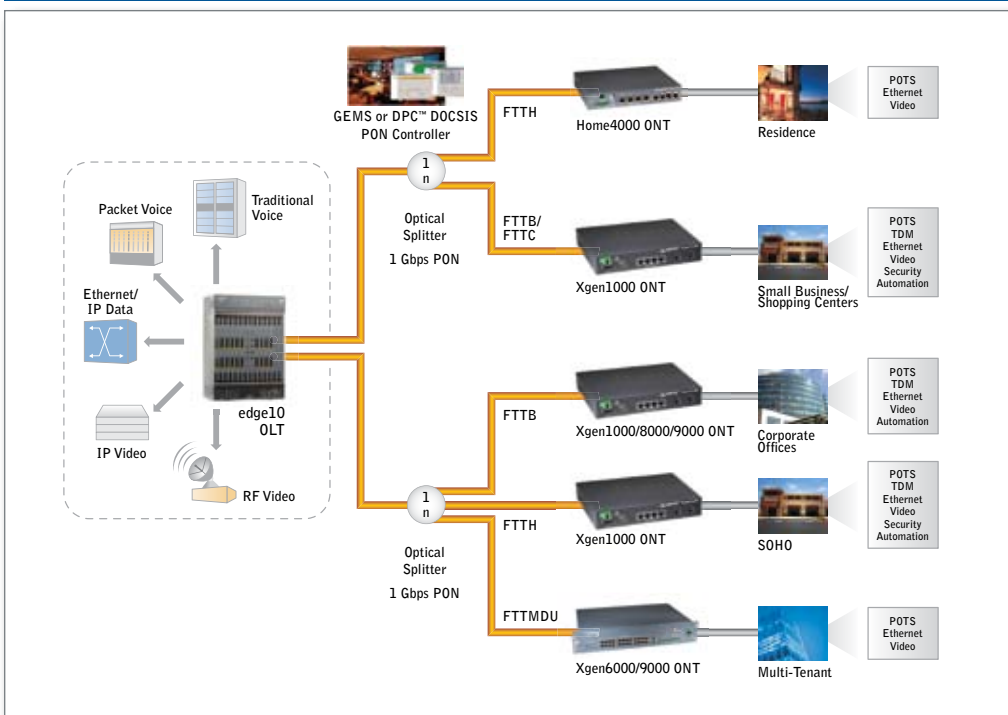
Part #	Description
PSB8000	UPS, 12 Volt, charger and battery
PSB8002	Hardened UPS (charger & battery), 12 Volt
PSB1005	Brick, plug-mount, 12 Volt
PSB1006	Brick, International plug mount, 12 Volt
PSB1009	Hardened UPS (charger & battery) for CTDI OSPE202 enclosure
PSB1010	12VDV, 20W hardened UPS for OSPE202
BAT1002	Temperature-hardened UPS battery, 12 Volt, for CTDI OSPE202 enclosure

Compatible mounting options

The Xgen1000 ONT operates with or without enclosures. It may be mounted in the following CTDI enclosures and adapters if required.

Part #	Description
OSPE202	All-in-One metal enclosure
ADPTR03	Wall mount adapter
ADPTR06	Snap-on wall-mounting adaptio

EPON Service Delivery



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PRODUCTS

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