H9122-4FE (CATV & 4 10/100M LAN)

Triple play FTTH ONU

PRODUCT DESCRIPTION

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.

PRODUCT FEATURE

- 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

- 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.

- General Characteristics

  Metal case, offer safeguard for optoelectronic sensitive devices

  Low consumption, high performance, high reliability

  Excellent cost performance in area

PRODUCT FEATURE

- CATV (Received optical power)

  Red >+2dBm

  Green +2~-13dBm (Digital TV:+2~-16dBm)

  Orange -13~-16dBm(DigitalTV:-16~-20dBm)

  Red <-16dBm (DigitalTV:<-20dBm)

- 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

- Power

  Power(Green) Bright :Normal

PRODUCT SERIES

Model	Mode optical port	CATV work wavelength	Data work waelength	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

TECHNICAL INDEX

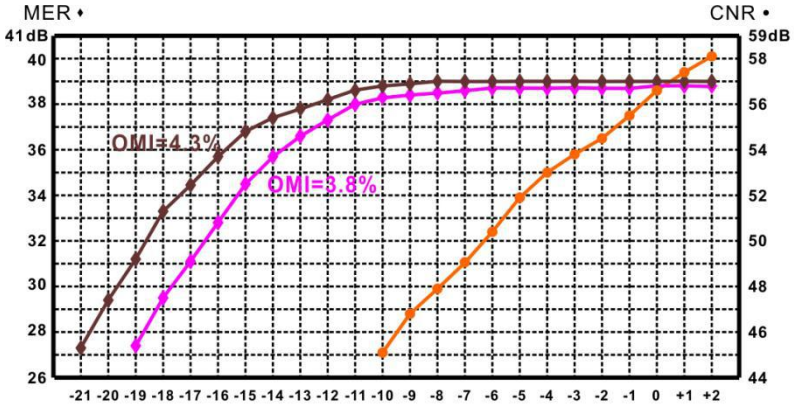
Performance			Index	Supplement
Optic feature	CATV Work wavelength	(nm)	1260~1620	H9122-4FE-DF
			1540~1563	H9122-4FE-SF
	Channel Isolation	(dB)	≥40	1550nm & 1490nm
	Responsivity	(A/W)	≥0.85	1310nm
			≥0.9	1550nm
	Receiving power	(dBm)	+2~-10	Analog TV(CNR>45dB)
			+2~-20	Digital TV(MER>29dB)
	Optical 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	(dBμV)	>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)	59CH(PAL-D)	
	OMI	(%)	3.8	
	CNR1	(dB)	54..6	Pin=-2dBm
	CNR2	(dB)	45.1	Pin=-10dBm
	CTB	(dB)	≤-65	Pin：0~-10dBm
	CSO	(dB)	≤-65	Pin：0~-10dBm

Link Feature DigitalTV	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	Tyoe.=7W
	Work temp	(℃)	-20 ~ +55	
	Storage temp	(℃)	-40 ~85	
	Work relative temp	(%)	5 ~ 95	
	Size	(mm)	132×98×24mm	

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	IEEE802.310Base-t,IEEE802.3u 100Base-Tx/Fx IEEE802.3x	
	Interface and quantity	4 RJ45, 10M/100M Ethernet network port	

CNR, MER DEGRADATION TABLE



Note:1.CNR Test conditions: 59CH PAL-D, OMI = 3.8%

2. MER test conditions: The Original Signal : MER = 39.0dB, BER <1.0E-9,
Test Frequency : 47 ~ 862MHz Full Channel, (The Curve is: 858. 00MHz) .
Red curve: OMI=3.8%
Brown curve:OMI=4.3%

3. Digital television Receiving Low Light, appropriate to increase the system modulation (OMI),can greatly improve the MER degradation.

MODEL EXPLANATION

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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		