P2P LAYER 2 SWITCH

i6400-series
Residential Switch

The Icotera i6400 Layer 2 residential fiber switch, prepared for Open Access networks, integrates optical Ethernet-based data transmission with Layer 2-4 functionality, CATV and USB.

- Ease of use & installation
- Vendor independent
- Award-winning industrial design
- Lowest Total Cost of Ownership

Strong hardware base
The Icotera i6400 is a fully featured Layer 2 fiber switch with an advanced feature set. i6400 is targeted towards open access networks and, in general, operators with a layer 2 demarcation point. All switching is done in hardware, resulting in lightning fast wirespeed gigabit transfer rates and giving the instant-on feeling for the end-user.

State of the art features
The i6400 is a complete, feature-full package of Layer 2 functionalities. Gigabit rates and instant forwarding due to powerful switching capability, optical signal auto-detection and support of 100Base-BX-10/20 and 1000Base-BX standards is a clear token of this high quality switch. The CATV AGC receiver gives the subscriber cable television access with power level configuration and monitoring. To top it off, this fiber switch offers (optionally) individual RF channel plans in a complete filter solution with high-block band attenuation.

Extensive functionality
The i6400 offers an advanced array of traffic control and shaping features, such as: Ethernet and IP filtering up to layer 4, MAC address limiting, IP source guard and VLAN forwarding and filtering. Agile reduction of traffic overhead is managed by jumbo frame forwarding leading to lower packet rates. Adaptive mechanisms control the quality of optical signal (both CATV and DATA) and enable the user to swiftly zero in on any problems in the upstream network. Ethernet link performance is continuously controlled by 802.3ah OAM instruments that allow prompt resolution of any arising problems. Link state information is propagated on both WAN and LAN side and power consumption is managed with advanced management capabilities.

Full control and management
The i6400 can easily be managed by protocols such as EOAM, SNMP v1/v2, SSH/Telnet and TR-069. Supported by our zero-touch auto provisioning mechanism it allows for easy and trouble-free daily operations.

Icotera

i6400 Residential Switch

FEATURES

- Vendor-independent
- Award-winning industrial design
- Low power consumption
- Optional operator branding

NETWORK COMMUNICATION
WAN INTERFACE

- Single-mode fiber (ITU-T G.652) SC/PC connector
- 100BaseBX10/20 compliant
- 1000BaseBX10/20 compliant
- Tx: 1310nm, Rx: 1480nm – 1600nm
- Operating distance: 20km
- Transmit power: -7dBm – -2dBm
- Receive sensitivity: -3dBm – -23dBm
- Class 1 laser product
- Auto detection of 100Mbps or Gigabit
- 1 x 1G/SFP for 6407 variant
- 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

- 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

- Management WAN interface
- OSI Layer 3 and 4 filtering by ACLs

USB

- 1 x USB 2.0 host port

CATV (OPTIONAL)

OPTICAL PARAMETERS
- Input wavelength: 1310nm - 1550nm
- Input level range: -9dBm - 2dBm
- Optical connector: SC/APC

RF PARAMETERS
- RF output impedance 75Ω
- Frequency range: 45Mhz - 890MHz
- Slope (maximum): 5dB
- RF output level (4% OMI, -8dBm - 0dBm): 80 ± 2dBµV
- CNR ≥ 45dB
- CSO ≥ 60dB
- CTB ≥ 60dB
- Management: via OMCI

MANAGEMENT & MONITORING

- IPv4 management interface
- Separate VLAN (optional)
- Access filtering based on IP source network
- Zero-touch provisioning with DHCP/TFTP/HTTP/FTP and TR-069/TR-181 with HTTPS
- Multicast analyzer
  - Debugging of live Multicast streams
  - Provides detailed information from MPEG-TS and RTP layers
- Host simulation tool
- Adjustable outage portal
- 64-bit port counters
  - Unicast
  - Packet size (64, 128, 256, 512, 1024, 1518, 9k)
  - Multicast
  - Broadcast
  - FCS error
  - Align error
  - Undersized
  - Fragmented
  - Too long
  - Good byte
  - Bad byte
  - Overflow
  - Filtered
  - Collisions
- SNMP v1/v2
  - IF-MIB2
  - Icotera private MIB
  - Community protected
  - Traps
- 802.3ah OAM
  - Link performance monitoring
  - Fault detection
  - Loopback testing
- Automatic firmware and configuration update (polling)
- Dual bank firmware w/ fail-safe upgrading

OPERATIONAL SPECIFICATIONS

- DC 12V input
- Power consumption maximum: 6.7W
- Power consumption in idle state: 1.9W
- 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
- VoIP LEDs - Registration status
- CATV LED - Signal status
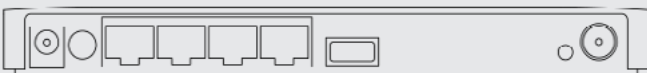- LAN status LEDs (link/traffic, duplex) per interface

FIBER TERMINATIONS

- Slide-on mechanism for easy installation (optional)
- 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 SN
- FTU (optional)

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i6400 Residential Switch
Configuration possibilities

Gateway Interface Configurations:

Model	Uplink	LAN	USB	CATV	Bottom
i6401	BX20	4x	1x	1x	FTU / Patch
i6405	BX20	4x	1x		FTU / Patch
i6407	RJ45/SFP	4/5x	1x		Patch (Roll-up)

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