GPON ONT G-97S
Platform Briefing

VERSION2

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Partnership for the Next Generation Broadband CPE

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Overview

To extend the GPON deployment in existing access network for business and residential subscribers, GPON ONT SFP G-97S provides the standard SFP package with SGMII interface, which can easily replace the Ethernet SFP module existing in Ethernet gateway, switch, router or backhaul equipment etc.

Equipped with ITU-T G.984 compliant GPON interface, G-97S incorporates interoperability, key customers' specific requirements and cost-efficiency. By integrating GPON MAC and standard compliant OMCI stack, G-97S provides all GPON functionality and full range FCAPS management features including supervision, monitoring and maintenance

Service

Data

The G-97S ONT is delivered with one SFP (Small Form-factor Pluggable) based 1000 Base-X Gigabit Ethernet data interface, supporting:

- Built-in layer-2 switching
- Advanced data features such as VLAN tag manipulation, classification, and filtering

Specification

Dimensions

- 82 mm x 14 mm x 12.5 mm (L x W x D)

Power Supply

- Power Consumption: < 2W

Working Environment

- case operating temperature: -40~+85 °C
- Humidity: 5 ~ 95% relative humidity, non-condensed

Safety & EMI

- CE compliant
- FCC/UL compliant

Installation

- SFP interface

GPON Interface

- Compliant with ITU-T G.984 GPON standards
- SFF type laser, SC/APC connector
- 1.244G bps Burst Mode Upstream Transmitter
- 2.488 Gbps Downstream Receiver
- Compliant with ITU-T G.984.2 Amd1, Class B+
  - APD receiver and DFB transmitter
  - 0.5~+5dBm launch power, -27 dBm sensitivity, and -8dBm overload
- Wavelengths:
  - US 1310nm, DS 1490nm
- Laser compliant with FCC 47 CFR Part 15, Class B, and FDA 21 CFR 1040.10 and 1040.11, Class I, ONT support Class C or Class C+ optics as an option

GPON QoS

- Multiple T-CONTs per device
- Multiple GEM Ports per device
- Flexible mapping between GEM Ports and T-CONT
- Activation with automatic discovered SN and

password in conformance with ITU-T G.984.3

- AES-128 Decryption with key generation and switching
- FEC (Forward Error Correction)
- DBA reporting by piggyback reports in the DBRu (mode 0)
- 802.1p mapper service profile on U/S
- Mapping of GEM Ports into a T-CONT with priority queues based scheduling
- Support Multicast GEM port and incident broadcast GEM port.

Ethernet Interface

- SFP based 1000 Base-X GbE interface
- Hardware priority queues on the downstream direction in support of CoS
- 802.1D bridging
- Virtual switch based on 802.1q VLAN
- VLAN tagging/detagging
- VLAN stacking (Q-in-Q) and VLAN Translation
- IP ToS/DSCP to 802.1p mapping
- Class of Service based on VLAN-ID, 802.1p bit, ToS/DSCP
- Marking/remarking of 802.1p
- Broadcast/Multicast rate limiting

OAM

- Standard compliant OMCI (the embedded operations channel) interface as defined by ITU-T G.984.4 and G.988
- Alarming and AVC report, performance monitoring
- Remotely software image download over OMCI, as well as activation and rebooting
- Hold two software sets with software image integrity checking and automatic rollback

Pin Description

PIN NO.	Name	Description
1	*V*EET1	Transmitter ground
2	TX Fault	Transmitter fault is internally tied to transmit ground. Or TOD (time of day) output
3	TX Disable	Transmit disable, This pin is tied to PHY low power mode
4	MOD_DEF2/SDA	Signal SDA(data) of the two-wire serial ID interface
5	MOD_DEF1/SCL	Signal SCL(clock) of the two-wire serial ID interface
6	MOD_DEF0	This pin is internally tied to transmit ground
7	R_SEL/RST	Dying gasp pin.
8	LOS/SD	Loss of signal indication
9	*V*EER1	Receiver ground. Or 1PPS output
10	*V*EER2	Receiver ground
11	*V*EER3	Receiver ground
12	RD_N	Differential receiver outputs. User to terminate to 100 Ω differential at host. AC coupled
13	RD_P	Differential receiver outputs. User to terminate to 100 Ω differential at host. AC coupled
14	*V*EER4	Receiver ground
15	*V*CCR	3.3V power
16	*V*CCT	3.3V power
17	*V*EET2	Transmitter ground
18	TD_P	Differential transmitter inputs. User to terminate to 100 Ω differential at host. AC coupled
19	TD_N	Differential transmitter inputs. User to terminate to 100 Ω differential at host. AC coupled
20	*V*EET3	Transmitter ground

Enclosure

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