GainMaker Node
Mains Power Pack Kit
Installation Instructions

Overview

Audience

These installation instructions are intended for cable system operators and installers who need to install a GainMaker Node Mains Power Pack Kit.

Introduction

The GainMaker Node Mains Power Pack Kit allows a GainMaker node to operate from local utility power, 100-240 VAC. It is intended for indoor applications where the use of local utility power is required or preferred. The source of AC power can be a nearby utility outlet or an uninterrupted power supply (UPS).

These installation instructions explain how to install the GainMaker Node Mains Power Pack Kit.

Note:

- The following instructions apply to standard GainMaker Nodes, Reverse Segmentable GainMaker Nodes, and 4-Port GainMaker Nodes.
- For additional information on node installation and configuration, refer to the appropriate node installation and operation guide.

Qualified Personnel

Only appropriately qualified and skilled service personnel should attempt to install, operate, maintain, and service this product.

WARNING:

Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.

In This Document

Important Safety Instructions

The installation and operation guide for the node contains important safety information. Please read and become familiar with this information before performing the procedures described in this document.

The following documents are available for nodes that can be adapted for AC utility power using the GainMaker Node Mains Power Pack Kit.

- *1 GHz GainMaker Broadband Amplifier Platform Node Installation and Operation Guide*, part number 4008353
- *Model GS7000 GainMaker Scaleable 4-Port Node Installation and Operation Guide*, part number 4013584
- *1 GHz GainMaker Broadband Amplifier Platform Reverse Segmentable High Gain Balanced Triple Node Installation and Operation Guide*, part number 4015253

To obtain any of these documents, contact Customer Service for your area. See ***For Information*** (on page 10) for contact information.

WARNING:

There is an electric shock hazard if protective earth (PE) ground is removed while plant coax or power is connected. Always keep PE ground connected to this equipment.

Equipment and Tools Needed

The GainMaker Node Mains Power Pack Kit, part number 4029111, includes an external AC-to-DC power supply, a power inserter/filter, a bracket for mounting the node to a wall or 19-inch rack, and interconnecting hardware.

The following table lists the complete contents of the kit.

Description	Part Number	Quantity
GainMaker Node Wall Mount Bracket	4029113	1
External Power Supply	4029112	1
External Power Supply Bracket	4029114	1
Power Inserter/Filter, with mounting plate and cable guide	4029115	1
Power Cord, North American IEC	562389	1
Housing Input Connector	172592	1
Cable Tie	73045	2
F Male to F Male Adaptor	1010453	2

Before you begin, confirm that the kit contains all of the parts listed above.

Tools Required

Before you begin, make sure that you have the following tools:

- 3/4-inch open end wrench
- 3/8-inch open end wrench or other F-connector tool
- 1/2-inch nut driver

Additional Equipment Needed

In addition to the parts supplied with the kit, you will need to obtain the following:

- Appropriate size #8 mounting hardware for the node housing and power inserter/filter module
- For installations not in North America, an IEC power cord for the region of use
- Grounding wires as needed for the node and power inserter/filter module housings

To Install the Housing Input Connector

Complete the following steps to install the housing input connector in the GainMaker node housing.

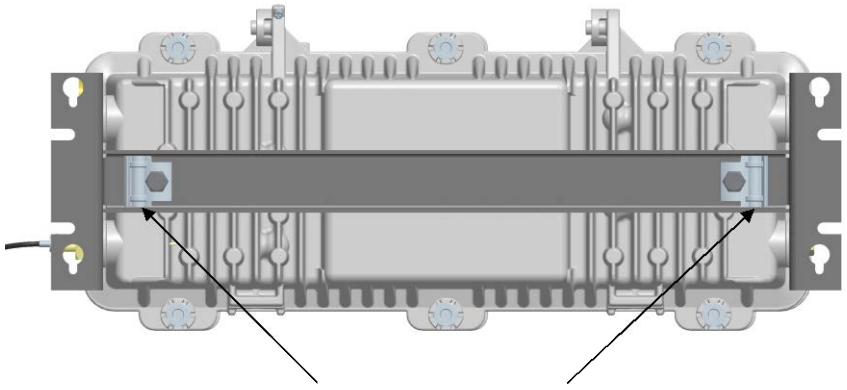
1. Open the node housing.
2. Remove the RF module.
3. Loosen the seizure.
4. Install the housing input connector.
5. Tighten the housing input connector from 5 ft-lb to 8 ft-lb (6.8 Nm to 10.8 Nm).
6. Re-tighten the seizure.

To Install the Node Wall Mount Brackets

Complete the following steps to install the mounting bracket to the GainMaker Node housing.

1 Remove the strand clamp bolts from the strand clamps. Set the bolts and strand clamps aside.

2 Align the node wall mount bracket with the node housing as shown in the following illustration.



3 Secure the bracket to the housing using the bolts removed in step 1. Use the strand clamps as spacers.

4 Insert the bare end of a protective earth (PE) ground wire, AWG 18 or larger, under one strand clamp before tightening the bolts.

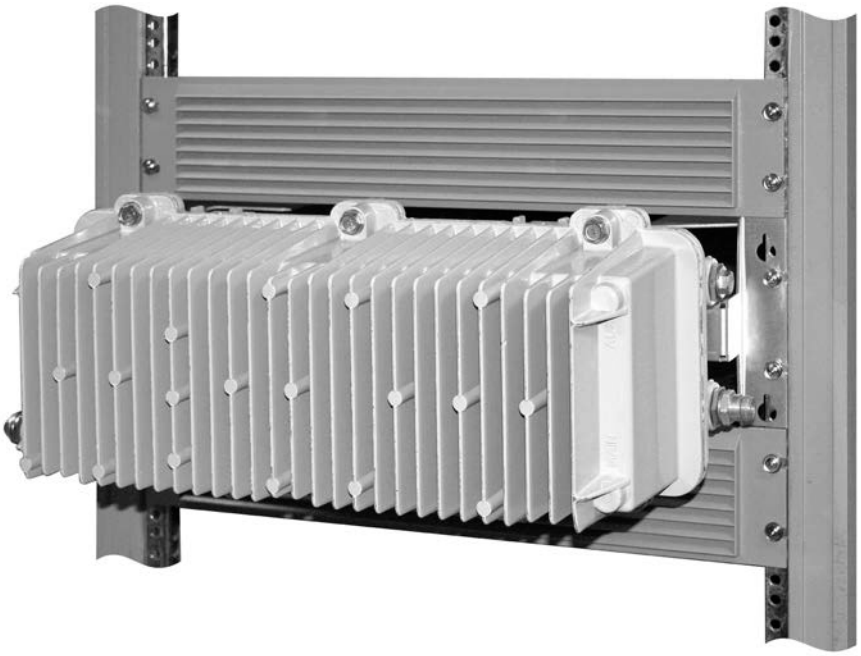
Note:

- If the PE ground wire is insulated, the insulation must be color-coded green with a yellow stripe.
- The node must be directly and reliably attached to PE ground. Do not rely on the ground connection to the plant coax or power inserter/filter module.

5 Torque the bolts holding the bracket in place from 5 ft-lbs to 8 ft-lbs (6.8 Nm to 10.8 Nm).

6 Secure the node with bracket attached to the mounting surface or a 19-inch rack using either the four keyed or the four circular mounting holes in the bracket.

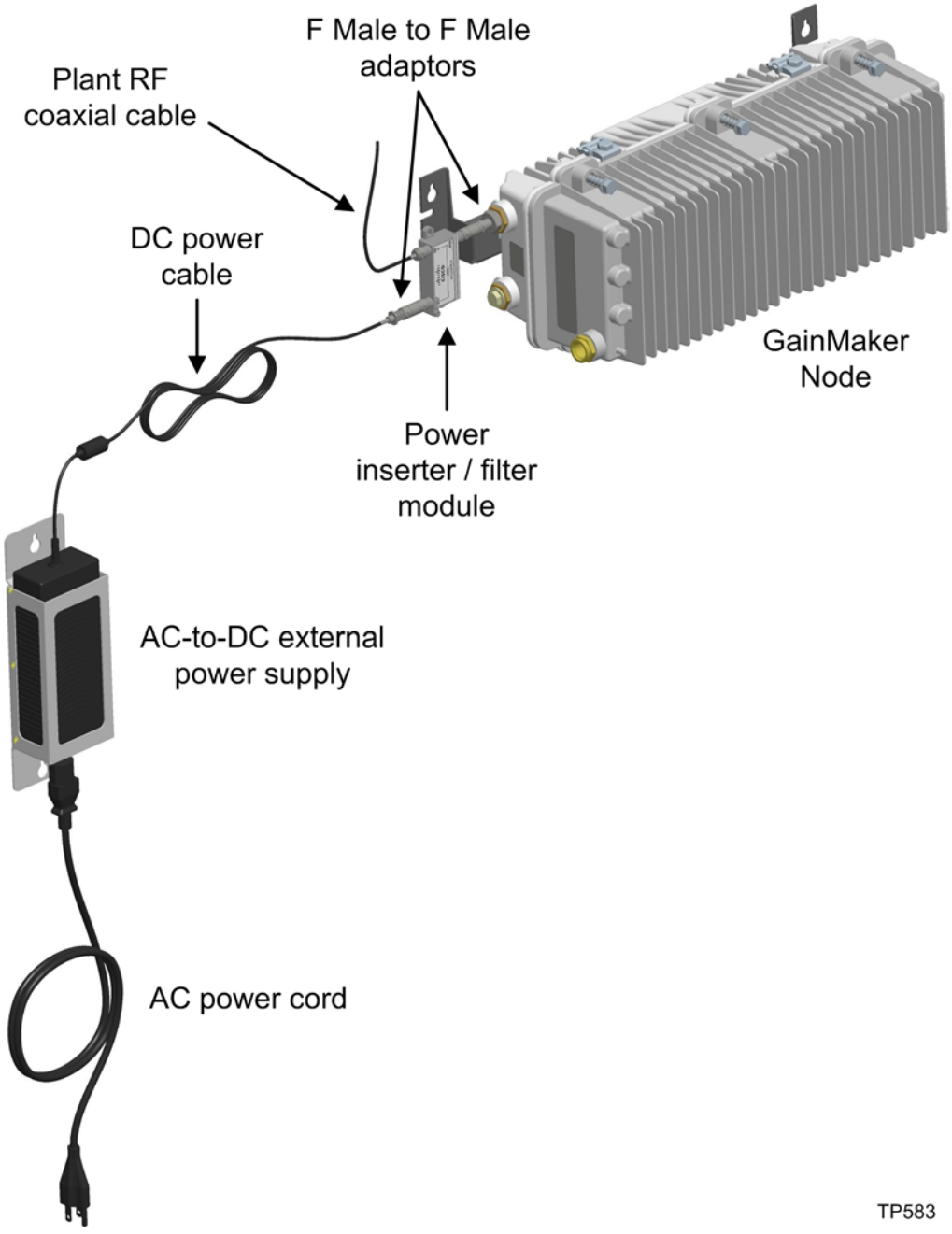
The following illustration shows the node mounted in a 19-inch rack.



To Install the Mains Power Pack Kit

Complete the following steps to install the mains power pack kit.

1 Attach the node housing to the mounting surface using the mounting bracket installed previously. Use appropriate size #8 mounting hardware (not supplied).



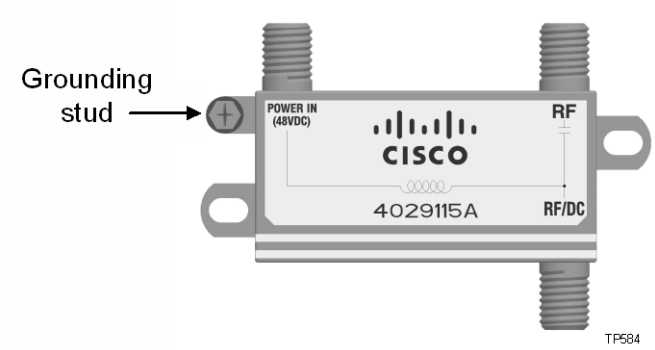
Note: The node can be mounted horizontally or vertically.

2 Install the power inserter/filter module as follows:

a Connect one end of an F Male to F Male adaptor to the connector labeled **RF/DC** on the power inserter/filter module.

b Connect the other end of the F Male to F Male adaptor to the RF input port on the node.

c Attach the plant RF coaxial cable to the connector labeled **RF** on the power inserter/filter module.



d Attach a ground wire to the grounding stud on the power inserter/filter module housing. Insert the bare end of a protective earth (PE) ground wire, AWG 18 or larger, under the grounding screw on the unit, and then tighten the screw from 18 in-lb to 20 in-lb (2.0 Nm to 2.3 Nm).

Note: If an insulated PE ground wire is used, the insulation must be color-coded green with a yellow stripe.

3 Connect one end of the remaining F Male to F Male adaptor to the free end of the DC power connector on the external power supply.

4 Choose a mounting location for the external power supply that will allow its cables to reach both an AC power outlet and the POWER IN (48 VDC) connector on the power inserter/filter module.

5 Mount the bracket for the external power supply to the mounting surface. Attach the bracket to the mounting surface using appropriate size #8 hardware (not supplied).

6 Slide the external power supply unit into the power supply bracket.

7 Connect the DC power cable (with F Male to F Male adaptor attached) to the POWER IN (48 VDC) connector on the power inserter/filter module.

8 Attach the AC power cord to the power supply, and then plug the AC power cord into a suitable nearby AC power outlet.

9 Use the provided cable ties as needed to dress all cables neatly.

10 Complete the installation process as described in the node documentation.

For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Cisco Systems, Inc.
5030 Sugarloaf Parkway, Box 465447
Lawrenceville, GA 30042

678 277-1120
800 722-2009
www.cisco.com

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