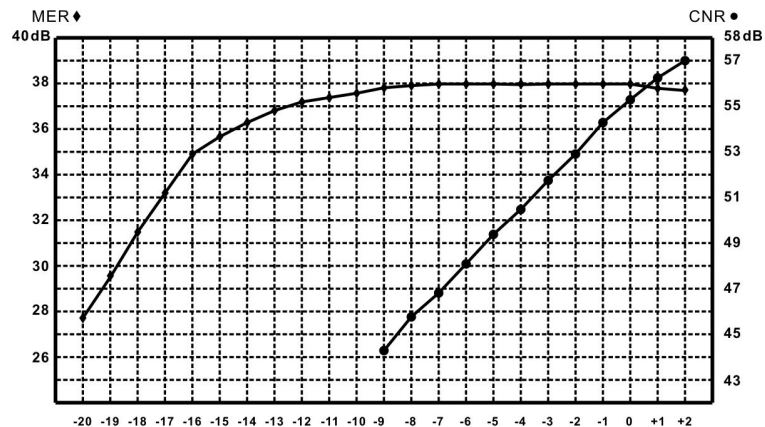


6.0 CNR, MER DEGRADATION TABLE



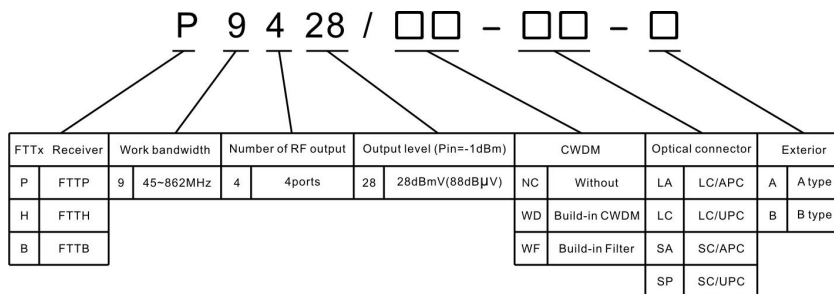
Note: 1. CNR test condition:59CH PAL-D,OMI=3.8%

2. Digital TV test signal: The original signal MER=38.2dB、BER<1.0E-9 Tx Input Level:87dBμV

7.0 PRODUCT SERIES

Model	Input Wavelength	CATV Work wavelength	Data pass wavelength	Fiber connector
P9428	1310 or 1550nm	1260~1620nm	-	SC/APC
P9428/WD	1310, 1490/1550nm	1540~1563nm	1310/1490nm	LC/APC
P9428/WF	1310, 1490/1550nm	1540~1563nm	-	SC/APC

8.0 MODEL EXPLANATION



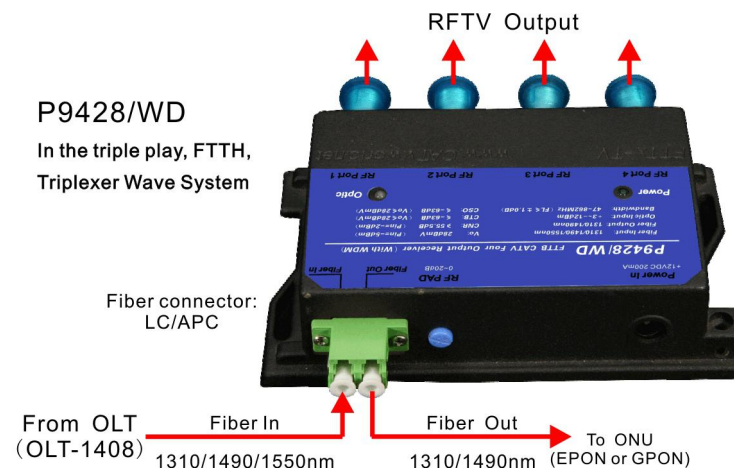
9.0 NOTE

1. The power adapter for this equipment: Input 220V, output DC 12V(0.6A)
2. Keep the optical connector clean, the bad link will cause too low RF output level
3. The built-in RF adjustable attenuator(PAD) of equipment can debug suitable level for system users .User Should not adjust by themselves, to avoid the device damage.

P9428、P9428/WD、P9428/WF

FTTP Four outputs CATV optical receiver
(Pin=-16dBm、Vo≥74dBμV、MER≥34dB)

47~862MHz



User Manual

Ver. 2.2. en

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1.0 PRODUCT DESCRIPTION

P9428, the operating bandwidth of 4 ~ 862MHz, is a low power consumption, high performance, and excellent cost performance RFTV broadcast network ONU(Optical network unit). Products with high sensitivity optical receiver tube and Huatai special low noise matching circuit.

P9428 for Analog TV, in Pin =-9dBm when, Vo ≥ 79dB μ V, CNR ≥ 44dB.

P9428 for Digital TV, in Pin =-16dBm when, Vo ≥ 74ddB μ V, MER ≥ 34dB.

P9428 for Digital TV, in Pin =-20dBm when, Vo ≥ 66dB μ V, MER ≥ 27 cal fiber amplifier power resources. For operators, can greatly reduce the cost of building the network. P9428 optical port mode with following three types optional:

P9428 : operating wavelength 1260~1620nm.

P9428/WD: Built-in CWDM, suitable for single-fiber triple wavelength system, RFTV

perating wavelength 1550nm, passwavelength 1310/1490nm, can conveniently connect the ONU of EPON, GPON.

P9428/WF: built-in 1310/1490nm filter,suitable for single-fiber triple wavelength system, RFTV Operating Wavelength 1550nm.

2.0 PRODUCT FEATURE

- Extra-low noise(3.8% modulate, -9dBm receive, CNR ≥ 44dB)
- Wide dynamic receiving optical power range: within Pin=-16, MER≥34dB
- Can save a large number of optical power resource, greatly reduce the network configuration cost
- In the range of 47~862MHz, all have good flatness ($F1 \leq \pm 0.75dB$)
- Built-in inter-stage gain adjustment, can choose high CNR and suitable output level according to different Receiving optical power.
- Four-way high level output, can supply service for more users
- Zinc die-casting all-in-one metal shell, supply safeguards to opto-electrical sensing device
- High output level can supply for many users
- Low power consumption, high cost performance

3.0 Main application

- FTTH,FTTP, FTTO
- FTTC, FTTN
- HFC

4.0 TEST DATA(Pin=+2.0dBm~-20dBm)

Pin (dBm)	Vo (dBμV)	MER	BER		Pin (dBm)	Vo (dBμV)	MER	BER	
			POST	PER				POST	PER
+2.0	100.6	38.1	<1.0E-9	<1.0E-9	-10.0	76.1	37.8	<1.0E-9	<1.0E-9
+1.0	98.0	38.3	<1.0E-9	<1.0E-9	-11.0	74.2	37.7	<1.0E-9	<1.0E-9
+0.0	96.1	38.3	<1.0E-9	<1.0E-9	-12.0	72.0	37.5	<1.0E-9	<1.0E-9
-1.0	94.0	38.3	<1.0E-9	<1.0E-9	-13.0	70.0	37.3	<1.0E-9	<1.0E-9
-2.0	92.1	38.3	<1.0E-9	<1.0E-9	-14.0	68.1	36.9	<1.0E-9	<1.0E-9
-3.0	90.1	38.2	<1.0E-9	<1.0E-9	-15.0	66.3	36.0	<1.0E-9	<1.0E-9
-4.0	87.9	38.1	<1.0E-9	<1.0E-9	-16.0	64.0	35.3	<1.0E-9	<1.0E-9
-5.0	85.7	38.0	<1.0E-9	<1.0E-9	-17.0	61.5	34.6	<1.0E-9	<1.0E-9
-6.0	83.5	38.0	<1.0E-9	<1.0E-9	-18.0	60.4	33.3	<1.0E-9	<1.0E-9
-7.0	81.2	38.0	<1.0E-9	<1.0E-9	-19.0	57.7	31.4	<1.0E-9	<1.0E-9
-8.0	79.9	38.0	<1.0E-9	<1.0E-9	-20.0	56.6	29.5	<1.0E-9	2.2E-9
-9.0	78.1	37.9	<1.0E-9	<1.0E-9					

Remark: 1. Test Signal: MER: 38.0 (dB), BER : <1.0E-9
2. Channel Load: DigitalTV 32 QAM

6.0 TECHNICAL INDEX

Performance		Index	Supplement
Optic feature	CATV Work wavelength	(nm)	1260~1620 P9428
			1540~1563 P9428/WF,,P9428/WD
	Pass wavelength	(nm)	1310, 1490 P9428/WD
	Channel Isolation	(dB)	≥40 1550nm & 1490nm
	Responsivity	(A/W)	≥0.85 1310nm
			≥0.9 1550nm
	Receiving power	(dBm)	+2~-9 Analog TV(CNR>45dB)
			+2~-20 Digital TV(MER>28dB)
Optical return loss	(dB)	≥55	
Optical fiber connector		SC/APC P9428, P9428/WF	
		LC/APC P9428/WD	
RF Feature	Work bandwidth	(MHz)	47~ 862
	Flatness	(dB)	≤±0.75 47~862MHz
	Output level	(dBμV)	>88 AnalogTV (Pin=+1dBm)
			>74 Digital TV (Pin=-16dBm)
	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)	52.9 Pin=-2dBm
	CNR2	(dB)	46.8 Pin=-10dBm
	CTB	(dB)	≤-65 Pin: 0~-10dBm
	CSO	(dB)	≤-68 Pin: 0~-10dBm
DigitalTV Link Feature	MER	(dB)	≥36 Pin:+2~-13dBm
			≥35.7 Pin=-15dBm
			≥27.7 Pin=-20dBm
BER	(dB)	<1.0E-9 Pin:+2~-20dBm	
General feature	Power supply	(V)	DC+12V ±1.0V
	Power Consume	(W)	≤3 +12VDC,210mA
	Work temp	(°C)	-20 ~ +50
	Storage temp	(°C)	-40 ~ 85
	Work relative temp	(%)	5 ~ 95
	Size	(mm)	118×73×29 (W) × (D) × (H)