



○ Features & Benefits

- Integrated Fiber L-Band Node and CATV Amplifier for a Complete Single Wire Solution for delivery of both DBS and CATV/PCN within MDU's
- 60/90 VAC Network Powering or Standard 120 VAC Models
- High RF Outputs To Support Additional Subscriber Premise Splitting
- 8, 16 and 24 Output Versions

The FILN multi-output L-band receiver is a breakthrough in hybrid fiber/coax (HFC) optical node technology. The unit combines the superior distribution attributes of several key functions into a single package. These are:

- Satellite signal fiber receiver
- Professional quality L-band amplifier
- Bi-directional CATV network amplifier employing trunk line grade hybrid amplifier modules
- Plug-in equalizers and attenuators for greater CATV input signal management, creating design flexibility
- CATV and satellite signal multiplexing and splitting networks with up to 24 residential outputs
- Return path management and amplification (10-40 MHz)
- Available with either 60/90 VAC Network Powering or Standard 120 VAC Models Fiber Receiver Section

The unit provides L-band DTH signal for up to 24 residential outputs, from one fiber input. There is an LED indicator on the optical input of the unit to indicate proper input level. There is also an LED on the L-band output to indicate the optimum output level. High L-Band signal levels are provided to each output to overcome the loss of long drop lengths and premise splitters required to serve multiple subscriber viewing locations. CATV Network Amplifier Section The unit accommodates a wide range of CATV input levels, making it more forgiving to existing CATV conditions and allowing for greater design flexibility. This is accomplished by the use of plug-in attenuators and equalizers to condition the input signal prior to amplification and splitting. The network amplifier is designed to handle both analog and digital channels in the bandwidth of 54-750 MHz. Additionally, the CATV amplifier has a return bandwidth of 10-40 MHz for compatibility with PPV, VOD, telephone and high speed data CATV services. The FILN multiplexes the bi-directional CATV signals with the satellite signals at each of the either 8, 16 or 24 outputs depending on the model deployed, thus creating a "True Single Wire" distribution solution.

Specifications and Ordering Information are located on the following page.

○ Specifications

RF

Frequency Range CATV:
10-40 MHz, 54-806 MHz
L-Band (32 Transponder): 950-2050 MHz

Output Level

8 Port Version
CATV 54-806 MHz:
20/29 (slope adjustable) dBmV ^b
L-Band: -29/-22 dBm, 20/27 dBmV
16 Port Version
CATV 54-806 MHz:
16/25 (slope adjustable) dBmV ^b
L-Band: -33/-26 dBm, 16/23 dBmV
24 Port Version
8 Ports
CATV 54-806 MHz:
16/25 (slope adjustable) dBmV ^b
L-Band: -33/-26 dBm, 16/23 dBmV
16 Ports
CATV 54-806 MHz:
12/21 (slope adjustable) dBmV ^b
L-Band: -37/-30 dBm, 12/19 dBmV

Return Path Gain

8 Output Version (10-40 MHz): 8/9 ±2 dB
16 Output Version (10-40 MHz): 4/5 ±2 dB
24 Output Version
8 Ports (10-40 MHz): 4/5 ±2 dB
16 Ports (10-40 MHz): 0/1 ±2 dB

CATV Forward Path Gain

8 Output Version (54-806 MHz): 8 ±2 dB
16 Output Version (54-806 MHz): 4 ±2 dB
24 Output Version
8 Ports (54-806 MHz): 4 ±2 dB
16 Ports (54-806 MHz): 0 ±2 dB

Input Level Max (CATV): +37 dBmV
(60 Ch. Load) (w/20 dB plug-in pad)
Input Level Typical (CATV): +21 dBmV
(60 Ch. Load) (w/4 dB plug-in pad)
Output Return Loss: <10 dB
CATV: 15 dB
L-Band: 18 dB
Output Tilt
CATV: -7 to +17 (via plug-in EQ) dB
L-Band: 7 dB
CTB Typical a: -65 dB
CSO Typical a: -70 dB
CNR c: -59 dB
Cross Modulation: -60 dB

Isolation

Adjacent Horizontal Ports
CATV: 25 dB
L-Band: 20 dB
Non-Adjacent Horizontal Ports
CATV: 35 dB
L-Band: 35 dB
Adjacent Vertical Ports &
All Other Non-Adjacent Ports
CATV: 40 dB
L-Band: 40 dB

Optical

Input: 1310 ±30 nm
Input Level (Optimum): -12.0 dBm

Receiver

Photodiode DC Responsivity: ≥ 0.75 A/W
Fiber: 9/125 Single Mode
(Corning SMF-28 or Equivalent)
Connector: FC/APC "tight fit"
(Type "R" per IEC 1754-10-1)
≥ 60 dB Optical Return Loss

General

7511-x Power Requirements
Voltage: 60-90 VAC
Frequency: 50/60 Hz
Power: 16 W
Current Consumption:
360 @60 VAC mA
275 @90 VAC mA
7512-x Power Requirements
Voltage: 117 VAC
Frequency: 50/60 Hz
Power: 16 W
Current Consumption: 300 @ 117 VAC mA
Fuse: .4A 250 VAC, Type T

Mechanical

Dimensions (WxHxD):
11 x 18 x 6 in
279.4 x 457.2 x 152.4 mm
Weight: 9 lbs, 4.1 kg

Connectors

CATV/L-band Output: "F" Type, Female
CATV Input:
"F" Type, Female or 5/8-24 Entry Port
Optical Input: FC/APC
Power (7512 only): IEC Receptical

Controls

L-band Output Level Control: Variable

Notes:

All L-band measurements made using; 5 MHz Resolution Bandwidth; 3 MHz Video Bandwidth; 20 sec. sweep time

a) Distortion figures are based on a 60 channel loading and a 750 MHz Bandwidth +16/+25 dBmV output level at high output port (24 output version).

b) Output level conditioned by plug-in pads and equalizers

c) Single Carrier-CNR Measurement

○ Ordering Information

Model	Stock No.	Description
FILN-S3A-2050-8-AC	7512 8	Multi-Output L-Band Fiber Optic Node, 8 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.
FILN-S3A-2050-8	7511 8	Multi-Output L-Band Fiber Optic Node, 8 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.
FILN-S3A-2050-24-AC	7512 24	Multi-Output L-Band Fiber Optic Node, 24 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.
FILN-S3A-2050-24	7511 24	Multi-Output L-Band Fiber Optic Node, 24 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.
FILN-S3A-2050-16-AC	7512 16	Multi-Output L-Band Fiber Optic Node, 16 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.
FILN-S3A-2050-16	7511 16	Multi-Output L-Band Fiber Optic Node, 16 Outputs Single-mode, 950-2050 MHz, 1310 nm, -12 dBm Input, FC/APC Conn.

Accessories

VMI-AT	9320	VMI Attenuator, Plug-In 1000 MHz
VMI-IEQ8V	9378A	VMI Inverse Equalizer, Plug-In, Vertical Profile 860 MHz
VMI-CEQ8V	9377A	VMI Equalizer, Plug-In, Vertical Profile 860 MHz