XGS-PON FTTH ONT

Baldur

Residential ONT for wholesale network operators

The Icotera Baldur optical network terminals (ONTs) integrate optical Ethernet-based gigabit data transmission with Layer 2 functionality. The Baldur ONTs provide operators with extended monitoring capabilities and allow them to flexibly implement wholesale solutions without compromising performance, creating a future-proof home setup.

- Designed for Open Access or wholesale deployment
- 10 Gbps multi-gigabit LAN port
- CWMP support for improved management and monitoring
- BBF.247 compliant
- OLT vendor-independent

Innovative features

The Icotera Baldur is an XGS-PON L2 termination device with full port flexibility, and multi-rate 10G and 1G ports. In addition to OMCI, the ONT has an integrated CWMP stack that supports both IPv4 and IPv6 layers. This integration makes it possible to configure non-G.988 parameters such as LED indicators and EEE, monitor PON and LAN interfaces, and access such device information as CPU and memory usage, firmware version, and temperature. Also, the Baldur ONTs support network performance tests according to the TR-143 standard, which ensures that operators can validate endpoints beyond the OLT hence reducing the need for costly troubleshooting. The TWAMP control server and session reflector further extend testing capabilities beyond the access layer, reaching all the way to the ONU.

Built to last, designed for sustainability

The Baldur ONTs feature securely encrypted and signed firmware. It's designed to lower negative environmental impacts in the full life cycle: Energy-Efficient Ethernet (EEE) reduces power consumption by up to 40% per LAN port. The high-quality components give the ONT an expected lifetime of over 10 years. Additionally, its housing is made of over 90% reused plastics.

Easy installation and integration

The Baldur XGS-PON ONT comes with the fibre termination unit (FTU) that supports all types of fibre installation methodologies and facilitates the use of single or dual-fibre in cable and tube. It is BBF.247 compliant, ensuring interoperability with OLT devices from Nokia, Adtran, Huawei, and others. Recognising the complexity of ONU and OLT integrations, the process is simplified by providing easy access to MIB data in standard JSON format. Also, a special integration software that mirrors all PON traffic for support and troubleshooting is available. Furthermore, a special integration software enables SSH access on the LAN port for remote troubleshooting.

FTU installation (fX411-00)

Patch installation (fX310-00)

Baldur Residential ONT

FEATURES

- Vendor-independent XGS-PON ONT
- Hardware forwarding
- Long-lifetime standard interfaces
- Protocol transparent forwarding

NETWORK COMMUNICATION

PON INTERFACE

- WDM filter that supports CATV, XGS-PON, and XG-PON signal coexistence
- ITU-T G.9807.1 compliant
- Wavelength: US 1260 nm – 1280 nm, DS 1575 nm – 1580 nm
- 10 Gbps symmetric line rate
- G.984.1,2,3,5 compliant
- G.988 compliant
- Forward Error Correction (FEC)
- AES encryption
- Dying gasp
- Class N1 optics

LAN INTERFACES

- 2x or 1x 10/5/2.5/1 Gbps multi-rate Ethernet ports
- Up to 3x 1 Gbps Ethernet ports (optional)
- Auto-negotiation for speed and duplex
- Energy-Efficient Ethernet (EEE) control

LAYER 2

- 64 byte forwarding at line rate
- Jumbo 9k packets
- Forwarding up to 256 MAC addresses
- VLAN QinQ support
- VLAN 802.1ad support
- Transparent IPv6 forwarding
- Multicast support

LAYER 3

- Virtual WAN interface configurable through an IP host (OMCI)
- SSH client for a configured virtual WAN interface
- Support for IPv4
- Support for IPv6
- Support for static IPv4
- Support for DHCP option 43 (when using CWMP)
- Support for DHCP option 42 (when using NTP)

QoS

- Support DBA in SR and NSR modes
- Support for Strict Priority and Weighted Fair Queuing
- Support up to 20 T-CONTs
- 8 upstream queues configurable via OMCI
- 8 downstream queues per LAN port configurable via OMCI
- Class of service based on VLAN-ID, 802.1p
- Marking and remarking of 802.1p
- Marking and remarking of DSCP/ToS

MANAGEMENT & MONITORING

- Zero-touch configuration with OMCI provisioning
- CWMP (TR-069) for monitoring and provisioning
- Dual bank flash memory with fail-safe firmware upgrading
- Hardware watchdog
- TR-143 for performance data and throughput statistics
- TWAMP
- iPerf for throughput testing

OPERATIONAL SPECIFICATIONS

- DC 12 V input
- Operating temperature: 5°C – 45°C
- Storage temperature: 5°C – 85°C
- Humidity: 5% – 95% (non-condensing)

PHYSICAL SPECIFICATIONS

CASING

- Size: 135 x 135 x 30 mm (W x H x D)
- Area for an optional PON label with the serial number - 16 x 30 mm on the right side
- Product SN, PON SN, FW version and MAC address label on the bottom side
- PON LED indicator for the connection status
- LED indicators on LAN ports for the link status

Fibre TERMINATIONS

- Slide-on mechanism for easy installation

INCLUDED IN THE BOX

- Icotera Baldur ONT
- 12 V power supply unit
- Fibre termination unit (FTU)
- 2 labels with the PON serial number

SUPPORTED PLATFORMS

- Nokia ISAM 7330/7360
- Huawei MA5800
- The ONT supports other specific platforms. For more information, contact our Sales department at sales@icotera.com.

ESG and SUSTAINABILITY

Product data aligns with the European Sustainability Reporting Standards (ESRS).
Icotera CO2 reduction targets are approved by the Science Based Target initiative (SBTi).

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

By 2030, Icotera will reduce the scope 1 and 2 greenhouse gas (GHG) emissions by 42%.

Climate (ESRS E1)
- Product CO_2 footprint (cradle-to-gate) data is available on request

Pollution (ESRS E2)
- Less than 0.1% hazardous substances in raw materials
- No flame retardants or plastic softeners in plastic parts
- Halogen-free printed circuit boards
- Available in up to 90% post-consumer recycled (PCR) materials
- Packaging: plastic-free, PE bag-free, 95% recycled cardboard
- Compliance with RoHS and the Swedish chemical tax rate for electrical equipment

Social (ESRS S2)
- Suppliers comply with the Icotera Supplier Code of Conduct: https://bit.ly/icotera-code

Distribution (ESRS E1)
- The CO_2 data on logistic solutions (ESRS E1) is available on request

Use
- Power consumption complies with the European Ecodesign Directive 2009/125/EC
- Energy-Efficient Ethernet support reduces power consumption by up to 40% per LAN port

End of life (ESRS E5)
- Built with high-quality components for 10 years expected lifetime
- Disassemblable for recycling
- WEEE producer and packaging responsibility is handled through Elretur and Emballageretur

Icotera Baldur residential ONT configuration options

Interface configurations

Model	Uplink	10G LAN port	1G LAN port	Installation
fX711-00	XGS-PON	2x	N/A	FTU
fX411-00	XGS-PON	1x	3x	FTU
fX311-00	XGS-PON	1x	N/A	FTU
fX310-00	XGS-PON	1x	N/A	Patch

For more information and feature requests, contact our Sales department at sales@icotera.com.