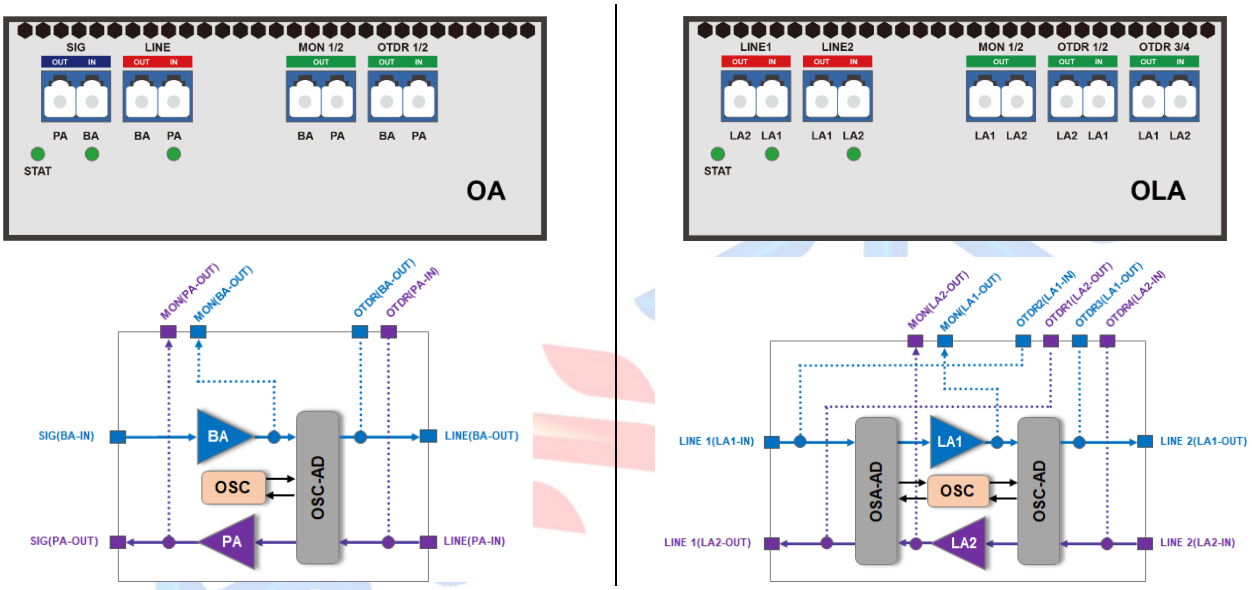
Optical Amplifier Board: OA

The main function of the OA (Optical Amplifier) board launched by Guangzhou Sintai Communication Co., Ltd. is to compensate the power of the signal light in the transmission link, which can simultaneously amplify the optical signal of up to 48 channels (channel interval of 100GHz) or 96 channels (channel interval of 50GHz) in C-band, with the features of flat gain, adjustable gain and small noise index, etc. Meanwhile, the board has built-in OSC optical monitoring channel to support OSC-based DCN communication, which is an indispensable and important part of DWDM system and future high-speed system and all-optical network long-distance transmission.

Equipment functional structure



Application scenarios

- Suitable for optical terminal stations (OTM), used as booster amplifier for multiplexed signals and pre-amplifier for demultiplexed signals
- Suitable for optical relay stations (OLA) to amplify bi-directional transmission signals and extend the transmission distance

Product specification

OA	
Occupy slot	1 slot
EDFA	● Optional built-in 1*EDFA (BA, PA, LA parameters optional) ● Optional built-in 2*EDFA (BA, PA, LA parameters optional)
OSC	● Optional without OSC ● Optional built-in 1*OSC ● Optional built-in 2*OSC ● Working wavelength: 1510nm ● Working rate: 1.25Gb/s
VOA	● Optional built-in VOA, the same number as EDFA

	● Location: EDFA input front ● Inherent insertion loss: <1dB ● Adjustment range: 0 ~ 15dB ● Power down state is inherent insertion loss
MON monitoring port	● Standard, the number of ports is the same as EDFA ● MON and the main optical channel optical power difference of 21 ~ 23dB
OTDR measurement port	● Optional, the number of ports is the same as the line interface ● OTDR signal wavelength: 1625nm ● OTDR channel loss: <1dB

EDFA Parameters			
	20G17	20G25	20G30
Wavelength range(nm)	1528 ~1568n	1528 ~1568	1528 ~1568
Gain range(dB)	16 ~ 18	24 ~ 26	22 ~ 35
Maximum total output optical power(dBm)	≥20	≥20	≥20
Noise(dB)	＜5.5	＜5.5	＜5.5
Gain flatness(dB)	＜1.5	＜1.5	＜1.5
Polarization correlation loss(dB)	< 0.5	< 0.5	< 0.5
Input optical power detection range(dBm)	-23 ~ 8	-31 ~ 0	-36 ~ -5
Output optical power detection range(dBm)	-6 ~ 20	-6 ~ 20	-6 ~ 20
Reflection coefficient(dB)	＜-30	＜-30	＜-30
Gain stability(dB)	±0.5	±0.5	±0.5