

# OA3000 SERIES

## RACK MOUNTED OPTICAL AMPLIFIERS



Motorola's RoHS compliant, low-noise, high-power, multiple output, Erbium-Doped Fiber Amplifier is optimized for Passive Optical Networks and Large Distribution Systems applications.

**Benefits Include:**

Noise Figure less than 4.5dB at +6dBm input power

Wide Input Operating Power Range from 0dBm to +12dBm

RoHS Compliant

Isolated optical input and output

Optical input and output monitor ports

Front panel status LEDs

AC and DC powering options

NEBS compliant

Highly reliable telecom grade optical components

Versions with integrated WDMs for PON or RFOG networks

Low power capability (output power per port can be reduced from the front panel display)

Field-replaceable fan assembly

Field-replaceable power supplies

The N2U-OA300 family of Erbium-Doped Fiber Amplifiers (EDFAs) is optimized for Passive Optical Networks (PON) and Large Distribution Systems applications. These high-performance, RoHS compliant optical amplifiers provide a low noise figure and an optimal output power at the operating wavelengths between 1544nm and 1562nm.

The OA300 series is a 2RU rack-mount NEBS Level 1 certified unit. Powering options include integrated, dual redundant 110/220VAC or integrated, dual redundant -48VDC power supplies. It is available with several power levels per port options with 8 or 16 output ports. Monitor ports for both the input and the output allow testing and monitoring while in operation.

For additional ease of use and space savings, versions with integrated WDMs are available. These models allow customers to optimize either their PON or RFOG networks using the same 2RU footprint.

**Reliable Optical Performance**

The OA300 utilizes multimode side-pump technology which increases output power capability while reducing component count. The pumps are combined in a high-power, redundant design which enables multi-layered reliability. The cooler-free pump design also enhances reliability and lowers power consumption.

**Embedded Intelligence and Network Management**

The OA300 is SNMP-capable and equipped with an RJ-45 Port for 10/100Base-T Ethernet communications and control.

# Specifications

## GENERAL

|                       |  |
|-----------------------|--|
| Source Power Voltage  |  |
| DC Version            | -36 to -72VDC  |
| AC Version            | 100 to 240VAC  |
| Power Consumption     | 80 Watts maximum                                     |
| Operating Temperature | -10C to +55C   |
| Storage Temperature   | -40C to +85C   |
| Dimensions            | 91mm H (2RU) x 483mm W x 382mm D (including handles) |
| Weight                | Less than 22lbs (10kgs)                              |

## COMMUNICATIONS

|                   |                           |
|-------------------|---------------------------|
| Local Interface   | RS-232 Port               |
| Network Interface | RJ-45 Port, 10/100 Base-T |
| Alarm Contact     | RJ-45 Port                |

## OPTICAL

|                             |   |
|-----------------------------|---|
| Optical Power per Port      | Various (see product table for details)     |
| Wavelength Range            | 1544nm to 1562nm                            |
| Noise Figure                |   |
| Maximum                     | 4.5dB at +6dBm                              |
| Optical Input Monitor Port  | -23 ± 1 dB from main input port             |
| Optical Output Monitor Port | -20 ± 2 dB from main output port            |
| Optical Return Loss         | >40dB                                       |
| Polarization Sensitivity    | <0.3dB                                      |
| Optical Connector Types     | SC/APC, E2000/APC<br>SC/UPC (PON WDM Ports) |

## Product Table

| Model                  | Description  |
|------------------------|--|
| N2U-OA300N21X16-2D/SCA | Amplifier, optical, +21dBm/port, 16 ports, dual DC power supplies, SC/APC optical connector, RoHS compliant            |
| N2U-OA300N18X8-2D/SCA  | Amplifier, optical, +18dBm/port, 8 ports, dual DC power supplies, SC/APC optical connector, RoHS compliant             |
| N2U-OA300N10X16-2D/SCA | Amplifier, optical, +10dBm/port, 16 ports, dual DC power supplies, SC/APC optical connector, RoHS compliant            |
| N2U-OA300N21X16-2A/SCA | Amplifier, optical, +21dBm/port, 16 ports, dual AC power supplies, SC/APC optical connector, RoHS compliant            |
| N2U-OA300N18X8-2A/SCA  | Amplifier, optical, +18dBm/port, 8 ports, dual AC power supplies, SC/APC optical connector, RoHS compliant             |
| N2U-OA300N10X16-2A/SCA | Amplifier, optical, +10dBm/port, 16 ports, dual AC power supplies, SC/APC optical connector, RoHS compliant            |
| N2U-OA300R20X16-2D/SCA | Amplifier, optical, +20dBm/port, 16 ports, RFoG WDMs, dual DC power supplies, SC/APC optical connector, RoHS compliant |
| N2U-OA300R17X8-2D/SCA  | Amplifier, optical, +17dBm/port, 8 ports, RFoG WDMs, dual DC power supplies, SC/APC optical connector, RoHS compliant  |
| N2U-OA300R20X16-2A/SCA | Amplifier, optical, +20dBm/port, 16 ports, RFoG WDMs, dual AC power supplies, SC/APC optical connector, RoHS compliant |
| N2U-OA300R17X8-2A/SCA  | Amplifier, optical, +17dBm/port, 8 ports, RFoG WDMs, dual AC power supplies, SC/APC optical connector, RoHS compliant  |
| N2U-OA300P20X16-2D/SCA | Amplifier, optical, +20dBm/port, 16 ports, PON WDMs, dual DC power supplies, SC/APC optical connector, RoHS compliant  |
| N2U-OA300P17X8-2D/SCA  | Amplifier, optical, +17dBm/port, 8 ports, PON WDMs, dual DC power supplies, SC/APC optical connector, RoHS compliant   |
| N2U-OA300P20X16-2A/SCA | Amplifier, optical, +20dBm/port, 16 ports, PON WDMs, dual AC power supplies, SC/APC optical connector, RoHS compliant  |
| N2U-OA300P17X8-2A/SCA  | Amplifier, optical, +17dBm/port, 8 ports, PON WDMs, dual AC power supplies, SC/APC optical connector, RoHS compliant   |

*For E2000 Optical Connector options, replace the "/SCA" with "/E"*



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