

FiberXport®

OCG-118

Ethernet gateway with VoIP



Genexis
fiber to the home

The OCG-118 modular managed Ethernet gateway, with integrated Voice-over-IP (VoIP), is part of the FiberXport® product family. Together with the FiberXport® wall-mount unit and the OCG-14 optical CATV receiver, it allows for triple play services on a Fiber-to-the-Home infrastructure in a single unit. The OCG-118 has been developed by Genexis to enable quality voice and managed Ethernet services over a Fiber-to-the-Home (FTTH) network at lowest cost. Two versions are available, OCG-118m with fiber WAN port and OCG-118e with electrical WAN port.

Four broadband data ports

IP-data entering the OCG-118 is directly forwarded to the four managed Ethernet ports on its LAN side, capable of handling speeds up to 100 Mbps. Rate-limit, QoS and VLAN can be managed for each port separately.

Two phone lines with VoIP

The OCG-118 supports Voice-over-IP for two separate phone lines. Voice traffic is automatically processed with highest priority. Standard POTS phones can be connected to the RJ-11 connectors. SIP user agent and G.711 codec are implemented. CLIP, DTMF, LEC and several Class 5 features are supported, as well as fax and modem pass through.

Automatic remote management

The Automatic Provisioning System enables easy remote management of all user and service properties over the already existing network. The CPE checks for most recent settings at startup and performs a periodic update check. If the current settings are not available, the CPE can start with locally stored settings.

Key Features:

- **Worlds smallest single unit triple play FTTH solution**
- **Plug-and-play with FXP-100 wall-mount unit and OCG-14 CATV receiver.**
- **Automatic provisioning**
- **Four managed Ethernet ports, 100 Mbps each**
- **Rate-limit, QoS and VLAN support**
- **Support for VLAN trunking (multiple VLANs per port) and Q-in-Q (double VLAN tagging)**
- **Dual phone line support**
- **Support for several caller features**



Features and specifications

User interfaces

- 2 user voice ports RJ-11
- 4 user data (LAN) ports RJ-45

Status LEDs

- Power
- Error / failure indication
- WAN – status
- R-TV – status
- M1-3 – feedback on management status
- T1, T2 – feedback on voice status
- LAN-ports – link and activity (4x)

WAN interface OCG-118m (optical)

- Single mode fiber (ITU-T G.652)
- SC/PC connector
- 100Base-BX10 compliant
- IEEE 802.3ah (EFM) compliant
- Full duplex transmission
- TX 1310 nm
- RX 1550 nm
- 15 km range
- > 16 dB power budget
- Class 1 laser product
- Transmit power -8 ... -14 dBm
- Receive power -8 ... -31 dBm

WAN interface OCG-118e (electrical)

- RJ-45 connector
- 10/100Base-TX (IEEE 802.3 Ethernet)
- Auto-negotiating full/half duplex
- Auto-MDI/MDIX

Voice ports

- 2 RJ-11 connectors
- 2 separate POTS lines
- SIP-based
- 5 REN support
- G.711 a-law and μ -law codec
- DTMF signalling in-band / RFC 2833
- Line Echo Cancellation (LEC)
- Adaptive jitter buffer
- Packet loss concealment (optional)
- Caller ID support (DTMF / FSK)
- Support for CLIR
- Class 5 services:
 - Call forward unconditional
 - Call forward on busy
 - Call forward on no answer
 - Call hold / release
 - Call waiting
- Modem / fax support
- Automatic provisioning via APS

LAN ports

- 4 RJ-45 connectors
- 10/100Base-TX (IEEE 802.3 Ethernet)
- Ports managed independently
- Auto-negotiating full/half duplex
- Auto-MDI/MDIX
- 4 priority QoS queues per port
- 8 layer 2 QoS levels
- VLAN tagging supported
- VLAN trunking supported
- Q-in-Q support
- IGMP snooping
- Rate-limiting / shaping

CATV control, for OCG-14 (OCG-118m only)

- Powering for OCG-14 unit
- Remotely switch on/off via APS
- Remote monitoring if CATV input signal is within specification

Provisioning

- Settings stored locally in flash
- Autonomous startup-sequence
- Provisioning even when CPE is turned off
- Failsafe remote firmware update
- Separate VLAN for Voice / Management
- Remote control of all port properties of all voice and data ports (VLANs, QoS, Rate-limit etc.)
- Status feedback
 - CPE status
 - CATV status
 - LAN status
 - Extensive LAN port statistics counters
 - SIP status
 - Line status (phone lines)

General specifications

Mechanical and environmental

- Dimensions (H x W x D)
 - OCG-118 190x110x60 mm
 - Incl. FXP-100 250x110x60 mm
- Weight
 - OCG-118 unit 225 g
 - Incl. FXP-100 395 g
 - Incl. FXP-100 & OCG-14 480 g
- Power supply range 10.8-13.2 Vdc
- Power supply typical 12 Vdc
- Power dissipation
 - OCG-118 unit 3.8 W typ.
 - Incl. OCG-14 5.6 W typ.
- Operating condition 0 - 35 °C
- Storage condition 0 - 70 °C

Emission and safety regulations

- CE approved
- Safety: EN60950
- Laser safety:
 - EN60825-1: Class 1 laser product
 - EN60825-2: Hazard level 1
- Emission: EN55022, Class B
- Immunity: EN55025

Supported standards

ARP	RFC 826
CFM	IEEE 802.1ag
DHCP	RFC 2131
	RFC 2132
DNS	RFC 1035
	RFC 2782
	RFC 2915
DTMF	ITU-T Q.24
DTMF signaling	RFC 2833
Ethernet	IEEE 802.3ah
	IEEE 802.3x
ICMP	RFC 792
IPv4	RFC 791
LEC	ITU-T G.168
MD5	RFC 1321
OAM	IEEE 802.3ah
RTSP	RFC 3550
	RFC 3551
	RFC 3711
SDP	RFC 2327
	RFC 3605
SIP 2.0	RFC 3261
	RFC 3263
	RFC 3264
	RFC 3265
	RFC 3420
	RFC 3515
	RFC 3581
	RFC 3842
	RFC 3891
	RFC 3892
SIP info	RFC 2976
Syslog	RFC 3164
TCP	RFC 793
TFTP client	RFC 1350
UDP	RFC 768
VLAN / QoS	IEEE 802.1p
	IEEE 802.1q
Voice codec	ITU-T G.711 (μ & a)

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