SNR-ONT-2G

G-PON Optical Network Terminal

SNR-ONT-2G is G-PON Optical Network Terminal (ONT) compliant with ITU-T G.984 standards. SNR has developed SNR-ONT-2G for all clients on the basis of G-PON technology. G-PON technology supports upstream 1.25Gbps and downstream 2.5Gbps PON transmission rate, highly efficient bandwidth usage for Ethernet multi-services and ensures that the carrier can provide reliable quality of services to their customers.

SNR-ONT-2G provides one G-PON uplink port and two ports of Gigabit Ethernet downlink interface supporting 10/100/1000Base-T (RJ45). SNR-ONT-2G enables the service providers to extend their core optical network all the way to their subscribers, eliminating the bandwidth bottleneck in the last mile. With two Gigabit Ethernet service ports, they deliver data at the speed of 1000Mbps to connected subscriber equipments.

Product Specification

Specification		SNR-ONT-2G
Interface	WAN port (1)	1 G-PON uplink port (SC/APC, SFF type) RX:1490nm, TX:1310nm, Distance: 20 km ITU-T G.984.2 Compliant G-PON ONU Class B+
	LAN port (2)	2-Port 10/100/1000Base-T (RJ45)
Dimensions (W x H x D)		135 x 35 x 135mm (5.3 x 1.4 x 5.3 in)
Operating temperature		32 ~ 104 °F (0 ~ 40 °C)
Storage temperature		-4 ~ 158°F (-20 ~ 70°C)
Operating humidity		0 to 90 % (non-condensing)
Power Adapter	Input	100-240VAC, 50/60Hz
	Output	DC 5V, 2A
LEDs		POWER : On WAN : G-PON Link LAN 1-2 : Gigabit Ethernet Link
Safety Standards		FCC Part 15, UL, VCCI*, CE*, (*Applicable regulations with the customer-specific requirements)

Key Features

FTTx Deployment

The ultimate goal of fiber reaching all the way to customer premises to perform Fiber to the home (FTTH), Fiber to the Business (FTTB) and Fiber to the Curb (FTTC) solutions are PON technology. SNR-ONT-2G G-PON ONT is the most technologically advanced, cost-effective solution available to provide voice and data service over PON fiber.

Extended Reach G-PON

Extended reach G-PON offers a clear deployment advantage that allows service providers to dramatically increase their serving areas. The logical reach of the G-PON is 60 km but, with the current price point for laser transceivers, most G-PON vendors limit the physical reach of their G-PON product to 20km for a highly efficient ranging and bandwidth granting procedure.

Dying Gasp

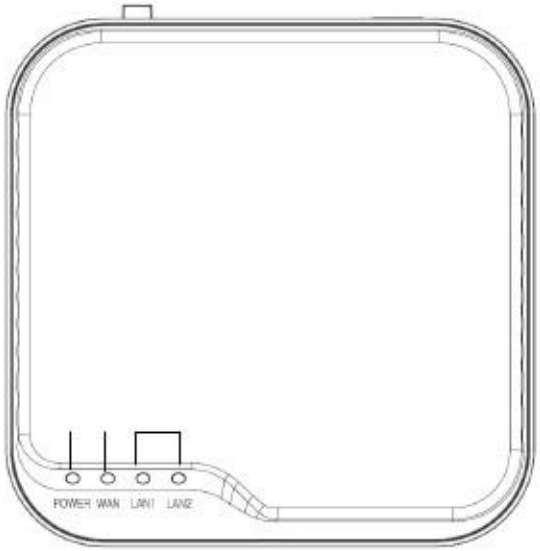
SNR-ONT-2G monitors supply voltages of the G-PON ONT system. When one of the monitored voltages goes down to a minimum configured threshold, this power monitor circuit informs the voltage failure signal to G-PON ONT. This input to the ONT system will trigger an interrupt to the host application and will send an upstream Dying Gasp message to OLT.

G-PON Transceiver Fault Detection

SNR-ONT-2G monitors TX fault within G-PON interface. When it detects some problems, SNR-ONT-2G blocks TX signal from ONT optic fiber module or performs the watchdog timer functions.

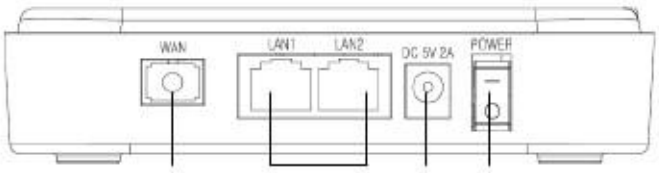
SNR-ONT-2G Interface

Top



POWER LED
The status of power supply
WAN LED
ONT registration with OLT
LAN 1-2 LED
Traffic transmission between ONT and PC/switch

Rear



WAN
Connect to G-PON interface via passive optical splitter.
LAN1-2
10/100/1000Base-T (RJ45) Gigabit Ethernet Link
Adapter Jack
Connect to AC power adapter.
Power On/Off Button
Change ON/OFF position of the ONT power

Specification of PON interface

G-PON ONU transceiver							
Optical Connector	Package	Wavelength	Speed	Rx sensitivity	Optical Tx Power	Reach	Application code
SC/APC	2x10 SFF	1310 nm(TX) 1490 nm(RX)	1.25Gb/s(US) 2.5Gb/s(DS)	< -28dBm	+0.5 ~ +5dBm	20 km	CLASS B+

Product Benefits

Benefits	
SNR-ONT-2G	G-PON Line rates of 2.5 Gbps (downstream) and 1.25 Gbps (upstream) 2-Port of Gigabit Ethernet interfaces Support Dying Gasp for OLT indication of fiber cut or remote side power loss IEEE 802.3q (VLAN) Self Loop Detection

Product Features

Product Features	
G-PON Features	ITU-T G.984 compliance Support Forward Error Correction (FEC) Support various ONT Transceivers (20km) G-PON Encapsulation Method (GEM) port: 512 (port id) G-PON ONU Transceiver - ITU-T G.984.2 compliant G-PON ONU class B+ - Support Digital Diagnostic Monitoring interface - Burst mode application - FTTx WDM Broadband Access
Layer 2	Untagged Port configuration Standard Ethernet Bridging Spanning Tree Protocol (IEEE 802.1D) Address learning with auto aging Switching / Bridging acc. to IEEE 802.1D and IEEE802.1Q
QoS	HW-based internal IEEE 802.1p(CoS) SP(Strict Priority) Scheduler QoS mapping based on 802.1q (VLAN tag), ToS/DSCP Classification by GEM Port-ID for downstream QoS
Multicast	IGMP snooping
Standard & Protocol	IEEE 802.1D STP IEEE 802.1p Strict Priority IEEE 802.1Q VLAN IEEE 802.1q Tag VLAN IEEE 802.3z Gigabit Ethernet

Ordering Information

Items	
SNR-ONT-2G	1-Port G-PON (Class B+, ITU-T G.984), 2-Port 10/100/1000Base-T, 64MB SDRAM, and 8MB Flash. AC power adapter. -. ONT for 20km distance -. SC/APC Connector type