

# GP1704 Series

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



## Product Overview

BDCOM GP1704 Series is a smart HGU with integrated wireless, VoIP and CATV function.

BDCOM GP1704 Series is oriented for the integrated multi-service network in telecom operator network.

BDCOM GP1704 Series is complied with the international standard ITU-T G.984/988 and PRC Communication Industry Standard GPON ONU in Access Technology Requirements and China Telecom GPON Technical Requirement CTC2.0.

GP1704 Series includes 10 models:  
GP1704-1G,  
GP1704-2FC-S,  
GP1704-2F-E,  
GP1704-2FV,  
GP1704-2G-22A,  
GP1704-2GV-22A,  
GP1704-4F-E,  
GP1704-4GV,  
GP1704-4GV-22A,  
GP1704-4GVC-22A.

## Product Characteristics

### Excellent Access Capacity

GP1704 Series supports the PON transmission rate of downlink 2.5Gbps/ uplink 1.25Gbps. Connected with BDCOM OLTs, it can realize 1:128 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

GP1704 Series supports DBA and Rate-Limit. It supports advanced dynamic bandwidth distribution and accurate bandwidth limit, which enables users to share 2.5Gbps bandwidth resource appropriately. It also supports QoS function, which guarantees a reliable service quality and service priority.

### Rich OMCI Function

GP1704 Series supports the standard OMCI defined by ITU-T, including configuration, alarm, performance monitoring, fault isolation and security management, and it also supports private OMCI defined by BDCOM.

### Complete Interaction Capacity

GP1704 Series is complied with ITU-T G.984/988 and relevant requirements for PRC Community Industry Standard GPON ONU in Access Technology Requirements and China Telecom GPON Technical Requirement CTC2.0.

### Advanced Energy-saving Technique

GP1704 Series supports the "GreenTouch" architecture and "Smart@CHIP".



Support 1.25Gbps uplink and 2.5Gbps downlink bandwidth



Efficient bandwidth usage and Ethernet services



The Splitting ratio ups to 1:128

# Model Lists

## GP1704-1G

xPON HGU



- 1 SC/UPC
- 1 GE TX
- 300Mbps Wireless

## GP1704-2FC-S

xPON HGU



- 1 SC/APC
- 1 GE + 1 FE TX
- 1 RF port
- 300Mbps wireless

## GP1704-2F-E

xPON HGU



- 1 SC/UPC
- 1 GE + 1 FE TX
- 1 USB port
- 300Mbps wireless

## GP1704-2FV

xPON HGU



- 1 SC/UPC
- 1 GE + 1 FE TX
- 1 USB port
- 1 POTS
- 300Mbps Wireless

## GP1704-2G-22A

xPON HGU



- 1 SC/UPC
- 2 GE TX
- 1 USB port
- 1200Mbps wireless

## GP1704-2GV-22A

xPON HGU



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

## GP1704-4F-E

xPON HGU



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

## GP1704-4GV

xPON HGU



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

## GP1704-4GVC-22A

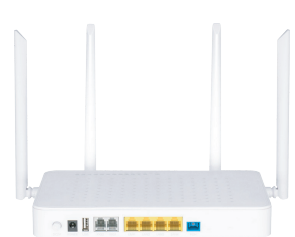
xPON HGU



- 1 SC/APC
- 4 GE TX
- 1 USB port
- 1 RF port
- 2 POTS
- 1200Mbps wireless

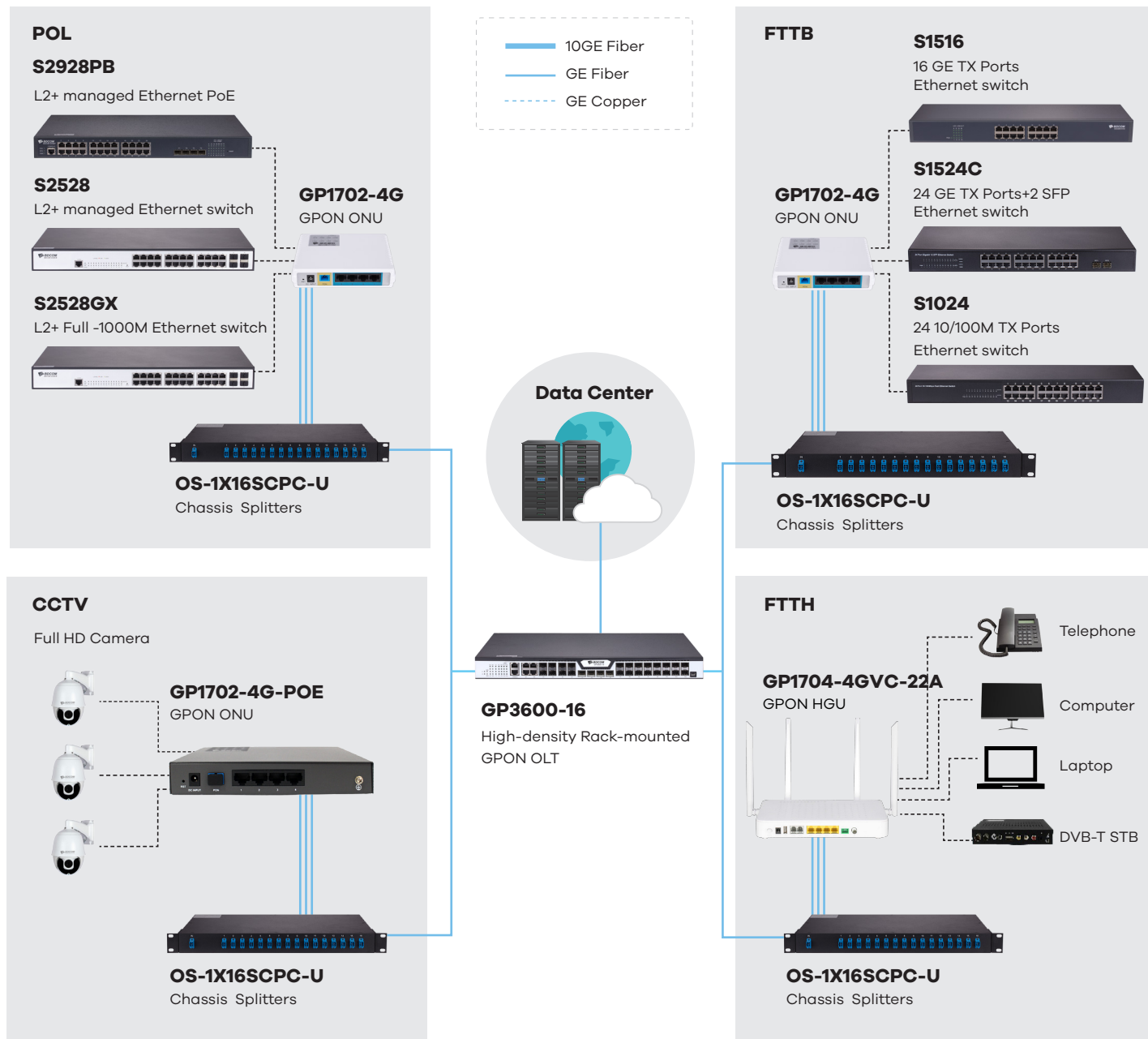
## GP1704-4GV-22A

xPON HGU



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

# Application Diagram



# System Performance

Item	GP1704-1G	GP1704-2FC-S	GP1704-4F-E
<b>Service interface</b>			
PON ports	1 SC/UPC	1 SC/APC	1 SC/UPC
UNI ports	1 GE TX	1 GE + 1 FE TX + 1 RF	1 GE +3 FE TX
WIFI	300Mbps	300Mbps	300Mbps
Optical power	TX power	0.5-5dBm	0.5-5dBm
	RX sensitive	<-28dBm	<-28dBm
<b>Power supply</b>			
AC adaptor	Input: 100-240V AC Output: 12V/0.5A	Input: 100-240V AC Output: 12V/1A	Input: 100-240V AC Output: 12V/1A
Max. consumption (W)	5	10	8
<b>Appearance</b>			
Chassis	Dimensions(WxDxH mm)	117 x 87 x 29	140 x 105 x 30
	Weight(Kg)(empty)	0.1	0.2
	Dimensions	218 x 142 x 46	277 x 176 x 38
Package	Weight(Kg)(empty)	0.3	0.4
<b>Environmental Specifications</b>			
Operating	Temperature /Humidity	0℃ - 45℃ /10%~85%(non-condensing )	
Storage	Temperature /Humidity	-40℃ - 85℃ /5%~95% (non-condensing )	
<b>System capacity</b>			
Accessories	Power adaptor		

Item	GP1704-2F-E	GP1704-2FV	GP1704-2G-22A	GP1704-2GV-22A
<b>Service interface</b>				
PON ports	1 SC/UPC	1 SC/UPC	1 SC/UPC	1 SC/UPC
UNI ports	1 GE + 1 FE TX	1 GE + 1 FE TX	2GE TX	2GE TX
WIFI	300Mbps	300Mbps	1200Mbps	1200Mbps
Voice	/	1	/	1
USB	1	1	1	1
Optical power	TX power	0.5-5dBm	0.5-5dBm	0.5-5dBm
	RX sensitive	<-28dBm	<-28dBm	<-28dBm
<b>Power supply</b>				
AC adaptor	Input: 100-240V AC Output: 12V/1A	Input: 100-240V AC Output: 12V/1A	Input: 100-240V AC Output: 12V/1.5A	Input: 100-240V AC Output: 12V/1.5A
Max. consumption (W)	10	10	15	15
<b>Appearance</b>				
Chassis	Dimensions(WxDxH mm)	140 x 105 x 30		
	Weight(Kg)(empty)	0.2		
Package	Dimensions(WxDxH mm)	277 x 176 x 38		
	Weight(Kg)(empty)	0.3		
<b>Environmental Specifications</b>				
Operating	Temperature /Humidity	0 - 45℃ /10%~85%(non-condensing )		
Storage	Temperature /Humidity	-40℃ - 85℃ /5%~95% (non-condensing )		
<b>System capacity</b>				
Accessories	Power adaptor			



# System Performance

Item	GP1704-4GV	GP1704-4GV-22A	GP1704-4GVC-22A
<b>Service interface</b>			
PON ports	1 SC/UPC	1 SC/UPC	1 SC/APC
UNI ports	4 GE TX	4 GE TX	4 GE TX + 1 RF
WIFI	300Mbps	1200Mbps	1200Mbps
Voice	2	2	2
USB	1	1	1
Optical power	TX power	0.5~5dBm	0.5~5dBm
	RX sensitive	<-28dBm	<-28dBm
<b>Power supply</b>			
AC adaptor	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)	15	15	15
<b>Appearance</b>			
Chassis	Dimensions(WxDxH mm)	230 x 140 x 34.9	230 x 140 x 34.9
	Weight(Kg)(empty)	0.4	0.5
Package	Dimensions(WxDxH mm)	325 x 255 x 48	325 x 255 x 48
	Weight (Kg)	0.6	0.7
<b>Environmental Specifications</b>			
Operating Temperature /Humidity	0 C - 45 C /10%~85%(non-condensing )		
Storage Temperature /Humidity	-40 C - 85 C/5%-95% (non-condensing )		
<b>System capacity</b>			
Accessories	Power adaptor		

## Technical Specifications

### Standards

- ITU-T G.984/G.988
- PRC Community Industry Standard GPON ONU in Access Technology Requirements
- 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
- CTC2.0 defined VLAN

### IP Service

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

### GPON Service

- AES128 algorithm encryption
- MAC/Loid/Hybrid authentication

### 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

### Reliability

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

### 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

- 802.11 b/g/n
- 802.11 ac(-22A models)
- 2x2 MIMO
- Multi SSID
- SSID encryption
- Wireless channel (configurable)

## Ordering Information

Model	
GP1704-1G	FTTH/O ONU, 1 GPON port (SC/UPC), 1 GE TX port, internal dual antenna(300M WiFi), plastic hull, DC12V/0.5A, external adaptor
GP1704-2FC-S	FTTH/O ONU, 1 GPON port (SC/APC), 1 GE + 1 FE TX ports, 1 RF(British system), external dual antenna(300M WiFi), plastic hull, DC12V/1A, external adaptor
GP1704-2F-E	FTTH/O ONU, 1 GPON port (SC/UPC), 1 GE + 1 FE TX ports, 1 USB port, external dual antenna(300M WiFi), plastic hull, DC12V/1A, external adaptor
GP1704-2FV	FTTH/O ONU, 1 GPON port (SC/UPC), 1 GE + 1 FE TX ports, 1 POTS, 1 USB port, external dual antenna(300M WiFi), plastic hull, DC12V/1A, external adaptor
GP1704-2G-22A	FTTH/O ONU, 1 GPON port (SC/UPC), 2 GE TX ports, 1 USB port, external dual antenna(1200M WiFi), plastic hull, DC12V/1.5A, external adaptor
GP1704-2GV-22A	FTTH/O ONU, 1 GPON port (SC/UPC), 2 GE TX ports, 1 POTS, 1 USB port, external dual antenna(1200M WiFi), plastic hull, DC12V/1.5A, external adaptor
GP1704-4F-E	FTTH/O ONU, 1 GPON port (SC/UPC), 1 GE + 3 FE TX ports, external dual antenna(300M WiFi), plastic hull, DC12V/1A, external adaptor
GP1704-4GV	FTTH/O ONU, 1 GPON port (SC/UPC), 4 GE TX ports, 2 POTS, 1 USB, external dual antenna(300M WiFi), plastic hull, DC12V/1.5A, external adaptor
GP1704-4GV-22A	FTTH/O ONU, 1 GPON port (SC/UPC), 4 GE TX ports, 2 POTS, 1 USB, external quadruple antenna(1200M WiFi), plastic hull, DC12V/1.5A, external adaptor
GP1704-4GVC-22A	FTTH/O ONU, 1 GPON port (SC/APC), 4 GE TX ports, 2 POTS, 1 USB, 1 RF(British system), external dual antenna(1200M WiFi), plastic hull, DC12V/1.5A, external adaptor

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