



FORMATO DOCUMENTACION Y
PROTOCOLOS

VISIÓN SATELITAL COMUNICACIONES

FIHH-00419-REV01

Versión: 01

Fecha: 01/02/2024

EQUIPOS USADOS PARA TECNOLOGIA FTTH

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CONTROL DE CAMBIOS

Versión	Fecha	Sección Modificada	Descripción cambios	Responsable(s)
0.1	01/02/2024	Todo	Creación del documento	Dirección de tecnologías de las comunicaciones

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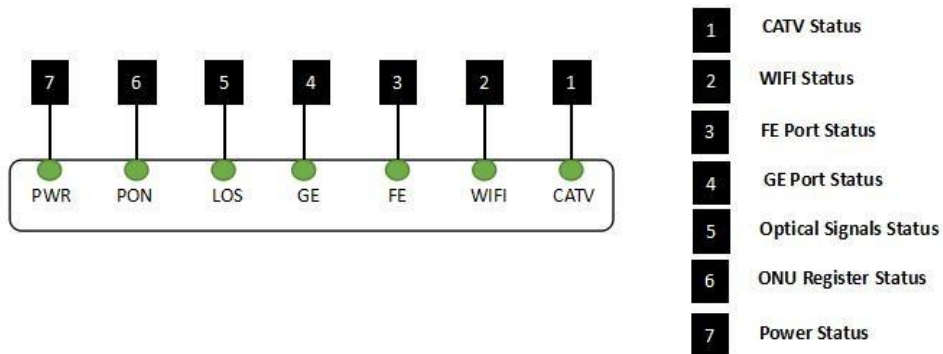
EQUIPOS UTILIZADOS TECNOLOGÍA FTTH

CDATA FD702XW-AG-R410 1GE+1FE+CATV+WIFI ONU



ESPECIFICACIONES TECNICAS

- Single-fiber access, provides internet, CATV, WIFI multiple service
- In compliant with ITU - T G. 984 Standard
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Meet 802.11 n/b/g technical standards
- Support VLAN transparent, tag configuration
- Support multicast function
- Support DHCP/Static/PPPOE internet mode
- Support port-binding
- Support OMCI+TR069 remote management
- Support data encryption and decryption function
- Support Dynamic Bandwidth Allocation (DBA)
- Support MAC filter and URL access control
- Support remote CATV port management
- Support power-off alarm function ,easy for link problem detection
- Specialized design for system breakdown prevention to maintain stable system
- EMS network management based on SNMP ,convenient for maintenance



Indicator		Description	
1	CATV	CATV status	On: CATV optical normal
2	WIFI	WIFI	Blinking: Data is being transmitted
3	FE	FE port status	On: Ethernet connection is normal
			Blinking: Data is being transmitted through the
4	GE	GE port status	On: Ethernet connection is normal
			Blinking: Data is being transmitted through the
5	LOS	GPON optical signals	On: Optical power lower than receiver sensitivity ;
			Off: Optical in normal
6	PON	ONU Register	On: Success to register to OLT
			Blinking: In process of registering to OLT
7	PWR	Power status	On: The ONU is power on

CATV

Item	Parameter
Wavelength	1550nm
Optical return loss	>45dB
Input optical power	-18dBm~0dBm
RF frequency	47MHz~1000MHz
RF output level	82dBuV (@-12~-2dBm@85MHz)
CNR	>41dB (@-10dBm@DS22 Channel)
CSO	>58dBc (@-10dBm@DS22 Channel)
CTB	>58dBc (@-10dBm@DS22 Channel)
RF output return loss	>12dB
RF impedance	75Ω

Specification

Item		Parameter
Interface	PON Interface	1*GPON port, FSAN G.984.2 standard, Class B+ Downstream Data Rate: 2.488Gbps Upstream Data Rate: 1.244Gbps SC/APC single mode fiber 28dB Link loss and 20KM distance with 1:128
	CATV Interface	1 RF output F-Type Connector
	Ethernet Interface	1*10/100/1000M and 1*10/100M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply
Performance Parameters	PON Optical Parameter	Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: 0.5~5dBm Rx Sensitivity: -28dBm Saturation Optical Power: -8dBm
	Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/s; Upstream 1.244Gbit/s Ethernet: 1000Mbps and 100Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms
Network Management	Management Mode	OMCI, TR069, WEB, Telnet
	Management Function	Status monitor, Configuration management, Alarm management, Log management
Physical Features	Power	<8.5W, 12V/1A power supply adapter
	Physical Specifications	Item Dimension: 160mm(L)*139.5mm(W)*28.5mm(H) Item Net Weight: about 231g
	Environmental Specifications	Operating temperature: 0 to 40°C Operating humidity: 10% to 90%(Non-condensing)

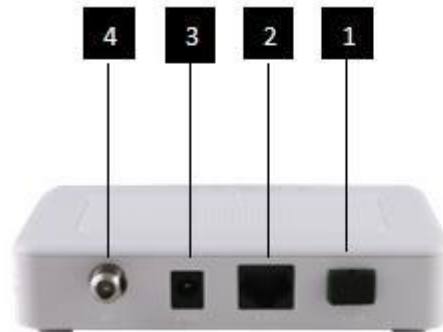
CDATA FD701G-AG-Z310 1GE+CATV GPON ONT



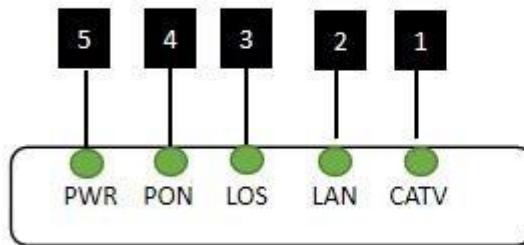
Functional Feature

- In compliant with ITU - T G.984 Standard, adapting GPON upstream
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Support SN and LOID+Password multiple registration methods
- Support port VLAN configuration
- Support mac-address learning
- Support port-based rate limitation and bandwidth control
- Support port flow-control
- Support broadcasting storm resistance function
- Support igmp transparent/snooping/proxy mode
- Support remote management configuration
- Support AES encryption and decryption
- Support three layer routing function
- Support remote CATV port management
- EMS network management based on SNMP ,convenient for maintenance
- Support power-off alarm function ,easy for link problem detection

Product Interface and LED Definitions



- 1** PON Optical Port
- 2** LAN Port
- 3** DC Power Port
- 4** RF Port



- 1** CATV Status
- 2** LAN Port Status
- 3** Optical Signals Status
- 4** ONU Register
- 5** Power Status

Indicator			Description
1	CATV	CATV status	On: CATV optical normal
2	LAN	LAN port status	On: Ethernet connection is normal Blinking: Data is being transmitted through the
3	LOS	GPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
4	PON	ONU Register	On: Success to register to OLT Blinking: In process of registering to OLT
5	PWR	Power status	On: The ONU is power on

SPECIFICATION

Item	Parameter
PON Interface	1*GPON port, FSAN G.984.2 standard, Class B+ Downstream Data Rate: 2.488Gbps Upstream Data Rate: 1.244Gbps SC/PC single mode fiber 28dB Link loss and 20KM distance with 1:128

User Ethernet Interface	1*10/100/1000M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance 1 RF output Female F-Type Connector
Power Interface	12V DC Power supply
PON Optical Parameter	Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: 0.5~5dBm Rx Sensitivity: -28dBm Saturation Optical Power: -8dBm
Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/ s; Upstream 1.244Gbit/s Ethernet: 1000Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms
Business Capability	Layer 2 wire speed switching Support VLAN TAG/UNTAG, VLAN translation Support Port-based speed limitation Support Priority classification Support storm control of broadcast Support loop detection
Network Management	Standard compliant OMCI interface as defined by ITU-T G.984.4 Support WEB management
Management Function	Status monitor, Configuration management, Alarm management, Log management
Shell	Plastic casing
Power	<4.5W, 12V/0.5A power supply adapter
Physical Specifications	Item Dimension: 125mm(L)*80mm(W)*28mm(H) Item weight: 0.2kg
Environmental Specifications	Operating temperature: 0 to 50°C Storage temperature: -40 to 85°C Operating humidity: 10% to 90%(Non-condensing) Storage humidity: 10% to 90%(Non-condensing)

CATV

Item	Parameter
Wavelength	1550nm
Optical return loss	>45dB
Input optical power	-18dBm~0dBm
RF frequency	47MHz~1000MHz
RF output lever	≥78dBuV (@-12~-2dBm@85MHz)
AGC control accuracy	<± 1db
Flatness	<± 1.5db
CNR	>41dB (@-10dBm@DS22 Channel)
CSO	>60dBc (@-10dBm@DS22 Channel)
CTB	>60dBc (@-10dBm@DS22 Channel)
RF output return loss	>14dB
RF impedance	75Ω
AGC function	Support

ONU WETS FD804GW



FD804GW

4 GE + 2 POTS + CATV + WIFI ONU

- 4-Port GE (RJ45)
- 2-Port POTS (RJ11)
- 1-Port RF CATV (F-Type)
- 2.4GHz 300Mbps WIFI
- Dual-External 5dBi antenna
- Power supply DC 12V

WETS G / EPON 1GE + 1FE +Wifi ONU

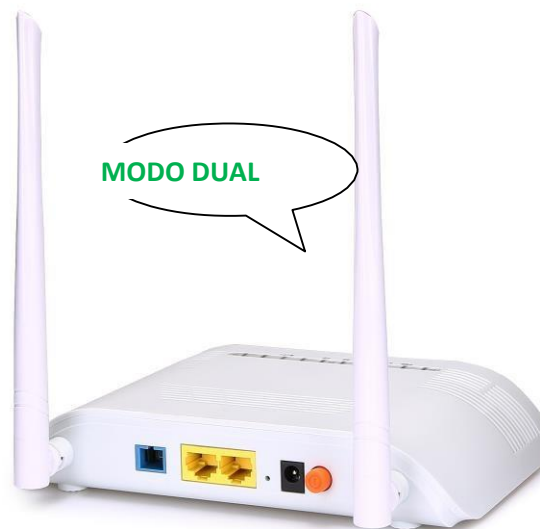


Figura 1 1GE + 1FE + WiFi ONU

1.2 Categorías de Producto

Modelo del	Especificaciones del producto	Chipset	Memoria SDRAM
V2802W	1 G / EPON + 1GE + 1FE + WiFi	Realtek	64 MB

1.4 Características Técnicas

	1GE + 1FE + WiFi	
Interfaz PON	1 G / EPON puerto (EPON PX20 + y GPON Clase B +) Recepción de sensibilidad: $\leq -28\text{dBm}$, saturabilidad: -8dBm Transmisión de potencia óptica: $0 \sim +4\text{dBm}$ Distancia de transmisión: 20 KM	
Longitud de onda	Tx1310nm, Rx 1490nm	Tx1310nm, Rx 1490nm y 1550nm
Interfaz Óptica	Conector SC / UPC	Conector SC / APC (fibra de señal con WDM)
Interfaz LAN	Interfaces Ethernet auto negociable 1 x 10/100/1000Mbps y 1 x 10/100Mbps. Conector RJ45	
Interfaz wifi	Cumple con IEEE802.11b / g / n Frecuencia de funcionamiento: 2.400-2.4835 GHz admite MIMO, tasa de transferencia de hasta 300 Mbps 2T2R, 2 antenas externas 5dBi Soporte: múltiple SSID Canales: 13 Tipo de modulación: DSSS、CCK y OFDM Esquema de codificación: BPSK、QPSK、6QAM y 64QAM	
LED	6, para el estado de POWER、LOS、PON、GE、FE、WiFi	7, para el estado de POWER、LOS、PON GE、FE、WiFi
Condición de uso	Temperatura: $0\text{ }^{\circ}\text{C} \sim +50\text{ }^{\circ}\text{C}$ Humedad: 10% \sim 90% (sin condensación)	
Condición almacenamiento	Temperatura: $-30\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$ Humedad: 10% \sim 90% (sin condensación)	
Fuente de alimentación	DC 12V / 1A	
Fuente de alimentación	$\leq 6\text{W}$	$\leq 7\text{W}$
Dimensión	185 mm x 120 mm x 34 mm (L x W x H)	
Peso neto	0,24 kg	0,29 kg