

WT-2G6 Satellite Optical Transmitter



1. Product Overview

WT-2G6 satellite optical transmitter is directly modulated adopts a highly linear DFB laser with cooler. It can simultaneously transmit 47-862MHz CATV signal and 960-2600MHz satellite live TV signal in one optical fiber. The satellite optical transmitter can select ITU standard wavelength and DWDM, which can achieve network upgrading and expansion. Compatible with FTTxPON technology to realize the multi network integration of CATV (analog and digital TV), satellite TV (DVB-S) and internet. SAT-IF uses a highly linear IF drive amplifier circuit with AGC function to ensure high-quality transmission of Analog TV, Digital TV (DVB-C, DVB-T) and Satellite TV signals in one optical fiber.

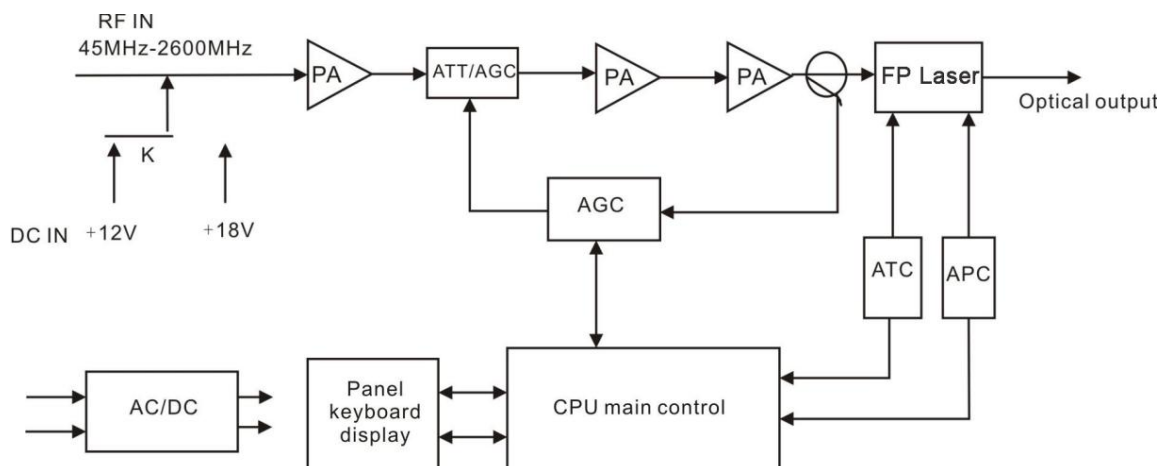
2. Product Applications

- One optical fiber transmit CATV and SLDTV
- FTTxPON (EPON, GPON)

3. Features

- Wide working bandwidth, up to 2.6GHz.
- ITU wavelength is optional.
- 1U 19" standard rack.
- CPU control, LCD displays status and fault diagnosis.
- Standard RJ45 interface, equipped with SNMP network management function.
- APC and ATC control circuits ensure the long life and high reliability of the laser.

4. Block Diagram

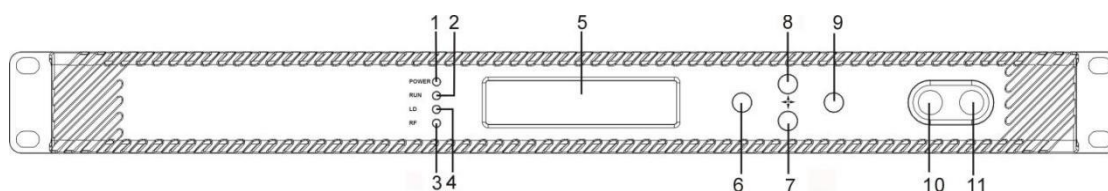


5. Technical Parameters

Performance	Unit	Index	Remark
Optical Characteristics			
Laser Type		DFB	Specified by the user
Optical Wavelength	nm	1310, 1550 or specified by the user	Specified by the user
Output Optical Power	mW	2, 4, 6, 8, 10	Specified by the user
Output Return Loss	dB	50	
Optical Connector Type		SC/APC or FC/APC	Specified by the user
CATV RF Characteristics			
Working Bandwidth	MHz	45-862	
Input Range	dBμV	75~85	Input level
Flatness	dB	±1	
Input Return Loss	dB	14	
C/N	dB	≥51	42CH CENELEC 80dBμV AGC OMI=3.8%
C/CTB	dB	≥63	
C/CSO	dB	≥58	
Input Impedance	Ω	75	
RF Connector		F type Male/Female	Specified by the user
SAT-IF Characteristics			
Working Bandwidth	MHz	950~2600	
Input Range	dBμV	68~83	Input level
Flatness	dB	±1	
Input Return Loss	dB	10	
C/IM3		≥55	Note1
General Characteristics			
Power Supply (AC)	V	110~265	Optional dual power
Consumption	mW	20	
SNMP network management interface		RJ45	
Working Temperature	°C	0~50	
Storage Temperature	°C	-40~60	
Dimension (W)*(D)*(H)	mm	483*395*44	1U 19 inch
Note1: C/IM3 is defined as the ratio between the peak of carrier signal and triple beat (IM3) by using a two-tone test (1.0GHz and 1.1GHz).			

6. External Function Description

6.1 Front Panel

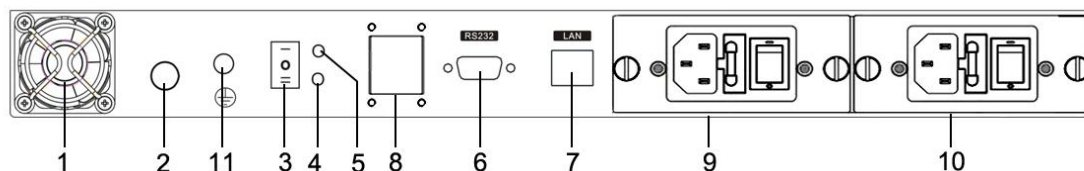


1	Power indicator	2	Run indicator	3	RF input indicator
4	Laser working indicator	5	LCD	6	ESC
7	Down	8	Up	9	Enter
10	Laser switching key	11	RF input test port		

6.1.1 Indicators Status Description

Power indicator	Power on	LED green
Run indicator	Normal	LED green
Laser indicator	ON	LED green
RF input indicator	No input or exceed the normal range	LED flash red
	Normal	LED green

6.2 Rear Panel



1	Fan outlet	2	RF signal input port	3	Voltage output switch
4	+18V indicator	5	+12V indicator	6	RS232 interface
7	LAN interface	8	Optical output interface	9	Power supply1
10	Power supply2	11	Ground stud		

Note:

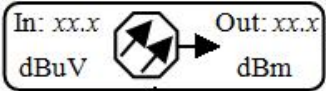
When the voltage output switch on the ‘—’ side, the +12V indicator is on and the RF signal input port with +12V voltage output;

When the voltage output switch on the ‘○’ side, the RF signal input port no voltage output;

When the voltage output switch on the ‘=’ side, the +18V indicator is on and the RF signal input port with +18V voltage output.

7. Menu Operation

7.1 Main Menu

Display parameters	Description
	Boot display
1.Disp Parameters	Menu 1: Display parameters
2.Set Parameters	Menu 2: Set parameters
3.Alarm Status	Menu 3: Alarm status

7.2 Display Menu

Display parameters	Description	Display parameters	Description
Laser Output	Output optical power	+24V	+24V monitor voltage
Laser Bias	Laser current	S/N	Serial number
Laser Temp	Laser temperature	BOX Temperature	Box temperature
TEC Cooling	Cooling current	IP Address	IP address
RF Control Mode	RF control mode	Sub Mask	Subnet mask
AGC Ref	AGC attenuation	Net GateWay	Gateway
+5V	+5V monitor voltage	MAC	Mack address
-5V	-5V monitor voltage	SoftWare Ver	Software version number
+12V	+12V monitor voltage		
+18V	+18V monitor voltage		

7.3 Setup Menu

Display parameters	Description	Remark
Set LaserOutPut Unit	Set optical power output unit	mW and dBm optional
Set Buzzer Alarm	Set buzzer alarm	YES is on, NO is off
Set RF Control Mode	Set RF control mode	AGC and MGC optional
Set MGC Ref	Set attenuation under MGC mode	Adjustable range 0~15dB
Set AGC Ref	Set attenuation under AGC mode	AGC control range -3~+3dB
Set Channel Number	Set channel number	
Set Local IP Address	Set IP address	
Set SubNet Mask	Set subnet mask	
Set Gateway	Set gateway	
Restore Factory	Restore factory settings	

7.4 Alarm Menu

Display alarm content	Description
RF Alarm	RF alarm
Laser Temp	Laser temperature alarm
Laser Bias:	Laser current alarm
Output Alarm	Output alarm
Laser Tec	Laser cooling current alarm
+5V Alarm	+5V voltage alarm
-5V Alarm	-5V voltage alarm
+12V Alarm:	+12V voltage alarm
+18V Alarm:	+18V voltage alarm
+24V Alarm	+24V voltage alarm

8. Attention

- Before powering on, make sure that the grounding terminals of the chassis and power socket are reliably grounded, and the grounding resistance should be $<4\Omega$, which can effectively protect against surges and static electricity.
- Optical transmitter is a highly technical professional equipment, its installation and debugging must be operated by professional technicians. Read this manual carefully before operating to avoid damage to equipment caused by fault operation or accident harm to the operator.
- When installing and debugging optical equipment, invisible laser beams may be emitted inside the fiber connector. Avoiding permanent harm to the body and eye, the fiber connector should not aim at the human body and human should not look directly at the fiber connector with the naked eye!
- There must be no shielding outside the ventilation holes of the device. Poor ventilation will cause the index to decrease, and in serious cases will cause damage to the device.
- When cleaning the fiber end face, you must confirm that the optical source is turned off.
- When the fiber connector is not in use, put a dust cover to avoid dust pollution and keep the end surface of the optical fiber clean.
- When installing the fiber connector, apply appropriate force to avoid damage to the adapter. Otherwise, the output optical power may decrease.



Hangzhou Prevail Communication Technology Co., Ltd

Hangzhou Prevail Optoelectronic Equipment Co., Ltd

Statement: Both **PREVAIL** and **Prevail** are the registered trademarks of our company. We have the right to use either of them.