P1704 Series

EPON Multi-service Broadband Access Home Gateway Unit(HGU)

BDCOM

Product Overview

BDCOM P1704 Series is a smart HGU with integrated wireless, VoIP and CATV function.

It is oriented for the integrated multi-service network in telecom operator network.

BDCOM P1704 Series is complied with the international standard IEEE802.3ah and PRC Communication Industry Standard (YD/T 1475-2006) and China Telecom EPON Technical Requirement CTC.

P1704 series includes 4 models: P1704-4F-E, P1704-4GV, P1704-4GV-22A, P1704-4GVC-S.

Product Characteristics

Excellent Access Capacity
It supports the PON transmission rate of downlink 1.25Gbps/ uplink 1.25Gbps. Connected with BDCOM OLT, it can realize 1:64 splitting ratio. The covering radius of the network can reach to 20km.

Secure Service Carrying Ability
For ensuring the secure service carrying ability of ONU, BDCOM has developed techniques including VLAN, STP, port isolation, ACL, QoS and Broadcast Storm Control.

High Service Control Capability
It supports DBA and Rate-Limit. It supports advanced dynamic bandwidth distribution and accurate bandwidth limit, which enables users to share 1.25Gbps bandwidth resource appropriately. It also supports QOS function, which guarantees a reliable service quality and service priority.

Rich OAM Function
It supports the standard OAM defined by China Telecom CTC2.1/3.0, including configuration, alarm, performance monitoring, fault isolation and security management, and it also supports private OAM defined by BDCOM.

Complete Interaction Capacity
It is complied with IEEE802.3ah and relevant requirements for PRC Community Industry Standard (YD/T 1475-2006) and China Telecom CTC2.1/3.0.

Advanced Energy-saving Technique
It supports the "GreenTouch" architecture and "Smart@CHIP".

Support 1.25Gbps uplink/downlink bandwidth

Efficient bandwidth usage and Ethernet services

The splitting ratio ups to 1:64

Model Lists

P1704-4F-E

GPON Multi-service Broadband Access Home Gateway Unit(HGU)

- 1 SC/UPC
- 1 GE + 3 FE TX
- 300Mbps Wireless

P1704-4GV

GPON Multi-service Broadband Access Home Gateway Unit(HGU)

- 1 SC/UPC
- 4 GE TX
- 300Mbps wireless
- 2 POTS

P1704-4GV-22A

GPON Multi-service Broadband Access Home Gateway Unit(HGU)

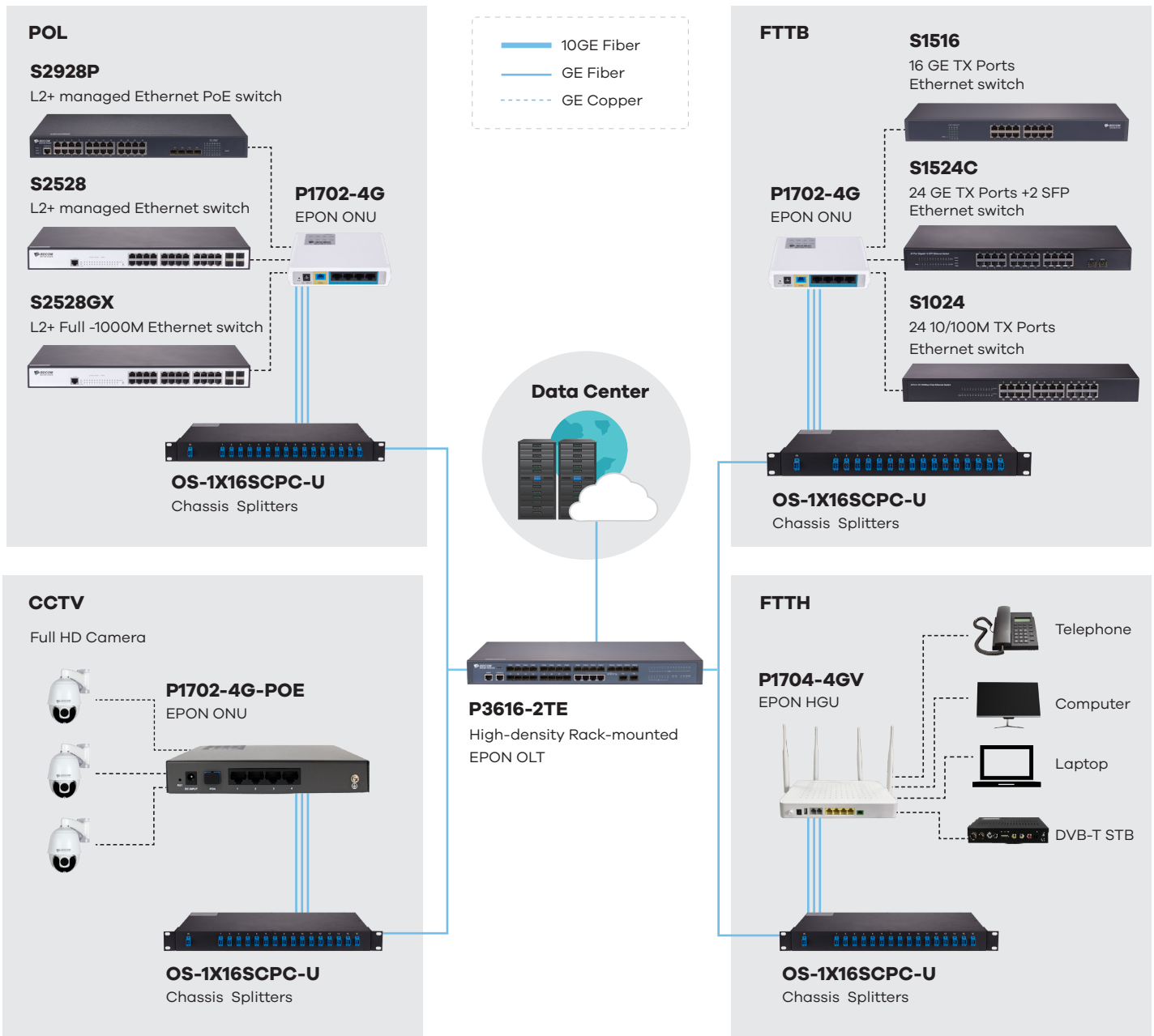- 1 SC/UPC
- 4 GE TX
- 1200Mbps wireless
- 2 POTS

P1704-4GVC-S

GPON Multi-service Broadband Access Home Gateway Unit(HGU)

- 1 SC/APC
- 4 GE TX
- 1 RF port
- 300Mbps wireless
- 2 POTS

Application Diagram

POL

S2928P
L2+ managed Ethernet PoE switch

S2528
L2+ managed Ethernet switch

S2528GX
L2+ Full -1000M Ethernet switch

P1702-4G
EPON ONU

OS-1X16SCPC-U
Chassis Splitters

10GE Fiber
GE Fiber
GE Copper

FTTB

S1516
16 GE TX Ports
Ethernet switch

S1524C
24 GE TX Ports +2 SFP
Ethernet switch

S1024
24 10/100M TX Ports
Ethernet switch

P1702-4G
EPON ONU

OS-1X16SCPC-U
Chassis Splitters

Data Center

P3616-2TE
High-density Rack-mounted
EPON OLT

CCTV

Full HD Camera

P1702-4G-POE
EPON ONU

OS-1X16SCPC-U
Chassis Splitters

FTTH

P1704-4GV
EPON HGU

Telephone

Computer

Laptop

DVB-T STB

OS-1X16SCPC-U
Chassis Splitters

System Performance

Item	P1704-4F-E	P1704-4GV	P1704-4GV-22A	P1704-4GVC-S
Service interface				
PON ports	1 SC/UPC	1 SC/UPC	1 SC/UPC	1 SC/APC
UNI ports	1 GE + 3 FE TX	4 GE TX	4 GE TX	4 GE TX + 1 RF
WIFI	300M	300M	1200M	300M
Voice	/	2	2	2
USB	/	1	1	1
Optical power — TX power	0.5~5dBm	0.5~5dBm	0.5~5dBm	0.5~5dBm
Optical power — RX sensitive	<-28dBm	<-28dBm	<-28dBm	<-28dBm
System capacity				
DRAM (MB)	128	128	128	128
Flash (MB)	128	128	128	128
MAC table	2K	2K	2K	2K
VLAN ID	4K	4K	4K	4K
Power supply				
AC adaptor	Input: 100-240V AC Output: 12V/1A	Input: 100-240V AC Output: 12V/1.5A	Input: 100-240V AC Output: 12V/1.5A	Input: 100-240V AC Output: 12V/1.5A
Max. consumption (W)	8	15	15	15
Appearance				
Chassis — Dimensions (WxDxH mm)	140 x 105 x 30	230 x 140 x 34.9	230 x 140 x 34.9	230 x 140 x 34.9
Chassis — Weight(Kg)(empty)	0.2	0.4	0.4	0.5
Package — Dimensions (WxDxH mm)	277 x 176 x 38	325 x 255 x 48	325 x 255 x 48	325 x 255 x 48
Package — Weight (Kg)	0.4	0.6	0.7	0.7
Environmental Specifications				
Operating — Temperature	-0℃ -45℃	-0℃ -45℃	-0℃ -45℃	-0℃ -45℃
Operating — Humidity	10%~85% (non-condensing)	10%~85% (non-condensing)	10%~85% (non-condensing)	10%~85% (non-condensing)
Storage — Temperature	-40℃ -85℃	-40℃ -85℃	-40℃ -85℃	-40℃ -85℃
Storage — Humidity	5%-95% (non-condensing)	5%-95% (non-condensing)	5%-95% (non-condensing)	5%-95% (non-condensing)
System capacity				
Accessories	Power adaptor			

Ordering Information

Model	Description
P1704-4F-E	FTTH/O ONU, 1 EPON port (SC/UPC), 1 GE + 3 FE TX ports, external dual antenna(300M WiFi), plastic hull, DC12V/1A, external adaptor
P1704-4GV	FTTH/O ONU, 1 EPON port (SC/UPC), 4 GE TX ports, 2 POTS, external dual antenna(300M WiFi), plastic hull, DC12V/1.5A, external adaptor
P1704-4GV-22A	FTTH/O ONU, 1 EPON port (SC/UPC), 4 GE TX ports, 2 POTS, external quadruple antenna(1200M WiFi), plastic hull, DC12V/1.5A, external adaptor
P1704-4GVC-S	FTTH/O ONU, 1 EPON port (SC/APC), 4 GE TX ports, 2 POTS, 1 RF(British system), external dual antenna(300M WiFi), plastic hull, DC12V/1.5A, external adaptor

Technical Specifications

Standards

- IEEE 802.3ah
- PRC Community Industry Standard (YD/T 1475-2006);
- IEEE 802.1D, Spanning Tree
- IEEE 802.1Q, VLAN
- IEEE 802.1w, RSTP
- ITU-T Y.1291

VLAN

- 4K VLAN
- Port based VLAN
- IEEE 802.1Q VLAN
- Tag/Transparent/Aggregation
- /Trunk/Translation mode VLAN
- CTC2.1/3.0 defined VLAN

IP Service

- DHCP server/client
- Routing/Bridging/Hybrid mode DNS, DDNS
- PPPoE
- NAT/NAPT

QoS

- Backpressure flow control (half-duplex)
- IEEE 802.3x flow control (full duplex)
- Against Head of Line mechanism
- IEEE 802.1p, CoS
- Four priority queues on each port
- WR, SP and FIFO queue schedule algorithms
- Port rate limit
- SLA and DBA

Management

- Management modes including CLI, HTTP, SNMP, TR069 and TELNET
- Software upgrade through TFTP and WEB, OMCI, etc.
- Local or server syslog

EPON Service

- AES128 algorithm encryption
- MAC/Loid/Hybrid authentication

Voice Service

- SIP, H.248, T.38 FAX
- Three-way calling
- Call waiting
- Hot-line calling

Network Security

- MAC address number limit
- MAC filter
- Port protect

Multicast

- IGMP-Snooping
- CTC defined dynamic multicast function
- MLD-Snooping
- Multicast group limitation
- Multicast fast-leave

Reliability

- Loop detection
- Dying-Gasp
- TX/RX optical power alarm

Wireless

- 802.11b/g/n
- 802.11 ac(P1704-4GV-22A)
- 2x2 MIMO
- Multi SSID
- SSID encryption
- Configurable Channel

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FC CE