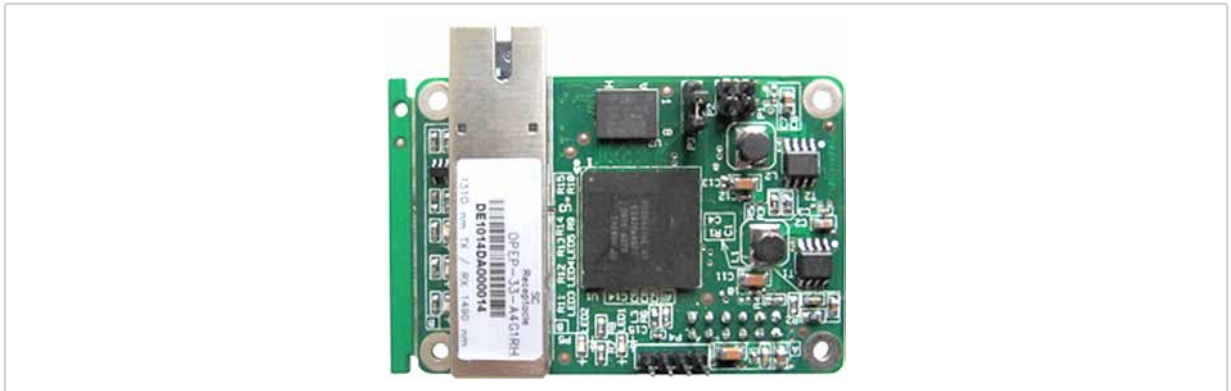


Product Specification

A-GEAR P100A

Remote Communication Module of Concentrator ONU



1. Introduction

Abiding by IEEE802.3ah, A-GEAR P100 series meets relevant requirements of GEAPON ONU regulated in Technical Requirements of YD/T1475-2006—Ethernet-Based EPON and China Telecom EPON Technical Requirement CTC2.0/2.1. The telecommunication technology and model of this series comply with relevant standards of the electricity information collection system in the electric power industry, and this series adopts TCP/IP, so this series is suitable for the remote communication of the concentrator.

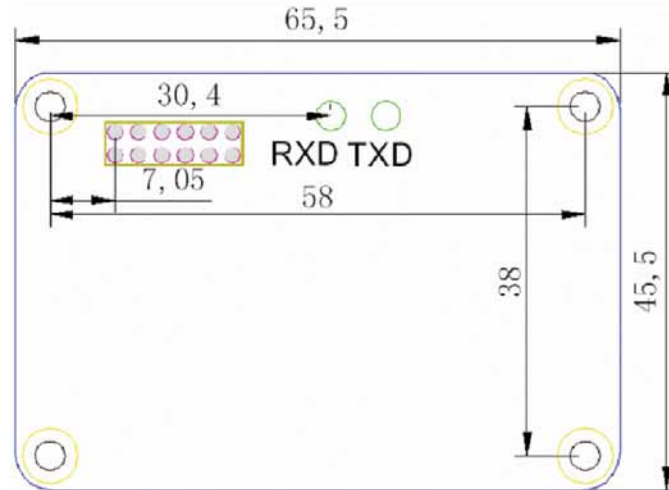
2. Technical Parameters

Item	Remarks
Standard	Technical Requirements of YD-T 1475-2006 access network-- EPON China Telecom EPON Technical Requirements--CTC2.0/2.1 Q/GDW 375.1-2009 Electricity Information Collection's Model Standard: Transformer Collection Terminal's Model Standard Q/GDW 375.2-2009 Electricity Information Collection's Model Standard: Transformer Collection Terminal's Model Standard Q/GDW 376.1-2009 Electricity Information Collection's Telecommunication Protocol: Telecommunication Protocol Between Station and Information Collection Terminal
Port Configuration	1 GEAPON interfaces Interface type: SC/PC patch

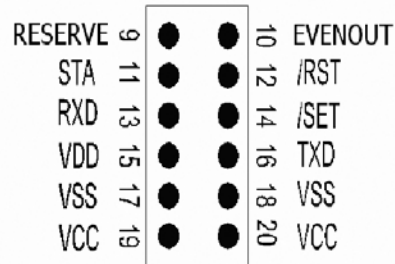
A-GEAR World Wide Manufacturing

Item	Remarks
Attributes of the Interface	<p>A 1.25Gbps transmission rate with downlink and uplink symmetry Working wavelength: uplink 1260nm-1360nm, downlink 1480nm-1500nm</p> <p>Network coverage diameter: 20 kilometers Optical physical condition: 1000 BASE-PX20</p>
Attributes of the Interface	<p>Average light remitting power: -1~4dBm Optical reception sensitivity: -30dBm Security: MAC authentication mechanism Distance test range: 0--20km Distance test precision: -16--+16ns</p>
Functions of the serial interface	<p>Type of the serial interface: RS485 Maximum port rate: 9600~38400bps</p> <p>Type of the session: supporting TCP server, TCP Client and UDP Supporting the transparent transmission of multiple electric power communication regulations such as IEC60870-5-101/104, EC61850, CDT and DNP.</p>
Interconnection	<p>Satisfying the functions and performance of OLT and ONU Satisfying the interconnection of the maximum optical coupling ratio, the maximum transmission distance and the differential transmission distance</p> <p>Satisfying the MPCP protocol, including the interconnection between LLID and multiple LLID, the ONU authentication mode and the ONU authorization mode, DBA, FEC, the standardization and interconnection of the link-layer encryption algorithm</p>
Reliability	Supporting hot swap
Management configuration	<p>EPON devices comply with the OAM function that is regulated in Clause 57 in IEEE802.3-2005.</p> <p>Supporting the collection terminal to set the ONU module (relevant functions need be developed according to customization)</p>
Power Source	<p>Input voltage: 12V Maximum power consumption < 1.5 W</p>
Environment requirements	<p>Working temperature: -40°C ~ 75°C Storage temperature: -40°C ~ 85°C Relative humidity: 5% ~ 95% no condensation</p>

3. Structure and Size



4. Pin Definition



Colorful collection device interface pin No.	Module corresponding to the pin number	Signal Type	Signal Name	Signal direction (for module)	Description
20	9	Reserved	RESERVE		Reserved
19	10	Reserved	RESERVE	I	Reserved
18	11	Reserved	RESERVE	0	Reserved
17	12	Signaling	/RST	I	Reset input (active low) can be retained without
16	13	Signaling	RXD	I	Communication module receives Signal acquisition system CPU pin (5V TTL level)

Colorful collection device interface pin No.	Module corresponding to the pin number	Signal Type	Signal Name	Signal direction (for module)	Description
15	14	Signaling	/SET	I	Command / data set Realty enable: low, for the control command; high, transparent data transmission.
14	15	Power supply	VDD		Digital part of the communication module power, by the colorful set provides. Voltage: DC 5V \pm 5%, Current: 20mA.
13	16	Signaling	TXD	0	PU communication module sends a signal to the collector pin (5V TTL level)
12, 11	17, 18	Power supply	VSS		Communication
10, 9	19, 20	Power supply	VCC		EPON communication module analog supply, provided by the collector, voltage range: +12 V ~ +15V, output power: 1.5W. Filter capacitor discharge time constant is not less than 10 times the power frequency cycle, with a total capacity of not less than 2200? F) o

5. Order Information

Model	Description
P100A	Collector