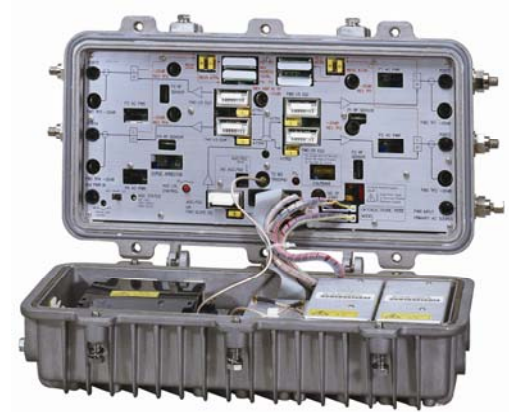


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# OPS2400 optical station

## Description

OPS2400 series optical station combines our field-proven network amplifier module with modular optical components to provide a flexible, scaleable, high performance optical station. The unit's modular design allows you to build stations tailored for a variety of applications and ensures that you can always upgrade or modify the station as your system evolves.

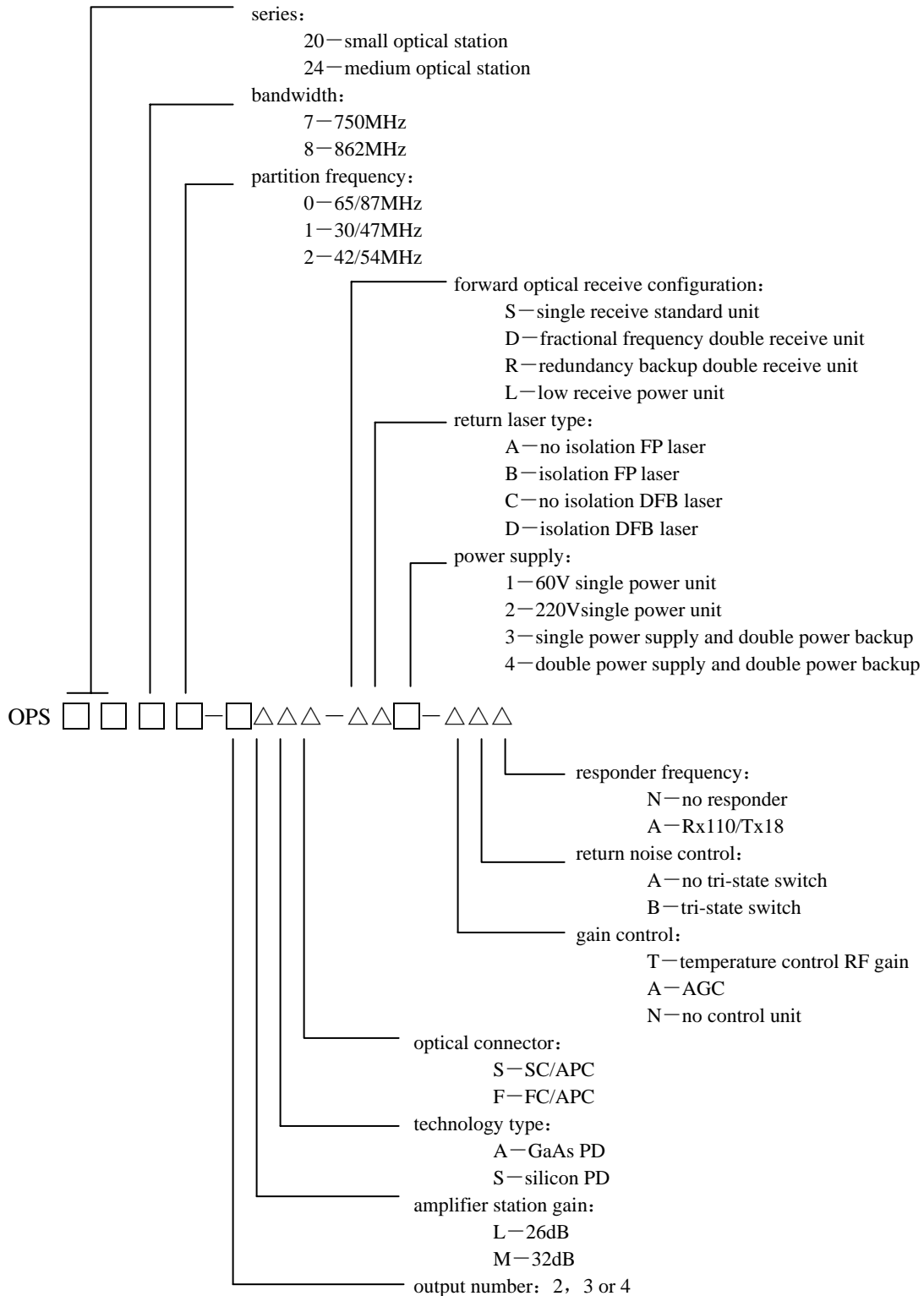


OPS2400 series optical station provides flexible, two-way communications. In the forward path; you can choose up to four high level RF outputs. In the return path, you can transmit information for applications such as telephony and data services. The OPS2400 is ideal system for require of cost-effective and scalable.

## Feature

- Separate quad-port high-level RF output, using 1GHz chassis, GaAs or silicon bipolar PHD hybrid amplifier.
- Redundancy options allow you to back up both forward optical receiver and power supply, greatly enhancing the reliability.
- Band combining feature is an ideal choice for extended reach or narrowcast services (video/telephony/data).
- Anti-high-voltage and surge protection device to ensure the normal operation.
- Optional output level auto control or temperature control.
- Status monitor transponder is compatible with national standard and SCTE HMS standard.
- Separate 3-state reverse switch equipped for each RF return path so that headend control center can know and eliminate interference in time.
- FP (IFP) or DFB laser, high NPR, large dynamic range.
- Internal or external output level test point optional.
- 15A current bypassing capability optimized thermal design.

**Order information**



**Specifications**

**Table 1 OPRM862/25 optical receiver module of OPS2400 optical station**

Item	Note	OPRM862/25	Unit
Optical characteristics			
Optical fiber		9/125/900	μ m
Optical receiver wavelength		1100~1600	nm
Optical return loss		>45	dB
Optical input power range		3 to -7	dBm
Optical connector		SC/APC or FC/APC	
Input optical power test point		0.2	mW/V
RF output			
Frequency range		45~862	MHz
Slope		0 to -1	dB
Flatness		±0.5	dB
Return loss		14	dB
RF output level (Pin=-1dBm)	1	25	dBmV
Link performance			
C/N	1	52	dB
CSO	1	-63	dBc
CTB	1	-68	dBc
Power supply			
DC voltage		24	V
Operating current		200	mA
Waiting current		20	mA
Dimensions		14.5×3.6×3.0	cm

Notes 1. When used with TXA or OT8C transmitter in optical link, 10km fiber + optical attenuator, receiving optical power -1dBm, PAL 59 channels, link performance see TXA optical transmitter link table.

**Table 2 OPA497 or OPA498 amplifier of optical station**

Item	Note	OPA497	OPA498	Unit
<b>Forward path</b>				
Frequency range		45~750	45~862	MHz
Flatness		±0.5	±0.5	dB
Return loss		16	16	dB
NF		9	9	dB
Minimum full gain (750 or 860MHz) L/M		26/32	26/32	dB
Reference output level (47MHz/550MHz/750or 862MHz)		35.5/44/47.5	36.5/43.5/48	dBmV
CSO (silicon / GaAs)	1	-75	-75	dBc
CTB (silicon / GaAs)	1	-73/78	-74/79	dBc
<b>Reverse path</b>				
Frequency range		5~65	5~65	MHz
Flatness		±0.75	±0.75	dB
Return loss		16	16	dB
AC current passing capability		15	15	A
Hum		66	66	dB
DC operating current (24V)		1900 (4 PORT)	1900 (4 PORT)	mA
Dimensions		44×24.5×16.5	44×24.5×16.5	cm
Weight		8.0	8.0	kg
Operation environmental temperature		-25~65	-25~65	°C

Note 1. reference output level from 47 to 550MHz, PAL-D 59 channels TV signal, test condition above 550MHz (-10dB) delivering digital signal or narrow band broadcasting.

**Table 3 Power supply of OPS2400 optical station**

Specification	Item						Unit
	AC voltage	60	55	50	45	40	V
<b>Dual-ports output</b>							
	AC current	0.8	0.85	0.93	1.05	1.18	A
	Power dissipation	42	42	42	42.5	43	W
<b>Tri-ports output</b>							
	AC current	1.01	1.07	1.16	1.31	1.48	A
	Power dissipation	53	53	53	53.5	54	W
<b>Quad-ports output</b>							
	AC current	1.2	1.28	1.39	1.57	1.77	A
	Power dissipation	63	63	63	63.5	64	W

Note: above-described, not equipped with redundancy module and status monitoring responder

**Table 4 Return optical transmitter module of OPS2400 optical station**

	Note	OPTM240				Unit
Optical characteristics						
Type of laser	1	FP	IFP	DFB	IDFB	
Optical wavelength		1310(1550) $\pm$ 20				nm
Output optical power	1	-1~0	-1~+2	-1~+2	+2~+3	dBm
Fiber connector	1	SC/APC or FC/APC				
RF input						
Frequency range		5~65 (200)				MHz
Slope		0~-1				dB
Flatness		$\pm$ 0.5				dB
Return loss (75ohms)		16				dB
RF input test point		-20				dB
General input power	2	$\geq$ 70				dB $\mu$ V
1MHz channel input power	2	$\geq$ 53				dB $\mu$ V
RF driver level (from 5 to 65MHz)	2	-7				dB $\mu$ V/Hz
Link performance						
NPR dynamic range	3	$\geq$ 10 (NPR $\geq$ 30)	$\geq$ 15 (NPR $\geq$ 30)	$\geq$ 12 (NPR $\geq$ 30)	$\geq$ 15 (NPR $\geq$ 38)	dB
Power supply						
DC voltage		24(5)				V
Operating current		180				mA
Output optical power test point		1				mW/V
Laser bias current test point		100				mA/V
Operation environmental temperature		-25 to 70				$^{\circ}$ C
Dimensions		14.5X3.6X3.0				cm

- Notes: 1. According to user's requirement  
 2. Module RF input port driver level; the station return RF input port general power will raise 10db  
 3. 10km optical fiber + attenuator, optical link loss 6db

**Table 5 Specifications**

Item	Note	Specifications	Unit
Link flatness		$\pm$ 0.75	dB
C/N	1	51.5	dB
CTB	1	67	dB
CSO	1	62	dB
Power dissipation		80	W
Operation environmental temperature		-25~+65	$^{\circ}$ C
Dimensions		440 $\times$ 245 $\times$ 165	mm
Weight		9	kg

Note 1: reference output level from 47 to 550MHz, PAL-D 59 channels TV signal, above 550MHz delivering digital signal or narrow band broadcasting (-10dB) .

