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DESCRIPTION

SMO-P16 is a high performance 1GHz CATV optical receiver for converting TV signal from optical fiber network into RF signal over coax cabling in residential homes. This product features compact size, high CNR, low distortion, low power consumption, easy installation and cost effectiveness. It supports conventional analog TV RF as well as Digital Video Broadcasting signals. RF output level can be adjusted with manual gain control. The SMO-P16 is the best choice to be used on FTTH services. It has WDM devices integrated for combing GPON (IP) signals of wavelengths 1310nm (upstream) & 1490nm (downstream) with 1550nm CATV signal in the same fiber.

FEATURES

- CATV 1GHz RF frequency bandwidth.
- Integrated WDM for GPON OLT wavelength bypass (1490/1310nm).
- Automatic gain control (AGC) of RF output level.
- Compact integrated mechanical housing.
- Module design and Plug & Play function.
- DC power on indication LED.
- AC/DC 12V power adaptor (standard)

SPECIFICATIONS

SMO-P16 1GHz Video Optical Network Unit					
Ite	**Description**	**Conditions**	**Units**	**Specifications**	**Note**
1	**Optical feature**				
1.1	CATV Wavelength		nm	1543 ~ 1563	
1.2	Pass Wavelength		nm	1310 & 1490	
1.3	Responsibility	@ 1550nm	A/W	≥ 0.9	
1.4	Receiving power cover range		dBm	-8 ~ +2	
1.5	Optical return loss		dB	≥ 55	
1.6	Optical fiber connector			SC/APC	
1.7	Isolation		dB	≥ 40	
2	**RF features**				
2.1	RF bandwidth cover range		MHz	47 - 1000	
2.2	Flatness		dB	< ± 0.5	
2.3	Output level	Analog TV (Pin= -3dBm)	dBmV	> 20	
2.4	Output level AGC	Automatic gain control	dBmV	21 ~ 25	Pin: +2 to -8dBm
2.5	RF Return loss		dB	≥ 14	
2.6	Output impedance		Ω	75	
2.7	Output port number			1	
2.8	RF connector			F- connector	
3	**Link performance**				
3.1	Test condition Analog: Digital:	NTSC 78CH analog, OMI 3.8% Or PAL-D 60 CH analog, OMI 3.8%			
3.2	CNR	analog test condition	dB	≥ 51	Pin: 0 dBm
				≥ 46	Pin: -6 dBm
				≥ 44	Pin: -8 dBm
3.3	CTB	analog test condition	dB	≤ -60	@0 dBm
3.4	CSO	analog test condition	dB	≤ -60	
3.5	HUM	Analog test condition	dB	≤ -60	

3.6	MER	Digital test condition Pin: +2 ~ -8dBm	dB	≥ 38	
3.7	BER (Pre-FEC)	Digital test condition Pin: +2 ~ -8dBm		≤ 1 x 10^{-9}	
4	**Other**				
4.1	DC Power indicator	On		Green	
4.2	Optical input power indicator			Green : +2 ~ -8 dBm Red : > +2, < -8 dBm	Tolernace ±0.5dB
4.3	Power supply		VDC	12	
4.4	Power Consumption		Watt.	≤ 5	
4.5	Working temperature		˚C	0 ~ 50	
4.6	Humidity	non-condensing		0 ~ 90%	

BLOCK DIAGRAM