

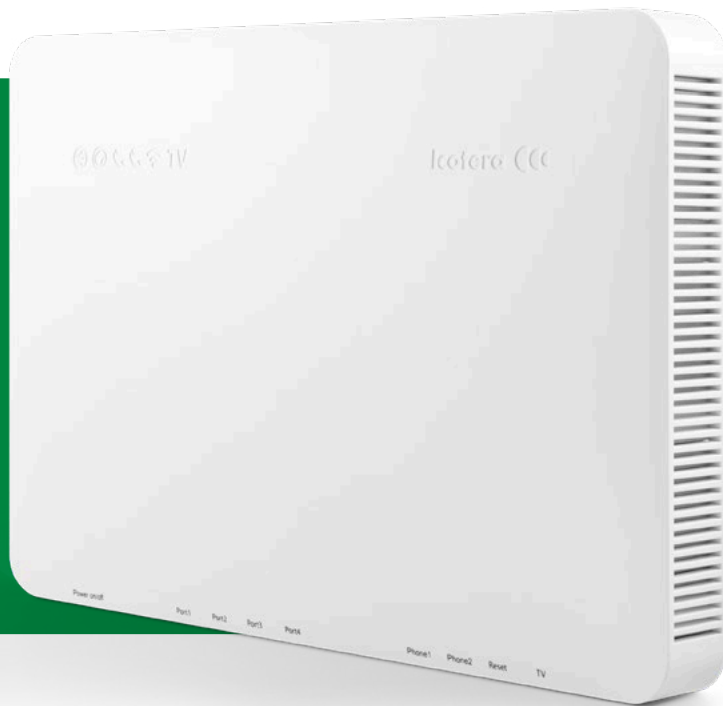
P2P FTTH GATEWAY

i6900-series

Residential Multi-Service Gateway

The Icotera i6900 Multi-Service Gateway integrates optical Ethernet-based gigabit data transmission with Layer 2-4 functionality, and CATV.

- Ease of use & installation
- Vendor independent
- Multi-Service Gateway for wholesales network operators
- Award-winning industrial design



Powerful hardware platform

The Icotera i6900 Fiber-to-the-Home (FTTH) Multi-Service Gateway demonstrates its great strength by bringing together a wide feature set and flawless performance. Its foundation is built on a powerful, cutting-edge dual-core architecture. This, paired with an ASIC for packet forwarding, ensures the platform is always ready to cope with additional tasks while processing VoIP, Gigabit routing of IPv4 with NAT, IPv6 and stateful filtering, traffic switching/bridging.

Innovative feature set

The i6900 provides exceptional Layer 2 functionality that can effortlessly handle 16 bridging instances, multiple WAN interfaces, PPPoE and in-band secure management. The CATV AGC receiver offers

broadband cable-television services to the subscriber with seamless monitoring and configuration of the power levels. As an optional feature, this FTTH gateway offers a complete and customizable filter solution with low-pass filters for individual RF channel plans.

Ease of control

A great variety of management protocols (e.g. SNMP v1/v2, syslog, SSH, Telnet and TR-069) is integrated and supported, which guarantees effortless control over the i6900. Paired with our fail-proof, zero-touch auto provisioning mechanism, they provide easy and trouble-free daily operations. To guarantee trouble-free firmware roll-outs in harsh network environments, the i6900 also comes with dual-bank firmware.

i6900 Multi-Service Gateway

FEATURES

- Best-in-class Wi-Fi solution
- Vendor-independent
- Award-winning industrial design
- Low power consumption
- Optional operator branding

NETWORK COMMUNICATION PON INTERFACE

- Single-mode fiber (ITU-T G.652) SC/PC connector
 - 100BaseBX10/20 compliant
 - 1000BaseBX10/20 compliant
- Tx: 1310nm, Rx: 1480nm-1600nm
- Full-duplex transmission
- Operating distance: 20km
- Transmit power: -7dBm - -2dBm
- Receive sensitivity: -3dBm - -23dBm
- Class 1 laser product
- Auto detection of 100Mbps or Gigabit

LAN INTERFACES

- 4 x 1G LAN
- Auto-negotiation for speed and duplex
- Integrated cable tester, detects:
 - Short
 - Open
 - Impedance mismatch
 - Cable length

LAYER 2

- 16 bridge instances
- 64 byte forwarding at line rate
- Jumbo 9k packets
- IGMP v1/v2 snooping
- Transparent IPv6 forwarding
- Forwarding up to 2K MAC addresses
- Multicast support
- VLAN Translation
- VLAN 802.1Q support
- Port mirroring

LAYER 3

- Virtual interfaces
- Multiple WAN interfaces in one router
- 64 byte forwarding at line rate with routing/NAT
- IGMP v1/v2 proxy with fast-leave and monitoring
- Stateful firewall
- IPv4 - SNAT, DNAT, DMZ - DNS proxy - DHCP client and server
- IPv6 - prefix delegation
- PPPoE (termination)
- 32K NAT/NAPT flows
- SW connection tracking
- RTSP stateful proxy
- Protocol helpers for: SIP, RTSP, FTP, TFTP, PPTP, L2TP and IPSec
- Guest Access

QoS

- Support for Strict Priority and Weighted Fair Queuing (available for Layer2 mode)
- 8 Upstream/Downstream Queues (available for Layer2 mode)
- Class of Service Based on VLAN-ID, 802.1p (available for Layer2 mode)
- Marking/Remarking of 802.1p (available for Layer2 mode)
- Marking/Remarking of DSCP/ToS (available for Layer2 mode)

CATV (OPTIONAL)

OPTICAL PARAMETERS

- Input wavelength: 1550nm - 1560nm
- Input level range: -9dBm - 2dBm
- Optical connector: SC/APC

RF PARAMETERS

- RF output impedance 75Ω
- Frequency range pass-band: 45MHz - 890MHz
- Frequency range Filter1: 430MHz - 890MHz
- Frequency range Filter2: 590MHz - 890MHz
- Slope (maximum): 5dB
- RF output level (2.5% - 4% OMI, -8dBm - OdBm): $80 \pm 2\text{dB}\mu\text{V}$
- RF output level @ AGC-high mode (2.5% - 4% OMI, -6 dBm - OdBm): $85 \pm 2\text{dB}\mu\text{V}$
- CNR $\geq 45\text{dB}$
- CSO $\geq 60\text{dB}$
- CTB $\geq 60\text{dB}$
- Management: via OMCI

VoIP

- 2 separate POTS lines SIP (RFC3261)
- 5 REN support
- DTMF signaling - SIP INFO - Inband - Auto - RFC 2833
- Caller ID support (DTMF/FSK)
- CLIR
- Advanced dialplan
- B-Number manipulation
- Class 5 services - Forward all calls - Forward on busy - Forward on no answer - Call waiting
- Codecs: G.711A a-law - G.711U μ -law - G.722 - G.729
- Codec negotiation
- Modem/Fax detection
- G.165 Echo Cancellation

MANAGEMENT & MONITORING

- Shared or separate IP interface for management
- L1 and L3 filters for all local services
- SSHv2 with key authentication
- Telnet with authentication
- End-user oriented Web interface (configurable) - LAN network - Port forwarding, NAT loopback, DMZ, DynDNS, Status and monitoring
- Zero-touch provisioning with DHCP/TFTP/HTTP/FTP or TR-069
- TR-069 with TLS, supporting - TR-104 (VoIP) - TR-181 (Network)
- SNMP v1/v2
- CLI with auto-completion
- Extensive debug possibilities
- Packet dumping
- All settings stored locally in flash
- Automatic firmware and configuration update (polling)
- Dual bank firmware w/ fail-safe upgrading
- LED brightness configurable by the operator and/or end user
- Hardware watchdog
- Wake-on-LAN for Web UI and CLI

OPERATIONAL SPECIFICATIONS

- DC 12V input
- Power consumption maximum: 16.7W
- Power consumption in idle state: 5.5W
- Operating temperature: 5°C - 45°C
- Storage temperature: 5°C - 85°C
- Humidity: 5% - 95% (non-condensing)

PHYSICAL SPECIFICATIONS

CASING

- Size: 233 x 162 x 41 mm (W x H x D)
- WAN LED - Connection status
- LAN LED - Link status
- VoIP LEDs - Registration status
- CATV LED - Signal status
- LAN status LEDs (link/traffic, duplex) per interface
- LED auto off after timeout period

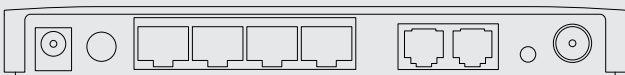
FIBER TERMINATIONS

- Slide-on mechanism for easy installation
- FTU support for - Gas block unit (sold separately) - WDM filter (sold separately)
- Blind cover for FTU (optional)

INCLUDED IN THE BOX

- CPE
- 12V PSU adapter
- 2 x Label with PON SN
- FTU

i6900 Multi-Service Gateway Configuration Possibilities



Gateway Interface Configurations:

Model	Uplink	LAN ports	POTS ports	USB 2.0 ports	USB 3.0 ports	Micro SD card	Wi-Fi	Antennas	CATV output	Gateway top	Gateway bottom
i6901-20	P2P MSGW	4xGE	2x	0	0	No	None	None	1 x	Printed: English ports + logo	FTU
i6902-20	P2P MSGW	4xGE	-	0	0	No	None	None	1 x	Printed: English ports	FTU
i6905-20	P2P MSGW	4xGE	2x	0	0	No	None	None	-	Printed: English ports + logo	FTU

NOTE: Please contact Sales for further details on information listed and feature requests.