# Avvio Networks

## A1020 10 Gigabit Regenerator/Repeater

### 10 Gigabit SONET, SDH or Ethernet (LAN or WAN) Regenerator/Repeater

Avvio Networks' A1020 repeater is an optical regenerator/repeater for OC-192 SONET, SDH or 10Gb Ethernet data streams at 1310nm, 1550nm, or DWDM wavelengths. It can also be used to convert 1310nm or 1550nm optical data to a DWDM wavelength on an ITU channel. The A1020 can leverage existing 1310nm equipment onto WDM wavelengths at a fraction of the cost of replacing the equipment.

The A1020 re-times, re-generates and re-shapes the optical signals for increased data reliability. The data can be clocked using either incoming clock or an internal source. Dry contact relays, SNMP traps, and LEDs are provided to indicate alarm conditions.

For OC-192 applications, the A1020 can be configured as a SONET/SDH regenerator with performance monitoring via SNMP is provided in the standard feature set. It can also be configured as a physical layer repeater, passing all data, including alarms through untouched, i.e., without SONET Section termination. The A1020 also provides a craft port for management over a serial link and Telnet for remote management using Avvio Networks' CLI.

The A1020 can be used in conjunction with Avvio Networks' A15XX series of passive Optical Add/Drop Multiplexers (OADMs) for a complete end-to-end solution.

Available options include 1310nm and 1550nm links, redundant DWDM uplinks, fixed 100Ghz DWDM, and widely tunable DWDM lasers. For long-haul applications, please contact Avvio Networks.

### Features

Supports SONET, SDH, or 10-Gigabit Ethernet (LAN or WAN)

Optional G.709 FEC

Optional Extended Reach (200km) technology

Software selection from SONET regenerator to fully transparent optical repeater

SONET/SDH Performance Monitoring

Dry Contact Relays

Meets applicable SONET timing and jitter specifications

1310, 1550 or DWDM Line Side Interfaces

Seamless integration with Avvio Networks system provisioning software

Avvio Networks' advanced optical networking products set the standard for a new breed of cost-effective networks and services.

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# Technical Specifications

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|---|---|
| **System Level** | |
| Data Rates | 9.953 to 10.7 Gb/s |
| Clocking | Meets applicable SONET/SDH wander and jitter specifications. |
| BER | $<10^{-12}$ ($<10^{-15}$ with FEC option) |
| **DWDM Interface** | |
| Channel Spacing | 50, 100Ghz (DWDM), or Tunable |
| Transmitter | Complies with GR-253 Core and applicable ITU-T G.957 standards.<br><br>Full C band tuning range (for models with tunable laser option) |
| Receiver | Pin or APD |
| **1310/1550nm Interface** | |
| Transmitter | 1310nm short reach or intermediate reach, 1550nm long reach (80km) |
| Receiver sensitivity | 0 to –22dBm<br>Contact Avvio Networks for specifications on SR, IR and LR interfaces |
| **System Management** | |
| Craft Port | RS-232 (9600, 8, N, 1) |
| Remote Provisioning | Telnet, SNMP (V2) |
| MIBs supported: (MIB-II) | 3592, 2863, 3418, 2011, Avvio Networks Enterprise MIB. |
| **Power Requirements** | |
| Power Input | -40 to –72VDC (-48VDC nom) |
| Power Consumption | 40W typical, 60W maximum (Depending on interfaces installed) |
| **Environmental** | |
| Operating Temperature, Relative Humidity, Vibration, Shock and Flammability | Meets Bellcore NEBS (GR63) TR-NWT-0000-63 Level 3 |
| EMI, EMC | Complies with FCC part 15 class A, UL950 and CE, and NEBS requirements |
| **Dimensions** | |
| Chassis size | 1.75" X 15" X 17" (19" rack mount) |


Lit number: A1020.15