SignalOn® Series

D3.1/CCAP™ Compliant

1.2 GHz

L-Band Power Inserter Module

INSTALLATION & OPERATION MANUAL

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PREFACE

1. Preface

1.1 Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular alert icon (seen below), and are listed in descending order of severity of injury or damage and likelihood of occurrence.

Danger: *Danger is used to indicate the presence of a hazard that **will** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*

Warning: *Warning is used to indicate the presence of a hazard that **can** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*

Caution: *Caution is used to indicate the presence of a hazard that **will** or **can** cause minor personal injury or property damage if the hazard is not avoided.*

1.2 General Safety Precautions

Warning: *Wet conditions increase the potential for receiving an electrical shock when installing or using electrically-powered equipment. To prevent electrical shock, never install or use electrical equipment in a wet location or during a lightning storm.*

1.3 Certification

SignalOn Forward Path products have been tested and found to comply with the requirements of UL 60950, and CSA 22.2 No. 0.7, emissions EN55022 radiated and conducted.

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GENERAL

2.   General

The SignalOn system is a modular system that permits high isolation splitting and switching of headend signals in a CATV system. The system is designed to accommodate strong cable management, EMI shielding, and ease of use. This facilitates easy reconfiguration and high performance within a dynamic headend environment.

The SignalOn L-Band Power Inserter Module is designed for use with the SignalOn 4-position, 8-position, or 20-position chassis. All RF connections to the splitter are made through standard 75 Ohm BNC, or F connectors located on the rear. Each SignalOn Power Inserter Module occupies two positions in a chassis. A splitter module is shown on the front of this publication. Each module can be used as either a splitter or a combiner.
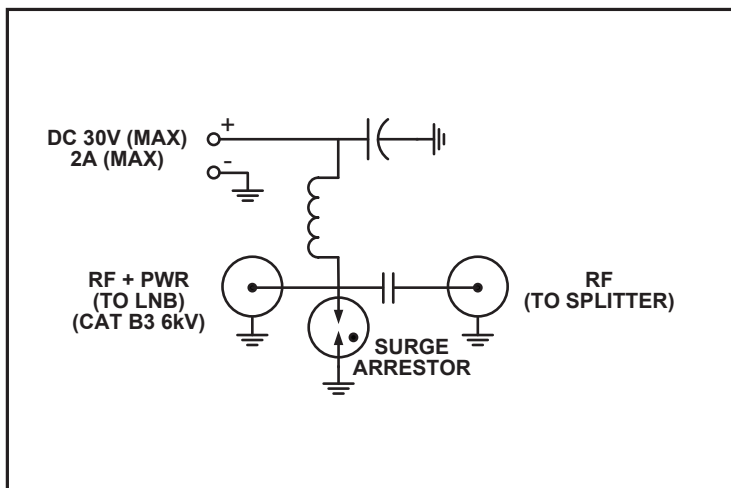

Figure #1: SignalOn N-MLPI Front

Figure #2: SignalOn N-MLPI Schematic

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PRODUCT DESCRIPTION

3. Product Description

L-Band microwave signals operating in the 950 MHz to 2.145 GHz frequency band are received from a satellite downlink antenna. Signals are then typically fed to multiple satellite receivers such as analog receivers, analog Integrated Receiver/Decoders or digital Integrated Receiver/Transcoders. When these multiple receiving devices are fed from the same satellite antenna, it is necessary to split the downlink signal into several equal outputs. These split signals are then fed to each receiving device individually.

Each splitter configuration has two ports that pass DC voltage(s) from the receiver(s) assigned to supply power to the Low Noise Block (LNB).

The customer can use their own LNB power supply downstream of their splitters, or they may employ this N-MLPI to serve two purposes.

a) Provide a terminal block interface to insert DC voltage onto the coax line. This voltage can be taken from 24 VDC output of a SignalOn power supply module if the LNB is rated for 24 VDC.

b) Provide surge protector from lightning strikes if placed between LNB and L-Band passive module. It is intended that only the N-MLPI need be replaced after such an event.

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SPECIFICATIONS

4.   Specifications

Specifications are noted in Table 1, and Table 2.

PARAMETER	SPECIFICATIONS	REMARKS
Physical		
Dimensions (W × D × H)	1.7 × 7.8 × 8.5 inches (4.3 × 19.8 × 21.6 cm)	
Weight	2.4 pounds (1.1 kg)	
Environmental		
Operating Temperature	0°C to +50°C (+32°F to +122°F)	
Storage Temperature	–40°C to +70°C (–40°F to +158°F)	
Storage Humidity	20 to 90%	No condensation

Table #1: Physical and Environmental Specifications

DESCRIPTION	PARAMETER
DC Power (Pass through)	1 Ampere Max.
Impedance	75 Ohms
Frequency Range of Operation	950 MHz to 2150 MHz
EMI (Near Field)	–100 dB Min.
EMI - Radiated and Conducted Emissions CISPR22	Class A
Insertion Loss	< 1 dB
Frequency Response Flatness	± 0.5 dB
Return Loss	> 16 dB
Isolation - Adjacent Circuits	> 65 dB
Surge Rating on LNB Port	CATB3 6kV

Table #2: Electrical Interface Specifications

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INSTALLATION

5. Installation

Each module occupies two slots in the chassis. Use the following procedure to install modules in the SignalOn Series chassis.

1. Make sure the ATX logo (or any other front panel lettering) is readable. Slide the plug-in module into its designated location in the chassis.

⚠ **Warning:** *Never install equipment in a wet location or during a lightning storm.*

2. Secure the module using its two captive retaining screws.
3. After each module is loaded into the chassis, refer to your work order, and connect the designated RF cables to the appropriate BNC or F connectors on the modules in the chassis.
4. Carefully route cables through the cable management slots located on each side of the rear of the chassis. Use the cable management guidelines found in this manual to route cable from the chassis to the rack/cabinet.
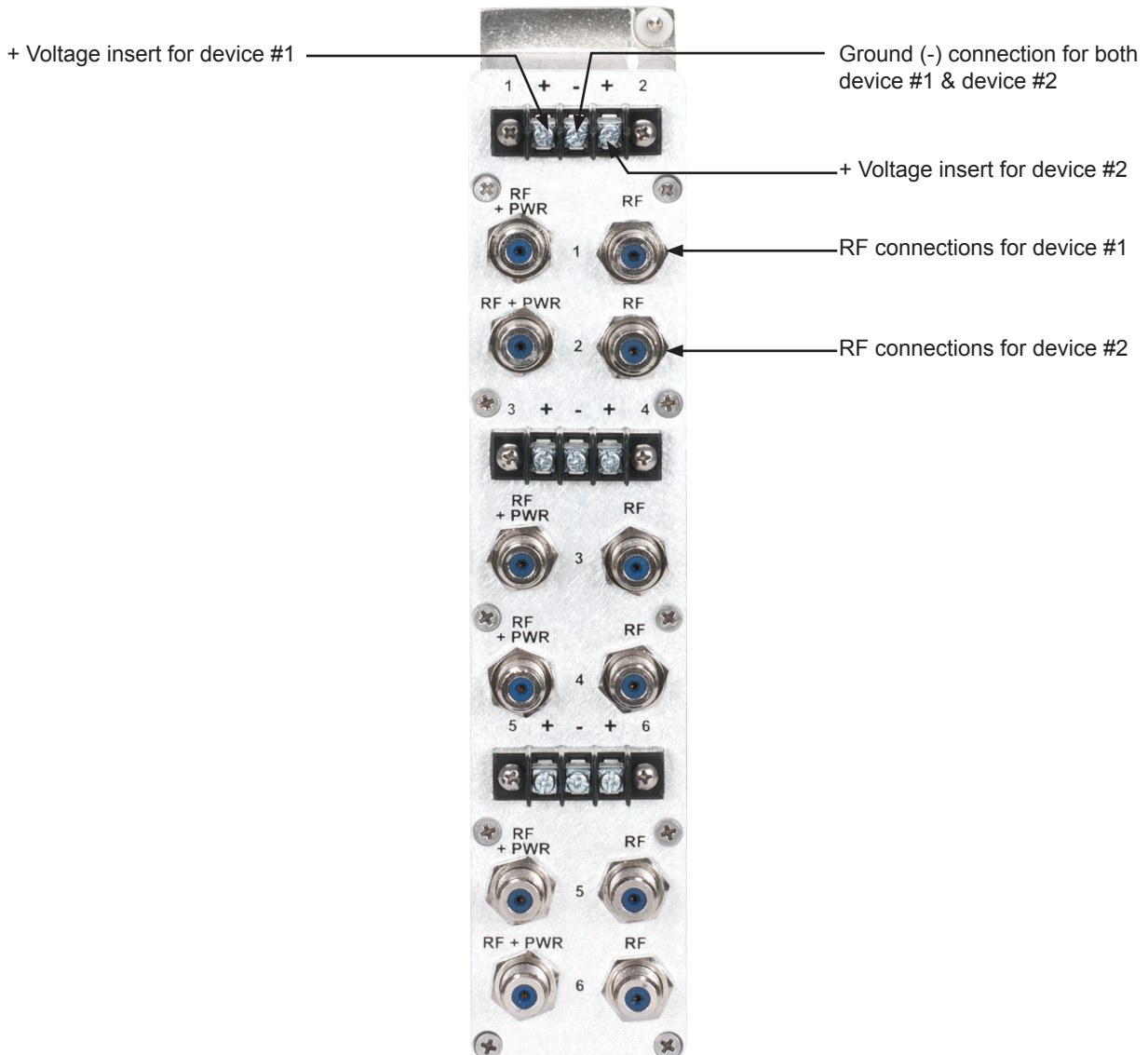5. Perform any cabling or operational tests required at your facility.

Figure #3: SignalOn N-MLPI Rear

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SERVICE & SUPPORT

6. Service & Support

6.1 Contact ATX Networks

Please contact ATX Technical Support for assistance with any ATX products. Please contact ATX to obtain a valid RMA number for any ATX products that require service and are in or out-of-warranty before returning a failed module to ATX.

TECHNICAL SUPPORT

Tel: 289.204.7800 – press 1
Toll-Free: 866.YOUR.ATX (866.968.7289) USA & Canada only
Email: support@atx.com

SALES ASSISTANCE

Tel: 289.204.7800 – press 2
Toll-Free: 866.YOUR.ATX (866.968.7289) USA & Canada only
Email: insidesales@atx.com

FOR HELP WITH AN EXISTING ORDER

Tel: 289.204.7800 – press 3
Toll-Free: 866.YOUR.ATX (866.968.7289) USA & Canada only
Email: orders@atx.com
Web: www.atx.com

6.2 Warranty Information

All of ATX Networks' products have a 1-year warranty that covers manufacturer's defects or failures.

6.3 Safety

IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The device should be connected to a power supply only of the type described in the operating instructions or as marked on the device.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization means of the device is not defeated.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the device.

SERVICING: The user should not attempt to service the device beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

FUSING: If your device is equipped with a fused receptacle, replace only with the same type fuse. Refer to replacement text on the unit for correct fuse type.

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