

AN-80i

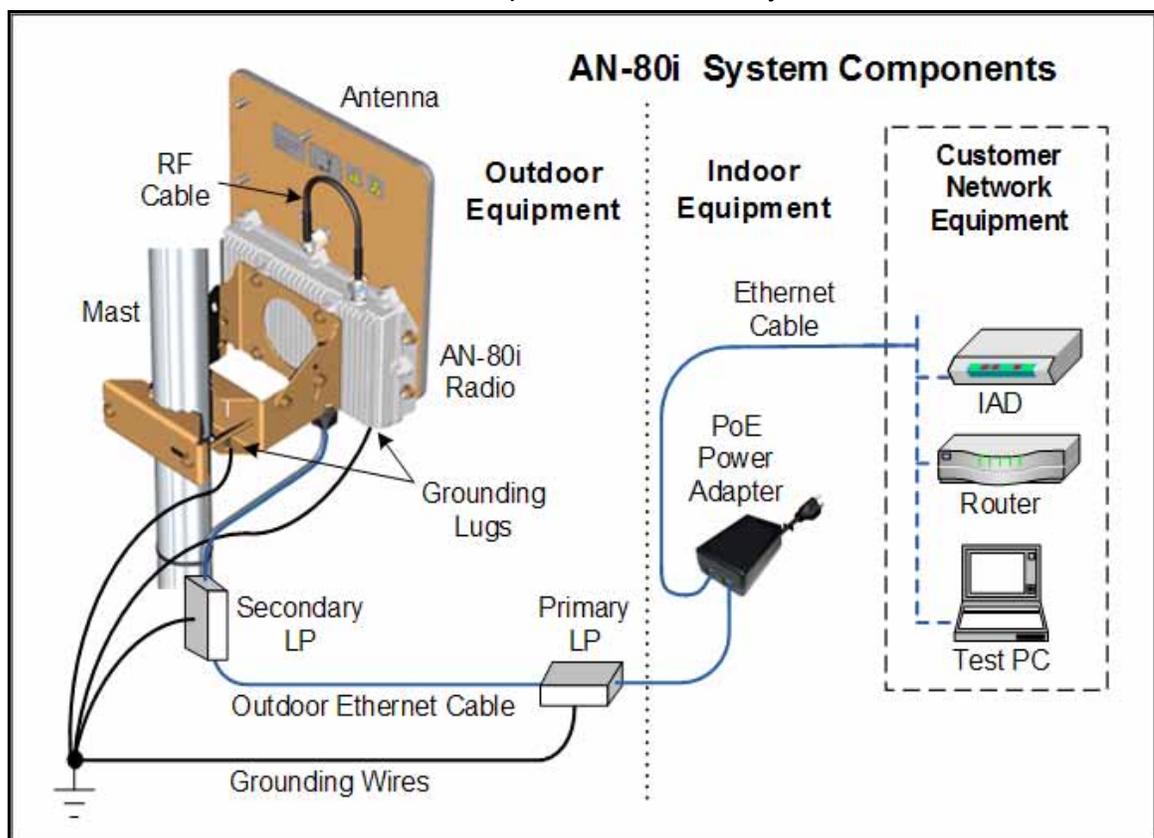
Advanced Broadband Wireless Infrastructure Solutions

PMP Quick Configuration Guide

This guide is an aid for initial deployment of an AN-80i point-to-multipoint (PMP) system. These procedures provide the steps required to:

- Step 1: Restore AN-80i factory default settings.
- Step 2: Configure basic network and RF settings.
- Step 3: Provision services required to send Ethernet traffic over the wireless link.

Refer to the *AN-80i User Manual* and the *AN-80i Installation Guidelines* for detailed information about the installation and operation of AN-80i systems.



Step 1: Restore Factory Default Settings

It is strongly recommended to begin by performing a factory reset of the AN-80i. This action will initialize the system parameters to known values and simplify the setup procedure when first deploying or replacing a field unit. Login to the AN-80i and use one of the following commands:

Telnet: Enter the command: **save defaultconfig**.

Web: Click the main menu command **Configure System** and click button **Def Cfg**.

Note: If the AN-80i IP address or password is unknown, or the unit is not responsive, refer to the 'Long Reset' procedure in the AN-80i User Manual.

Step 2: Basic Network and RF Setup

The following table contains the minimum set of parameters required to configure an AN-80i sector controller and subscriber. Parameters should be configured in the order listed. Enter values for all required settings on each screen and then click **Apply & Save** to activate and save these changes.

AN-80i Required Parameter Settings					
Step	Screen	Parameter	Reference	Sector Controller	Subscriber
1	Product Options	Options Key	RF Plan	Enables PMP SC mode, RF freq., channel widths, etc.	Enables RF freq., channel widths, etc.
2	Configure System: System	System Name	Network Plan	Name for SC	Name for SS
		IP Address	Network Plan	Network IP address	Network IP address ²
3	Configure System: Wireless	System Mode	RF Plan	PMP SC	PMP SS
		Channel Width	RF Plan	Refer to RF Plan (Same for SC and SS)	
		RF Freq.	RF Plan	Refer to RF Plan (Same for SC and SS)	
		Tx Power	RF Plan	Refer to RF Plan	Refer to RF Plan
		Max. Distance	RF Plan	Refer to RF Plan	N/A
		Antenna Gain ¹	RF Plan	See Mfg. Spec.	See Mfg. Spec.
4	Configure System: Security	BS MAC	RF Plan	N/A	PMP SC MAC address

Notes: 1. DFS enabled systems only. 2. Each AN-80i must be configured with a unique IP address.

Step 3: Provision Services

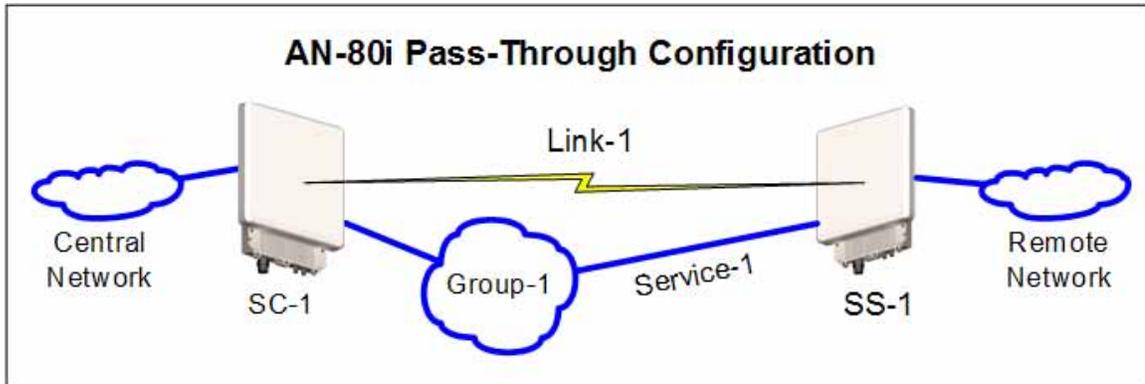
The AN-80i wireless traffic operation is controlled by three 'Provisioning' functions:

Links define the characteristics of the wireless interface between the sector controller and subscriber, including the uplink and downlink uncoded burst rates (UBR).

Groups define filtering/processing at the sector controller Ethernet port.

Connections define filtering/processing at the subscriber Ethernet port.

Ethernet data traffic can not be transmitted over the wireless interface before provisioning at least one wireless subscriber **Link**, one **Group**, and one **Connection**. All configuration settings must be made on the sector controller.



Use the following provisioning functions to set up a 'Pass through' configuration (no VLAN support) and have the AN-80i system transparently pass all Ethernet traffic.

Note: All provisioning settings are made on the base station (PMP SC).

3.1: Create Subscriber Link

The first step creates a subscriber Link named 'Link-1' and defines the general operating characteristics of the wireless link.

1. Click **New Link** in the main menu.
2. Enter data for the following fields:
 - Link Name:** Name for this wireless link (e.g., Link-1).
 - Peer MAC:** Subscriber MAC address
 - Use defaults for all other fields.
3. Click **Apply** to activate these settings.
4. Click **Save All** in the main menu to save changes to the provisioning configuration.

Repeat these steps to add additional links if required.

3.2: Create a Service Group

The second step creates a Service Group named 'Group-1' to forward all Ethernet traffic received on the sector controller Ethernet port.

1. Click **New Group** in the web page main menu.
2. Enter data for the following fields:
 - Name:** Name for this service group (e.g., Group-1).
 - Tagging mode:** Select Pass-through.
 - SC Ethernet Enable:** Click to check the box .
 - Use defaults for all other fields.
3. Click **Apply** to activate this Group.
4. Click **Save All** in the main menu to save changes to the provisioning configuration.

3.3: Create Connections

This step creates a pass through Connection that forwards all Ethernet traffic received on the subscriber Ethernet port.

5. Click **New Connection** in the web page main menu.
6. Enter data for the following fields:
 - Name:** Enter a name for this Connection (e.g., Service-1).
 - Tagging mode:** Select Pass-through
 - Parent Link ID:** Click **Select Link** and choose the Link created in step 3.1 (Link 1).

Parent Group ID: Click **Select Group** and choose the Group created in step 3.2 (Group-1).

Use defaults for all other fields.

7. Click **Apply** to activate this Connection.
8. Click **Save All** in the main menu to save changes to the provisioning configuration.

The system is now configured to transparently pass Ethernet traffic over the wireless interface.

System Components

The following components are available from Redline:

AN-80i System Components Available from Redline				
 ① AN-80i Radio	 ② Lightweight Mounting Kit	 ③ Heavy-Duty Mounting Kit	 ④ Stand-Alone Mounting Kit	 ⑤ RF Jumper Cable
 ⑥ PMP Sector Antennas	 ⑦ Subscriber & PTP Antennas	 ⑧ Ethernet Line Protection (LP)	 ⑨ Outdoor Ethernet Cable	 ⑩ PoE AC + Power Cord or DC (No Cord)

AN-80i System Components Available from Redline	
#	Description
1	AN-80i radio.
2,3,4,5	Mounting kit for AN-80i. All kits Include 400 mm (16 in) RF cable. Lightweight mount includes universal bracket with assembly hardware. Fits 44.5 to 76.2 mm (1.75 to 3.00 in) mast or mounts to flat surface. Heavy-duty mount includes heavy-duty mounting bracket with assembly hardware. Fits 44.5 to 117.3 cm (1.75 to 4.62 in) mast. Stand-alone mount includes adapter bracket with assembly hardware and clamps. Fits 70 to 120 mm (2.75 to 4.75 in) mast.
6	Sector antennas (flat panel).
7	Subscriber & PTP antennas (flat panel and parabolic).
8	Lightning protection (LP) unit for Ethernet cable.
9	Cat-5e shielded outdoor Ethernet cable. Pre-terminated with RJ-45 connectors.

AN-80i System Components Available from Redline	
#	Description
10	PoE power injector with single AC 110/220 VAC input, single 10/100 Ethernet data port, plus single 10/100 powered Ethernet port.
11	Power cord for AC type PoE power injector only. The AC power cord must be ordered separately from the PoE.
12	AN-80i Quick Start Guide

Customer Supplied Materials

Installation of the AN-80i equipment requires additional equipment and materials supplied by the customer. The following list is provided as a guideline only, and additional materials may be required based on local conditions at each installation site. This list is not comprehensive and is provided as a guide only.

Installation - Customer-Supplied Items		
#	Item	Description
1.	Equipment Rack	Mounting space allocated for the PoE power adapter. Must accommodate 2 m (6') AC power cable and routing of Ethernet cable from PoE to local Ethernet network access point.
2.	120/240 VAC Power	Reliable 120/240 VAC. Total power requirements must be evaluated based on individual site configurations.
3.	Cat-5 Ethernet Cables	Connect from PoE power adapter to core network.
4.	Cable Installation Materials	Materials for securing cables to mast, protecting cables from abrasion, etc. including suggested weatherproofing materials: Scotch 2200 series of vinyl mastic rolls Scotch 130C linerless rubber splicing tape 3M Scotch super 88 electrical tape Rubber mastic putty or duct sealing putty
5.	Radio/Antenna Mast	Mast or tower location as required by site survey. Equipment must be rated for weight and wind loading of all installed radios and antennas.
6.	Ground Block	Termination for grounding and shields of all conductive cables entering the building.
7.	Grounding Wire	Master grounding system for all indoor and outdoor equipment, with #2 AWG through #6 AWG as required and eye-terminals for connection to RDL-2000 chassis and mounting bracket.
8.	Tools	i) Precision set of screwdrivers, cutter pliers, and other common installation tools. ii) Portable computer (Windows™) for RDL-2000 configuration, antenna alignment, and troubleshooting as required.