

Features and Benefits

ANTRONIX®

Antronix Fiber Node (AFN) H-Series: High-Output

Antronix introduces the Antronix Fiber Node Platform (AFN). The cost-effective AFN has been designed to receive a full compliment of video, data and telephony via single optical fiber and converts the signal to RF for distribution via existing RF networks. Various optical return transmitters are available to complete the two-way communications link.

An available WDM allows a single fiber to carry both forward and return optical signals. The AFN allows the systems designer to bring fiber directly into the home or business. Its small size enables placement in most NID boxes. Additional applications include MDU, businesses, schools and colleges, residential homes and government. The AFN is available in a variety of configurations. The full-featured H-Series (AFN-HSA-xxxx-xxx) provides a constant +38 dBmV RF output over a wide optical input of -8 dBm to +2 dBm. Meanwhile, the return optical transmitter can be selected from a choice of Fabry-Perot (FP) 1310 nm lasers or high-performance Distributed Feedback (DFB) lasers in either 1310 nm or CWDM wavelengths.

For easy installation and set up, the AFN provides field accessible gain and slope controls, while an external DC optical power monitor allows installation without an optical power meter. LED indicators further simplify installation.



- **Impressive Performance**
High output (+38 dBmV) and Low distortion push-pull amplification provides excellent carrier-to-noise, CSO and CTB performance.
- **Field-Adjustable Controls**
Variable gain and slope controls enable optimal signal levels for both forward and return path.
- **WDM Option**
A WDM option is available to provide 2-way communications via a single fiber. Both internal and external options are available.
- **Available E-option**
The patented E-option plug-ins ease system design with a simple plug-in module.
- **Simple Installation**
All ports facing down simplifies fiber installation and keeps cable bends to a minimum.
- **1 V/mW External DC Test Point**
- **Tri-Colored LED External Optical Power Indicator**
Indicates high, low or optimal optical input levels.
- **Standard SC/APC Optical Connector**
SC/APC connector minimizes optical reflections.
- **Patented CamPort® F-connectors**
Antronix's CamPort® connectors maximize connectivity and reliability.
- **Several Return Optical Transmitter Options Including:**
 - 2.0 mW, 1310 nm, Isolated FP
 - 2.0 mW, 1310 nm, Isolated DFB
 - 2.0 mW, 1550 nm, CWDM Isolated DFB
(optional wavelengths available)
- **Optical Receiver is also Available in a Lower Cost Standard RF Output**
- See Antronix document DS-1061 for the AFN-LSA series.
- **DOCSIS Compliant Operation**
- **6 kV Ring Wave Surge Survivability**
- **Local or Remote +12 Vdc Unit Powering**

Specifications subject to change without notice

Specifications Antronix Fiber Node (AFN)



Electrical - Preliminary

Model:	Typical
AFN-HSA-xxxN-xxx	
Optical Receiver RF Performance	
Frequency Range	54-1002
RF Output Level	+38 dBmV @ -8 to +2 dBm
Output Return Loss	> 16 dB
Flatness	+ 1 dB
Distortion Performance (@ -1 dBm input)	0.3
CNR	53 dB
CSO	-63 dBc
CTB	-65 dBc
Optical Receiver Parameters	
Optical Receive Bandwidth	1200 -1600 nm
Input Optical Power	-8 dBm to +2 dBm
Connector Type	SC/APC, FC/APC
Optical Return Loss	> 55 dB
Return Tx RF Parameters	
Frequency	5-42 MHz
Input Return Loss	16 dB
Return RF Input level	-57 dBmV/Hz (+9 dBmV per carrier)
Flatness	+1.5 dB
Return Tx Optical Parameters	
Laser type	Fabry-Perot (FP) or DFB
Output Power	2.0 mW (FP), 2.0 mW (DFB)
Connector Type	SC/APC, FC/APC
Optical Return Loss	> 55 dB

Ordering Information

AFN-Haa-bccd-eff

RF Output
H: +38 dBmV @ -8 to +2 dBm

aa: Connector Type
SA-SC/APC
FA/FC/APC

b: Special Feature
0: None
1: Internal WDM

ff: Plug-in Value

Plug in Value in dB
00 to 12 dB

e: Plug-in

J: Jumper (JP)
E: Cable Equalizer (CE)
S: Cable Stimulator (CS)
H: Forward Path Attenuator (HT)

d: Frequency Split

N: 42/54 MHz
B: 65/85 MHz
M: 85/102 MHz

cc: Return Transmitter

00: No Tx
02: 2.0 mW, Isolated, 1310 nm, FP
03: 2.0 mW, Isolated, 1310 nm, DFB

CWDM Options*

47: 1470 nm
49: 1490 nm
51: 1510 nm**
53: 1530 nm**
55: 1550 nm**
57: 1570 nm**
59: 1590 nm
61: 1610 nm

Ex: **AFN-HSA-155N-E06**
38 dBmV
SC/APC Connector
42/54 MHz Split
2.0 mW, Isolated, 1550 nm, DFB
Internal WDM
6 dB Cable Equalizer 54-1002 MHz

* All are 2.0 mW, isolated DFBs

** Recommended CWDM wavelengths for HFC applications