

# OAxxx-FA

## 2G6 OPTICAL AMPLIFIER

### Application

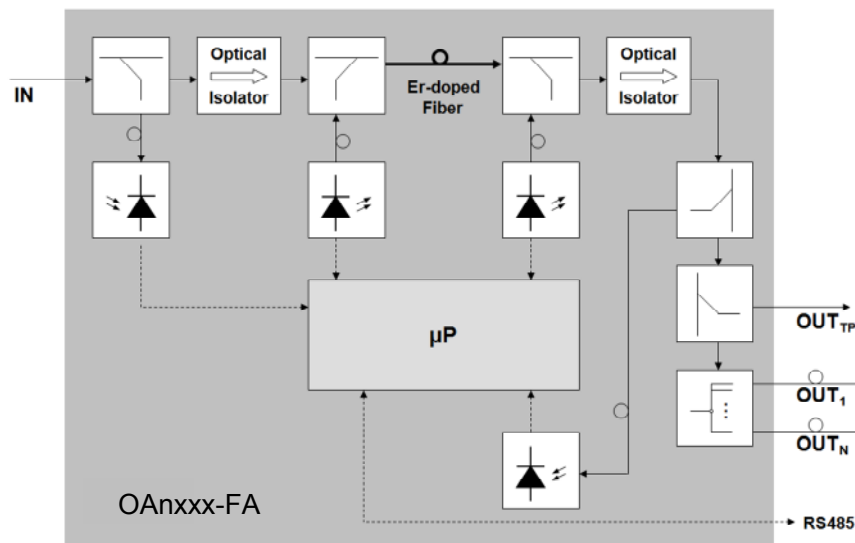
- ▶ Amplification of 1550 nm optical signals on single mode fibers
- ▶ Pre-, in-line or distribution amplifier in Hybrid-Fiber-Coax (HFC), RfOG, and FTTH RF overlay networks

### Features

- ▶ Front panel optical input and output
- ▶ Erbium doped fiber amplifier technology
- ▶ Single or dual pumped (980 nm/1480 nm pump laser)
- ▶ +13 up to +20 dBm optical output power per port
- ▶ Up to 4 optical output ports (internal optical splitter)
- ▶ Supervision of the optical input level, optical output level and pump laser current
- ▶ Automatic switch-off in case of non-sufficient optical input power
- ▶ Redundancy (2 pump lasers) optional for power levels starting from 16 dBm
- ▶ Optional measurement unit for SBS threshold of succeeding fiberoptic links (SBS detection)
- ▶ Optional optical output test port
- ▶ Standby mode



### Block Diagram



## Technical Data

### OA Mnemonic

**OAxxxx-FA**

n= number of output ports  
 x= output power per port  
 ( e.g 130 equals 13.0 dBm )

Parameter	Unit	
Input signal wavelength	[nm]	1540 ... 1561
Wavelengths of pump lasers (typ.)	[nm]	980 / 1480
Optical return loss	[dB]	>40
Optical input power	[dBm]	-5.0 ... +10.0
Optical input power (recommended)	[dBm]	0.0 ... +10.0
Flatness @ 1545-1560 nm	[dB]	± 1.0
Noise figure at 0 dBm optical input power	[dB]	≤ 4.8
Polarization dependent gain	[dB]	< 0.2
Residual pump power (input and output)	[dBm]	< -10
CSO with Cenelec 42 according EN50083-3	[dBc]	80
CTB with Cenelec 42 according EN 50083-3	[dBc]	90
Supply voltage	[VDC]	24
Power consumption:		
OA1130-FA, OA1165-FA, OA2130-FA, OA4130-FA, OA2165-FA, OA1200-FA	[W]	≤ 8 single pumped
OA2200-FA, OA4165-FA, OA4200-FA	[W]	≤ 30 dual pumped
Output power tolerance	[dB]	±0.5 (1551 ... 1556 nm)
	[dB]	±0.8 (1548 ... 1560 nm)
Number of Slots for 2G6 chassis		Module width 1
Weight	[kg]	~1.5
Optical connectors		SC/APC or E2000
Equipment operation environmental conditions		
Operation		ETS 300 019, class 3.1
Storage temperature		ETS 300 019, class 1.2
EMC		EN50083-2
Safety		EN 50083-1 and EN 60950, Laser class 1M according IEC 60825-1 (eyesafe for normal viewing)
Optical Test Port	Unit	
Nominal optical output power (for nominal optical output power of main output ports)	[dBm]	-2.0 ± 1.5 +2.0 ± 1.5

### Available Types

OA1130-FA, OA1165-FA and OA1200-FA

One optical output port with 13, 16.5 or 20 dBm optical power

OA2130-FA, OA2165-FA and OA2200-FA

Two optical output ports with 13, 16.5 or 20 dBm optical power per port

OA4130-FA, OA4165-FA, OA4200-FA

Four optical output ports with 13, 16.5 or 20.0 dBm optical power per port