Aurora® Optical Node

Aurora's Node Solution

The typical node configuration, which supports the BrightPath FTTH architecture, consists of a highpower (+24 dBm) EDFA and an 8-way splitter to distribute the 1550nm downstream signal to 8 output fibers. A forward/return optical diplexer separates the eight downstream 1550nm signals from the eight upstream 1310nm signals. The eight upstream 1310nm signals are routed to eight upstream receivers, the outputs of which are combined into a single RF signal which is then digitized and transmitted upstream at 2.125 Gbps using Aurora's patented digital reverse technology transceiver. The typical configuration utilizes a "2-fer" Digital Transceiver (DT4230N) that supports 128 HP per each of two return paths.

Features

- Single-fiber FTTH network solution
- Services up to 8 optical outputs (up to 256 homes served per node)
- Digitized returns
- Enables low-cost Network Interface Units (NIUs)
- High reliability
- Provides extended dynamic range and distance
- High output EDFA – up to +24 dBm
- Supports alternate route switching
- Integrated element management provides full monitoring without the extra cost of a transponder
- Redundant powering options
- Environmentally hardened housing can be strand or pedestal mounted without external cooling

Aurora® Optical Node Specifications

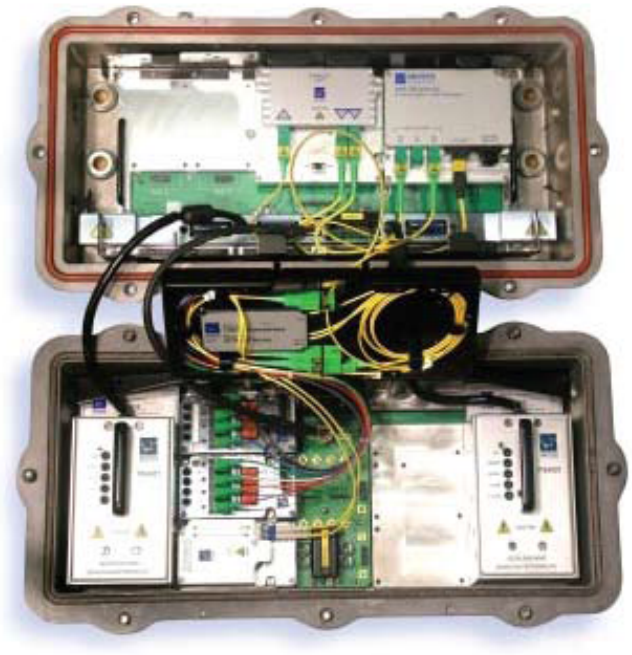
Physical	
Dimensions	20″L x 10″D x 11.7″H (51cm x 25.5cm x 30cm)
Weight	38 lbs (17.1 kg)

Environmental	
Operating Temperature Range	-40° to +65°C (-40° to 149°F)
Storage Temperature Range	-40° to +85°C (-40° to 185°F)
Humidity	5% to 95% non-condensing

Power Requirements	
Operating Input Voltage Range	44 to 95 VRMS
Power Consumption	45 W (typ configuration)
Power Passing	15 ARMS
Power Supply Start-up Input Voltage	40-44 VRMS
Power Supply Turn Off Input Voltage	34-38 VRMS
Power Supply Efficiency	73% typical

Optical (typical configuration)	
Forward Typical Values (1550nm)	
Input	+5 to +15 dBm
Output	14 dBm at each of 8 outputs
Noise Figure at 5 dBm Input	< 6 dB
Reverse Typical Values (1310nm)	
Input	-15 dBm nominal
Output	0 dBm using TR4040-PI SFP

The optical ports facility of the DT4230N or DT4030N can be populated with a variety of SFP (plug-in) transceivers depending on the network application. Please refer to the appropriate data sheets for the selected transceivers for detailed specifications.



Typical BrightPath Application Node Configuration
1 NH4000-H Housing
1 PS4001 Power Supply
2 AR4041 5–45 MHz Optical (Quad) Receiver modules
1 FA4524 High-output 1550nm Optical Amplifier
1 DT4230N Digital Transceiver
1 OP4138 Broadcast Splitter – 1310/1550 Diplexer
1 OP91M2S Single 1310/1550nm Combiner/Separator
1 PC4002 Power Chassis
1 FT4004V Fiber Tray
1 TR4040-PI 2.125 Gbps 1310nm Optical Transceiver SFP

A backup PS4001 Power Supply may be ordered separately. Also available are additional plug-in modules, including optical redundancy switches, which are described on separate data sheets. Please contact your Aurora Networks sales representative for information regarding specific equipment configuration options to meet your particular requirements.

Specifications subject to change without notice.