STN6800-D16HE-OA (BA+PA)

Optical Amplifier Card for STN6800-D16HE

Integrated Booster Amplifier (BA) and Pre-Amplifier (PA) module inside

Overview

OA is a family of a DWDM C-band optical amplifier card based on erbium-doped optical fibers (EDFA) including Booster Amplifiers, Line Amplifiers and Pre-Amplifiers. Its working wavelength is normally C-Band (1529~1561nm), special working wavelength range can be discussed with Sino-Telecom.The amplifier card can be operated at constant gain (Automatic Gain Control AGC), constant output power (Automatic Power Control, APC). Because of adopting optimal design of optical path, it can amplify the C-Band signal with or w/o middle stage access (MSA), at fixed gain or variable gain, which brings great flexibility for the network application. There are isolators at input and output port. Integrated VOA can be automatically adjusted to achieve smooth gain spectrum. Optical supervisory channel (OSC) is optional function integrated in the module, it can be dropped or added.

Features

- Support 96CH DWDM C-band System
- Integrated Booster Amplifier and Pre-Amplifier module inside
- Operating wavelength: 1529~1561nm (Extended band is available)

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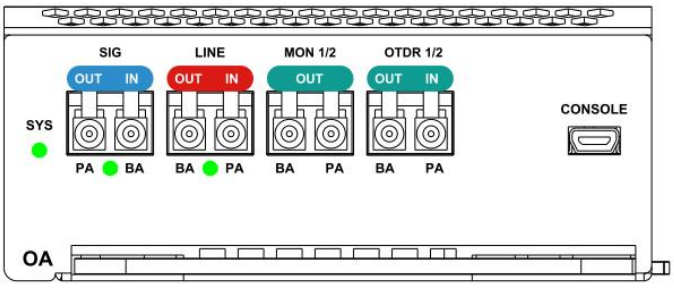
- Multi-working mode: AGC (default), APC,ACC
- Excellent gain flatness and NF
- Embedded OSC channel, for remote management and topology management
- Optional gain variability, external SFP VOA for adjusting line power
- Monitor port for power monitoring
- Support APR function

Interface Description

There are two types of optical amplifier card. Here is the OA card integrated BA and PA module inside.

OA (BA + PA) card



Interface	Connector	Description
SIG（IN）	LC/UPC	Client optical power input interface
SIG（OUT）	LC/UPC	Client optical power output interface
LINE（IN）	LC/UPC	Line optical power input interface
LINE（OUT）	LC/UPC	Line optical power output interface
MON 1/2（OUT）	LC/UPC	Optical power monitoring interface
OTDR 1/2（IN）	LC/UPC	PA input OTDR monitoring interface
OTDR 1/2（OUT）	LC/UPC	BA output OTDR monitoring interface

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Physical Characteristics

Characteristic	Description
Occupied Slots Number	Occupy one Slot
Operating Temperature	-5~55°C
Operating Relative Humidity	5~95%
Storage Temperature	-40~75°C

Technical Specifications

Optical Characters

Different part number has different specification. Maybe actual application needs customized specification. please contact Sino-Telecom for further discussion.

1. Optional Booster Amplifiers without VOA: BA20/G12(OSC) and BA20G16(OSC).

(1) BA20/G12(OSC)

Item	Min.	Typ.	Max.	Unit	Note
Operation wavelength	1529		1561	nm	
Input Power Range	-21	8	11	dBm	
Gain range	9	12	15	dB	Can be set
Output Power Range	-9	20	20.5	dBm	
Gain Flatness		1	1.5	dB	@rated Gain
Noise Figure			6.5	dB	@rated Gain
Loss alarm Threshold	-22			dBm	Can be adjusted

(2) BA20G16(OSC)

Item	Min.	Typ.	Max.	Unit	Note
Operation wavelength	1529		1561	nm	
Input Power Range	-25	4	7	dBm	
Gain range	13	16	19	dB	Can be set
Output Power Range	-9	20	20.5	dBm	
Gain Flatness		1	1.5	dB	@rated Gain
Noise Figure			6	dB	@rated Gain
Loss alarm Threshold	-26			dBm	Can be adjusted

2. Optional Pre-Amplifiers with VOA: PA16G20V(OSC) and PA16G25V(OSC).

(1) PA16G20V(OSC)

Item	Min.	Typ.	Max.	Unit	Note
Operation wavelength	1529		1561	nm	
Input Power Range	-31	-4	1	dBm	
Gain range	15	20	25	dB	Can be set
Output Power Range	-11	16	16.5	dBm	
Gain Flatness		1	1.5	dB	
Noise Figure			5.5	dB	@rated Gain
Loss alarm Threshold	-32			dBm	Can be adjusted

(2) PA16G25V(OSC)

Item	Min.	Typ.	Max.	Unit	Note
Operation wavelength	1529		1561	nm	
Input Power Range	-32	-9	-4	dBm	

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Gain range	20	25	30	dB	Can be set
Output Power Range	-7	16	16.5	dBm	
Gain Flatness		1	1.5	dB	
Noise Figure			5.5	dB	@rated Gain
Loss alarm Threshold	-33			dBm	Can be adjusted

Optical General Specification

Item	Min.	Typ.	Max.	Units	Note
Operating wavelength range	1529		1561	nm	
Polarization dependence gain			0.3	dB	
Polarization mode dispersion			0.5	ps	
Return Loss	45			dB	UPC connector

OSC Specification

Optical supervisor channel is optional, Add/Drop outside, it means drop from PA input and add at BA output. OSC channel wavelength can be customized, center wavelength such as 1490, 1510, 1625nm.

Item	Min.	Typ.	Max.	Unit	Note
OSC channel wavelength	1507	1510	1513	nm	optional
OSC insertion loss			1	dB	

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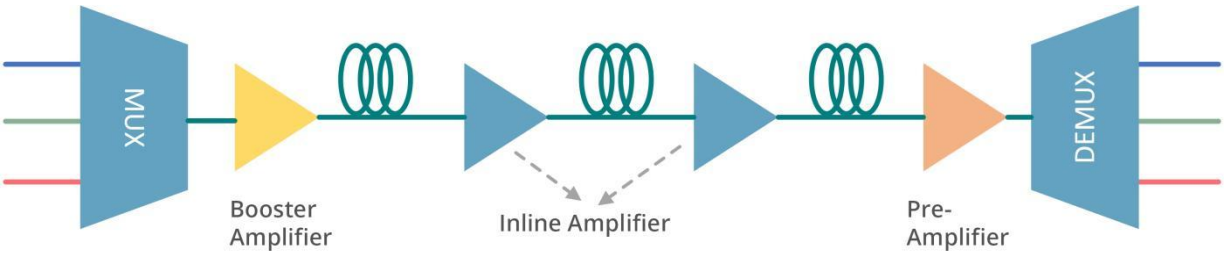
Typical Applications



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