

Amplifier and Splitter Unit

PRODUCT DESCRIPTION

WDM (Wavelength Division Multiplexing) Amplifier and Splitter Module to amplify a single optical signal and to split it into 64 optical output signals. The amplification is achieved using EDFA (Erbium Doped Fiber Amplifier) which amplifies the optical multiplexed signal comprising of 4 RF signals and one RS422 signal. The Optical amplifier is followed by a Variable optical attenuator to control the variation in amplifier gain and then this signal is given to optical splitter which splits the signal into 64 optical output signals. The five different optical wavelengths are 1530nm, 1550nm, 1570nm, 1590 and 1610nm. RS422 interface is used for sending health information.

KEY FEATURES

- Custom form factor, conduction cooled
- EDFA based Optical amplifier and attenuators with variable gains
- 1:8 Optical Splitter
- Operates on single 28V power supply
- Maximum power consumption is less than 80W
- Distributes power to all Receiver unit
- Collects health of each receiver over RS422 and sends this to transmit unit
- MIL grade 38999 connectors used for outside interface
- Single mode fibre used for optical input
- Luxcis® contacts are available on 38999 connectors for optical output signals



SPECIFICATIONS

Hardware Architecture

The hardware consists of conduction cooled chassis which houses the following sub-modules:

- Optical Processing Block
- Controller Card for controlling the gain of optical amplifier and variable attenuator as well as for monitoring and processing of health information.
- Power Supply card to generate required supply voltages

Interfaces

- Multiplexed optical input signal comprising of 4 RF signals and RS422 Sync signal information.
- 64 optical multiplexed output signals.
- Ethernet interface to obtain health information.

- RS422 interface to obtain health information in debug mode.

Software / IP

- Test Software and diagnostic RTL for validation of Module

MECHANICAL

- Conduction cooled chassis with custom form factor
- Enclosure dimensions of Amplifier and Splitter Unit Module:
500 mm X 350 mm x 350 mm

POWER CONSUMPTION

- Input voltage of 28V from external power supply.
- Maximum power consumption of the module is 80W.

ENVIRONMENTAL

- Qualification : MIL-STD-810E
MIL-STD-461E
- Temperature range : -40°C to +55°C (Storage)
-20°C to +55°C (Operational)



PART NUMBER(S)

WDMFOJB-32	Wave length Division Multiplexing Amplifier and Splitter Module (WDMAS)
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