

P2P Fiber Router

IGW 3000 P2P Residential Router

The Icotera IGW 3000 P2P residential router integrates optical Ethernet-based data transmission with Layer 2-4 functionality and VoIP, 802.11bgn Wi-Fi, CATV and USB.

- Ease of use
- Minimized TCO
- Vendor independent
- Local 24/7 support
- Smart-Home platform
- Award-winning industrial design



Powerful hardware platform

The Icotera IGW 3000 P2P 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, swiftly handling tasks in real-time with one dedicated core, while reserving the second core for any high-priority calculations. The platform always remains ready to cope with additional tasks while processing VoIP, Gigabit routing of IPv4/IPv6 with NAT (IPv4) or bridging at wirespeed.

Cutting-edge functionality

In order to reduce multicast traffic load, IGW 3000 P2P has been fitted with full IGMP proxy functionality. Paired with extensive VFR-lite functions, allowing up to 4 independent router instances with full support of multicast, NATv4 functionality, filtering up to layer 7 and several IPv6 mechanisms - it serves as a true, state-of-the-art powerhouse, guaranteed to handle any configuration with ease.

Innovative feature set

The IGW 3000 P2P provides exceptional Layer 2 functionality that can effortlessly handle up to 8 bridging instances. Independent configurations, binding a maximum of 18 interfaces (LAN, WAN, Wi-Fi, virtual and PPPoE) can be assigned to separate routers or bridges. The CATV AGC receiver offers broad cable television services to the

subscriber with seamless monitoring and configuration of the power levels. As an optional feature, this fiber router offers a complete filter solution with high-block band attenuation for individual RF channel plans.

Ease of control

A great variety of management protocols (e.g. SNMP v1/v2, SSH/Telnet and TR-069) is integrated and supported, which guarantees effortless control over the IGW3000 P2P. Paired with our fail-proof, zero-touch auto provisioning mechanism, they guarantee easy and trouble-free daily operations.

Integrated Smart-Home platform

The IGW 3000 P2P router supports the unique Icotera Smart-Home platform via state-of-the-art low-consuming wireless technology. The platform offers great solutions for end-users within Alarm & Surveillance, Energy Management and Home automation. The cloud-based platform connects to third party device-hardware, which makes the possibilities for connecting devices close to endless. For the network operator or service provider, the platform offers an opportunity for additional revenue streams and higher customer loyalty. The Icotera Smart-Home platform is deeply integrated into the Icotera gateway, which makes the daily use effortless and very valuable for the modern household.

IGW 3000 P2P Residential Router

FEATURES

- High performance solution
- Intuitive design
- Extensive IPv6 support
- Slide-on design
- Phenomenal aesthetic design
- Integrated feature rich CATV solution (optional)
- Low power consumption
- Developed and manufactured in Europe
- Operator branding (optional)
- Customized firmware

NETWORK COMMUNICATION

WAN INTERFACE

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

LAN INTERFACE

- 4 or 8 RJ45 connectors 10/100/1000 Base T(X)
- Auto-negotiation for speed and duplex
- Auto MDI/MDX
- Jumbo packets
- 802.1x

Wi-Fi INTERFACE

- IEEE 802.11b/g/n
- IEEE 802.11a (optional)
- Authentication methods
 - Open
 - 802.1x
 - WEP64
 - WEP128
 - WPA
 - WPA2
- Multiple SSIDs

- MAC filtering
- 2T2R MiMo
- Internal antennas (external optional)
- Automatic channel selection
- Software Tx power control
- Extensive monitoring
- Neighbor scanning

LAYER 2

- Multiple bridge instances
- Gigabit wirespeed forwarding
- IGMP snooping
- 802.1p marking
- VLAN support
- Wi-Fi support
- Transparent IPv6 forwarding
- DHCP relay

LAYER 3

- VRF-lite
- Virtual interfaces
- Multiple WAN interfaces in one router
- Gigabit wirespeed forwarding
- IGMP proxy with fast-leave and monitoring
- P2P filters/rate-limiting
- Stateful Packet Inspection
- IPv4
 - SNAT, DNAT, DMZ
 - DNS proxy
 - DHCP client and server
- IPv6
 - Prefix delegation RFC3769
 - 6RD
 - DHCP client and server
 - DS-Lite
 - Auto-configuration
- PPPoE (termination)
 - IP L2-L4 filters
- Connection tracking with monitoring
- RTSP stateful proxy

QoS

- 8 queues
- Layer 3 QoS features
 - Packet classification marking
 - Queuing
 - Scheduling
 - Rate Limiting
- L2 rate limiting
- 802.1p priority
- 802.1p remapping
- ToS classification
- DiffServ classification

USB

- Up to 2 USB ports
- Prepared for
 - Z-Wave
 - ZigBee
 - CAT-iq
 - Storage

VoIP (OPTIONAL)

- 2 RJ11 connectors
- 2 separate POTS lines SIP (RFC3261)
- 5 REN support
- DTMF signalling
 - SIP INFO
 - Inband
 - Auto
 - RFC 2833
- Adaptive jitter buffer
- DNS SRV
- Caller ID support (DTMF/FSK/DTMF DK)
- 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
- Modem/Fax support
- Silence suppression
- LEC (Line Echo Cancellation)
- G.165 Echo Cancellation
- CNG (Comfort Noise Generation)

CATV (OPTIONAL)

OPTICAL PARAMETERS

- Saturation power: 3 dBm
- Input level range: -10 to 0 dBm
- Input wave length: 1310/1550 nm
- Optimal AGC range: -6 to 0 dBm
- Equivalent input noise (amplifier + diode): 8 pA/√Hz
- Responsivity $\lambda=1310$ nm: 0.8 A/W
- Responsivity $\lambda=1550$ nm: 0.9 A/W
- Optical connector: SC/APC
- Standard Single Mode fiber (ITU-T G.652)
- Software monitoring of RX level in 0.1 dB steps

RF PARAMETERS

- Frequency range: 45 to 900 MHz
- Output level at -3 dBm (0 dB slope, 3.5% OMI w/2 filters): 75 dBuV
- Output level at -3 dBm (4 dB slope, 3.5% OMI): 78 dBuV
- Linearity: ± 1 dB
- CNR (CENELEC 42 channels): ≥ 51 dB
- CSO (CENELEC 42 channels): ≤ 60 dBc
- CTB (CENELEC 42 channels): ≤ 60 dBc
- RF filters (optional): up to 2
- Filter attenuation in block band: > 50 dB
- Filter attenuation in pass band: < 3 dB
- Filter and output power level controllable by software
- RF connector: 75 Ohm "F"

MANAGEMENT & MONITORING

- Shared or separate IP interface (VLAN or virtual) for management
- IP filters for all local services
- SSHv2 with key authentication
- Telnet with authentication
- End-user oriented web interface (configurable)
 - Wi-Fi
 - PPPoE
 - LAN network
 - Port forwarding, NAT loopback, DMZ, DynDNS
 - Status and monitoring
- TR-069 supporting
 - TR-104 (VoIP)
 - TR-098 (Network)
- CLI with auto-completion
- SNMP v1/v2 (IF-MIB, ICOTERA private MIB)
- Extensive debug possibilities
- Packet dumping
- All settings are stored locally in flash
- Zero-touch configuration with DHCP/TFTP or TR-069
- Automatic firmware and configuration update (polling)
- Fail-safe firmware upgrading

OPERATIONAL SPECIFICATIONS

- DC12V input $\pm 10\%$
- Max power consumption: 12 W
- (incl. 4 LAN, 2 VoIP, Wi-Fi and CATV)
- Operating temperature: 0 – 45°C
- Storage temperature: -20 – 85°C
- Humidity: 5% – 95% (non-condensing)

PHYSICAL SPECIFICATIONS

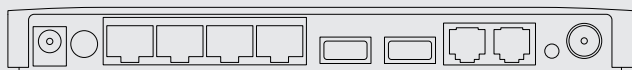
CASING

- Weight: 800 g
- Size: 190 x 110 x 48 mm (W x H x D)
- Front LEDs configurable by operator and/or end-user:
 - Power/WAN status (link/traffic/provisioning)
 - VoIP port 1
 - VoIP port 2
 - Wi-Fi
 - CATV (status/signal power)
- LAN status LEDs (link/traffic, duplex) per interface
- LED auto off after timeout period

FIBER TERMINATION UNIT (OPTIONAL)

- Slide-on mechanism for easy installation
- FTU support for
 - Gas block unit (sold separately)
 - WDM filter (sold separately)
- Optional blind cover for FTU
 - VoIP port 2
 - LAN status (link/traffic, duplex)

IGW 3000 P2P Configuration possibilities



Gateway Interface Configurations:

9020:	1 x Power	4 x LAN	2 x USB	2 x POTS		Wi-Fi	Int. Ant.
9022:	1 x Power	4 x LAN	2 x USB	2 x POTS	1 x CATV	Wi-Fi	Ext. Ant.
9026:	1 x Power	4 x LAN	2 x USB	2 x POTS	1 x CATV	Wi-Fi	Int. Ant.
9040:	1 x Power	8 x LAN	1 x USB			Wi-Fi	Int. Ant.
9041:	1 x Power	8 x LAN	1 x USB		1 x CATV	Wi-Fi	Int. Ant.
9042:	1 x Power	8 x LAN	1 x USB		1 x CATV	Wi-Fi	Ext. Ant.



reddot design award
product design 2013