HT8500T （CNR≥54dB, SBS:13~19 adjustable)

Advanced type ITU wavelength adjustable Externally Modulated Optic transmitter

Product description

RFTV is a unidirectional analogue and digital video broadcast. It adopts high efficiency modulation mode for RF carrier wave and its economical efficiency, flexibility and bandwidth validity is beyond comparison of IPTV. By adopting EPON, GEPON or P2P access mode to realize triple-play and FTTx, RFTV broadcasting network in 1550nm optical wavelength still plays an important role and 1550nm externally modulated optical transmitter is the core equipment in this system.

1550nm externally modulated technology has no laser chirp, low dispersion distortion, and great extinction rate, with excellent characteristic within 47~862MHz. External Modulator doesn't generate CSO distortion after reasonable bias. It can be followed by amplifier when used in large area coverage of over-long trunk and local networks. Adopting WDM, it can multiplex optical channels with multi-wavelength through one fiber. 1550nm optical fiber CATV follows the current development trend of triple-play and fiber to home.

We are the well-known manufacture in analog externally modulated optical transmitter around the world. HT8500T is a series of 1550nm externally modulated optical transmitter achieving the highest standards of today. The whole-unit's optical source adopts narrow line width (Typ.=0.35MHz), low noise and continuous wave DFB laser, which is propitious to reduce dispersion effect. Adopting ITU standard wavelength, users can adjust and set the wavelength on the front panel within the range of ±200GHz (±1.6nm) as ±0.05nm stepping. It is applicable for the network upgrading and expansion of WDM system. The whole unit signal modulation adopts CATV special LiNbO3 external modulator of American JDS-U company and optimized control technology with independent intellectual property , so it can reach high index of back to back CNR ≥ 53.5dB, CTB ≤ -65dB, CSO ≤ -65dB, SBS: 13~19dBm continuous adjustable. The whole unit is equipped with perfect RS232 communication interface, SNMP network management, 1+1 back-up power supply and casing temperature auto-control. All the optical port can be installed in the front panel (The back panel is also available if needed).

HT8500T, advanced type externally modulated optical transmitter with it's high index, high reliability and excellent cost performance, is applicable for the over-long trunk of large and middle CATV station head-end, WDM system and CFG dispersion compensation system.

- •HT8527T: 2 fiber output, each port≥7.0dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.
- •HT8529T: 2 fiber output, each port≥8.5dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.
- •HT852AT: 2 fiber output, each port≥10dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.
- •HT852BT: 2 fiber output, each port≥11dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.
- •HT852CT: 2 fiber output, each port≥12dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.
- •HT852DT: 2 fiber output, each port≥13dBm, CNR≥53.5dB, SBS: 13~19dBm continuously adjustable、ITU wavelength adjustable.

Product features

- Externally modulated technology, no laser chirp, low dispersion distortion,
- high extinction ratio, with excellent characteristic within 40~862MHz, used in the over-long trunk of large and medium sized cable television head-end.
- 1+1 powers supply back up, hot-plug function available.
- Narrow line width (Typ=0.35 MHz), low noise, and DFB continuous wave laser, be propitious to reduce dispersion effect.
- The operating bandwidth is up to 47~1000MHz.
- The work bandwidth for HT8500T optic transmitter is up to 47~824MHz.
- CNR ≥ 53.5dB and excellent CTB, CSO index.
- SBS: 13~19dBm, continuous adjustable.
- ITU standard wavelength adjustable, users can adjust and set the wavelength on the front panel with ±0.05nm stepping in the range of ±200GHz (±1.6nm), used in the network upgrading and expansion of WDM system.
- AGC/MGC mode is optional at spot; OMI can be optimized at spot.
- Perfect RS232 communicate interface.
- Advanced SNMP network management function.
- Casing temperature auto-control.

Main application

- Used in the over-long trunk and distribution net in the large and middle cable television central station head-end.
- Analogue digital hybrid transmission > 200Km (with dispersion compensation).
- Pure digital transmission (without dispersion compensation) > 400Km.
- (with dispersion compensation) >700Km.
- VAS in DWDM fiber CATV system
- CFG dispersion compensates system.

Technical index

Performance			Index		Supplement
Optic feature	Operating wavelength	(nm)	ITU-TG.692 standard wavelength		
	Wavelength ADJ. range	(nm)	±1.6		±200GHz
	Wavelength ADJ. mode		±0.05nm stepping		
	Wavelength stability	(Pm/°C)	-1~0		Tc=20~70°C
	Line width	(MHz)	Typ.=0.35		FWHM(△λ), (-3dB fullwidth)
	Side mode suppression ratio	(dB)	≥45		SMSR
	Equivalent noise intensity	(dB/Hz)	≤-160		RIN (20~1000MHz)
	Number of output port		2		
	Output power	(dBm)	7.0, 8.5, 10, 11, 12, 13		2×7, 2×9, 2×10, 2×11,2×12,
	Return loss	(dB)	≥50		
	Optical fiber connector		SC/APC		Optional FC/APC, LC/APC
RF feature	Work bandwidth	(MHz)	47-862		Optional 47~1000MHz
	Input level	(dBmV)	18~28		AGC
	Flatness	(dB)	≤±0.75		47~862MHz
			≤±1.5		862~1000MHz (Optional)
	Return loss	(dB)	>16		
	Input impedance	(Ω)	75		
	RF connector		F-Female		
Link feature	Transmit channel		PAL-D/60CH	PAL-D/99CH	
	CNR1	(dB)	≥53.5	≥52	Back to back
	CNR2	(dB)	≥51.5	≥50	65Km optical fiber, 0dBm
	CTB	(dB)	≤-65	≤-65	
	CSO	(dB)	≤-65	≤-65	
	SBS restrain	(dBm)	13~19		Adjustable

General Information	SNMP network management		RJ45	
	Communication interface		RS232	
	Power supply	(V)	90~265VAC	-48VDC optional
			-48	30~72
	Power Consume	(W)	≤50	Single power works
	Operating temp.	(°C)	0~50	Machine temp. control
	Storage temp.	(°C)	-40~85	
	Relative humidity	(%)	5~95	
	Size	(")	19×15.2×1.75	(W)x(D)x(H)

Product series

型号	光波长	输出光口数	每口输出光功率
GDS-5802-13	1310nm	1	2dBm
GDS-5804-13		1	4 dBm
GDS-5806-13		1	6dBm
GDS-5808-13		1	8 dBm
GDS-5809-13		1	9dBm
GDS-5810-13		1	10dBm
GDS-5812-13		1	12dBm
GDS-5802-□□		1	2 dBm
GDS-5804-□□		1	4 dBm
GDS-5806-□□		1	6 dBm
GDS-5808-□□	1550nm	1	8 dBm
GDS-5809-□□		1	9 dBm
GDS-5810-□□		1	10 dBm

Test condition:

CNR1: Tx to Rx, 0dBm receiving.

CNR2: 16dBm EDFA (NF4.5~5.5dB), 65km fiber, 0dBm receiving.

Model explanation

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Product type		Product series		Number of output port		Output power		Quality		ITU Grid Ch. No.		Wavelength		Optical port position		Connector		power supply mode		Power supply	
HT	Analogue optical transmitter	85	1550nm external modulation	2	2 fiber output	7	7.0dBm	T	Advanced type	23	1558.98nm	086	47~862MHz	F	Front panel	FA	FC/APC	HP	Dual PS、Hot plug	22	220VAC
						9	8.5dBm			31	1552.52nm	100	47~1000MHz	B	Back panel	SA	SC/APC			11	110VAC
						A	10dBm			37	1547.72nm					LA	LC/APC			48	-48VDC
						B	11dBm			□□	15XX.XXnm									42	-48VDC& 220VAC
						C	12dBm														
						D	13dBm														