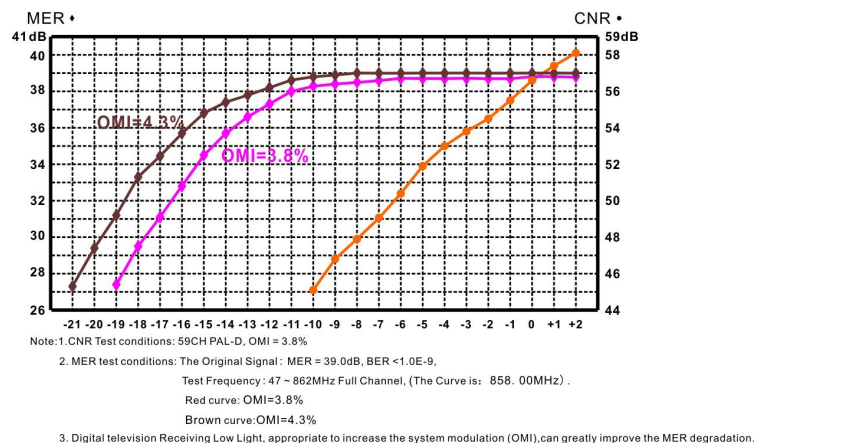


6.0 EPON ONU TECHNICAL INDEX

Standard appliance	IEEE802.3/802.3ah		Fiber interface performance	SC/APC
Work wavelength	Tx: 1310nm. Rx: 1490nm		Fiber type standard	Single mode fiber SMF
Tx Output Power	-1dBm ~ +3dBm		Rx receiver sensitivity	-26dBm
Transmit rate	1Gbps up/down bound symmetry		Optical link budget loss	29dB
Service quality	QoS IEEE802.1p	IPV4 TOS priority	Subscriber identification	ONU IEEE802.1x
Dynamic Bandwidth allocate	DBA The biggest bandwidth of every ONU subscriber and assure the allocate with quantity			
L2 switch function	MAC address management, 8K Rate Limiting, Support IGMP Snooping (V1/V2) inquiry Support IEEE802.1d STP support IEEE802.1q VLAN			
Management mode	Web Server, SNMP data collect, can remote escalate built-in software by HTTP			
LAN interface	Standard appliance	IEEE802.3/10Base-t, IEEE802.3u 100Base-Tx/Fx IEEE802.3x		
	Interface and quantity	4 RJ45, 10M/100M Ethernet network port		

7.0 CNR, MER DEGRADATION TABLE



8.0.NOTE

- Power Adapter Type: Input 220V, output DC power 12V (1A)
- PON port with SC/APC fiber connector. Need put protective seal when the connector not in use, make sure the optical connector are cleaning.
- When Optical signal connected with the PON port, the indicator light of PON port will turn on. If the light turns on and stable, it means the signal with center office network well connected and registered. If the light flashes, then means the signal not well connected and registered, need double check.
- LOS lights turn on, means the self-test not pass. If the PON indicator light shows stable, but LOS lights turn on, it means the device is faulty.
- 4 LAN indicator light corresponds to 4 10M/100M Ethernet interface, when lights flashing, it Means the link well connected, and all data well transferred.

H9122-4FE-SF, H9122-4FE-DF

Triple play FTTH ONU (CATV+EPON ONU)



H 9 1 22 - 4FE - □□

FTTx Receiver	CATV Work bandwidth	Number of RF output	Output level (Pin=-3dBm)	LAN form and quantity	Mode optical port
H FTTH	9 45~1000MHz	1 1ports	22 22dBmV(82dBμV)	4FE Four 10M/100M Port	SF Single fiber access
P FTTP				1GE A 1000M Port	DF Dual fiber access
B FTTB				4GE Four 1000M Port	

User Manual

Ver. 2.3 en

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1.0 PRODUCT DESCRIPTION

Huatai H9122-4FE, is a triple play, FTTH ONU Optical network unit. Products will be a high-performance optical receivers and CATV FTTH EPON ONU, integrated in an ultra-small metal box . Provides high-quality and high-speed data to the user CATV , language, video and other broadband business services . High-performance products , high compatibility and excellent cost performance, today's triple play, FTTH preferred device .

H9122-4FE, built-in EPON ONU, providing users 4 10M/100M LAN ports . Product implementation of the national Ministry of interoperability standards , compatible with multiple manufacturers of EPON OLT, to achieve interoperability .

H9122-4FE, built-in CATV FTTH optical receiver using H9122. H9122-4FE selected operators in over FTTH networks. Its high performance , high reliability has been widely verified. H9122-4FE can be used to save a large amount of optical fiber amplifier power resource . For operators , can greatly reduce the cost of building the network. H9122-4FE optical port mode, there are two kinds of selection:

- H9122-4FE-SF: single fiber access , built-in CWDM, applicable Triplexer wave system
- H9122-4FE-DF: dual fiber access, without CWDM, CATV and data each with an optical fiber.

2.0 PRODUCT FEATURE

2.1 Digital TV optical receiver

- Ultra-low noise, for analog TV, Pin = -10dBm, Vo ≥ 69dBμV, CNR ≥ 45dB
- High receiver sensitivity for digital television, Pin = -16dBm, Vo ≥ 60dBμV, MER ≥ 35dB
- Received optical power over a large dynamic range of +2 dBm ~ -21dBm, And have excellent properties
- Optical power can save a lot of resources, greatly reduce the cost of network construction

2.2 EPON ONU

- Powerful L2 switching
- High rate of PON: up and down the line of symmetry 1Gb / s data, VoIP and IPTV language
- For ONU automatic identification, location, configuration, ONU can " plug and play"
- High quality based on the service level agreement (SLA) Accounting (QoS) features
- Powerful remote management functions and data to Support various OAM functions with a Single fiber.

2.3 General Characteristics

- Metal case, offer safeguard for optoelectronic sensitive devices
- Low consumption, high performance, high reliability
- Excellent cost performance in area

4.0 PRODUCT SERIES

Model	Mode optical port	CATV work	Data work	Fiber connector
H9122-4FE-SF	Triplexer wave	1540~1563nm	1310/1490nm	SC/APC
H9122-4FE-DF	Dual Fiber Access	1260~1620nm	1310/1490nm	CATV:SC/APC,DATA:SC/UPC

3.0 PRODUCT FEATURE

3.1 CATV (Received optical power)

- Red >+2dBm
- Green +2~-13dBm (Digital TV:+2~-16dBm)
- Orange -13~-16dBm(DigitalTV:-16~-20dBm)
- Red <-16dBm (DigitalTV:<-20dBm)

3.2 ONU

- PON (Green)
- Bright : Link, registered normal
- Flicker : Links, registration is not normal
- LOS (Red) Off : Normal
- Bright : Device self-test failure

- LAN1 (Green) Flicker : Link normal
- LAN2 (Green) Flicker : Link normal
- LAN3 (Green) Flicker : Link normal
- LAN4 (Green) Flicker : Link normal

3.3 Power

- Power(Green) Bright :Normal

5.0 TECHNICAL INDEX

Performance		Index	Supplement
Optic feature	CATV Work wavelength	(nm)	1260~1620 H9122-4FE-DF
			1540~1563 H9122-4FE-SF
	Channel Isolation	(dB)	≥40 1550nm & 1490nm
	Responsivity	(A/W)	≥0.85 1310nm
			≥0.9 1550nm
	Receiving power	(dBm)	+2~-10 Analog TV(CNR≥45dB)
+2~-20 Digital TV(MER>29dB)			
Optical return loss	(dB)	≥55	
Optical fiber connector		SC/APC H9122-4FE-SF	
		SC/UPC(CATV) H9122-4FE-DF	
		LC/APC(DATA)	
RF Feature	Work bandwidth	(MHz)	45 ~ 1000
	Flatness	(dB)	≤+0.75 45~1000MHz
	Output level	(dBμ)	>82 AnalogTV (Pin=-3dBm)
			>82 Digital TV (Pin=-5dBm)
	Output level adjust	(dB)	0~18 MGC
	Return loss	(dB)	≥14 47 ~ 862MHz
	Output impedance	(Ω)	75
	Output port number		1
	RF tie-in		F-Female
	Analog TV Link Feature	Test channel	(CH)
OMI		(%)	3.8
CNR1		(dB)	54.6 Pin=-2dBm
			45.1 Pin=-10dBm
CTB		(dB)	≤-65 Pin: 0~-10dBm
CSO		(dB)	≤-65 Pin: 0~-10dBm
DigitalTV Link Feature	OMI	(%)	4.3
	MER	(dB)	≥36 Pin=-15dBm
			≥29 Pin=-20dBm
BER	(dB)	<1.0E-9 Pin:+2~-20dBm	
General feature	Power supply	(V)	DC+12V +1.0V
	Power Consume	(W)	Max ≤10W Tvoe =7W
	Work temp	(°C)	-20 ~ +55
	Storage temp	(°C)	-40 ~85
	Work relative temp	(%)	5 ~ 95
	Size	(mm)	132×98×24mm