



GigAccess™ 2.4

Self-Install BSU/RSU

User Guide

PRELIMINARY

December 2003

Rev A

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1. Introduction

1.1. General

Congratulations on your purchase of the WaveIP GigAccess™ self-install Business/Residential Subscriber Unit (BSU/RSU).

This document describes how to install and use your subscriber unit to obtain wireless high-speed Internet access. You can connect your RSU both to a computer and to a local area network (LAN) through the integrated two ports.

1.2. GigAccess™ System Overview

GigAccess™ is WaveIP's wireless point-to-multipoint broadband communication system. The basic subsystem – a Sector, consists of an AU (Access Unit) and up to 64 Subscriber Units (SUs) Each with full-duplex communication SUs and the WAN via the AU.

Figure 1-1 depicts a general description of a typical sector in the GigAccess™ system.

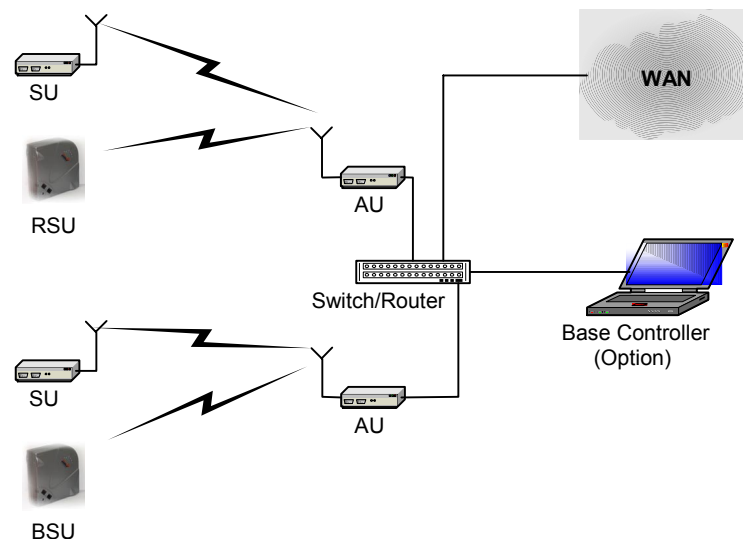


Figure 1-1: General Description of typical sector in GigAccess™ System

2. Packing List

When you first open the package, verify that the unit is complete and consists:

- BSU or RSU
- Power Supply
- Quick Start Guide

BSU Part number: **BSU-24D-115D-FU**.

RSU Part number: **RSU-24D-115D-FU**.

Figure 2-1 illustrates the RSU package contents.

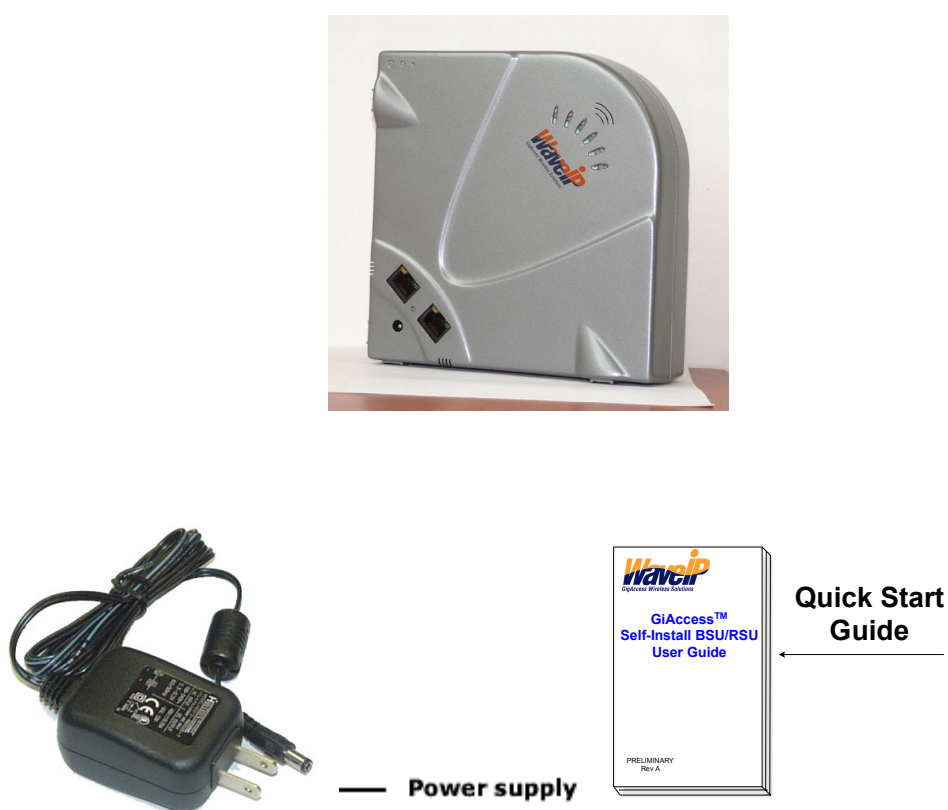


Figure 2-1: BSU/RSU package contents

3. Installation Process

3.1. General

The BSU/RSU is a self-installed, plug and play unit, which requires minimum operation from the user. A general description of the BSU/RSU is given in the figure below.

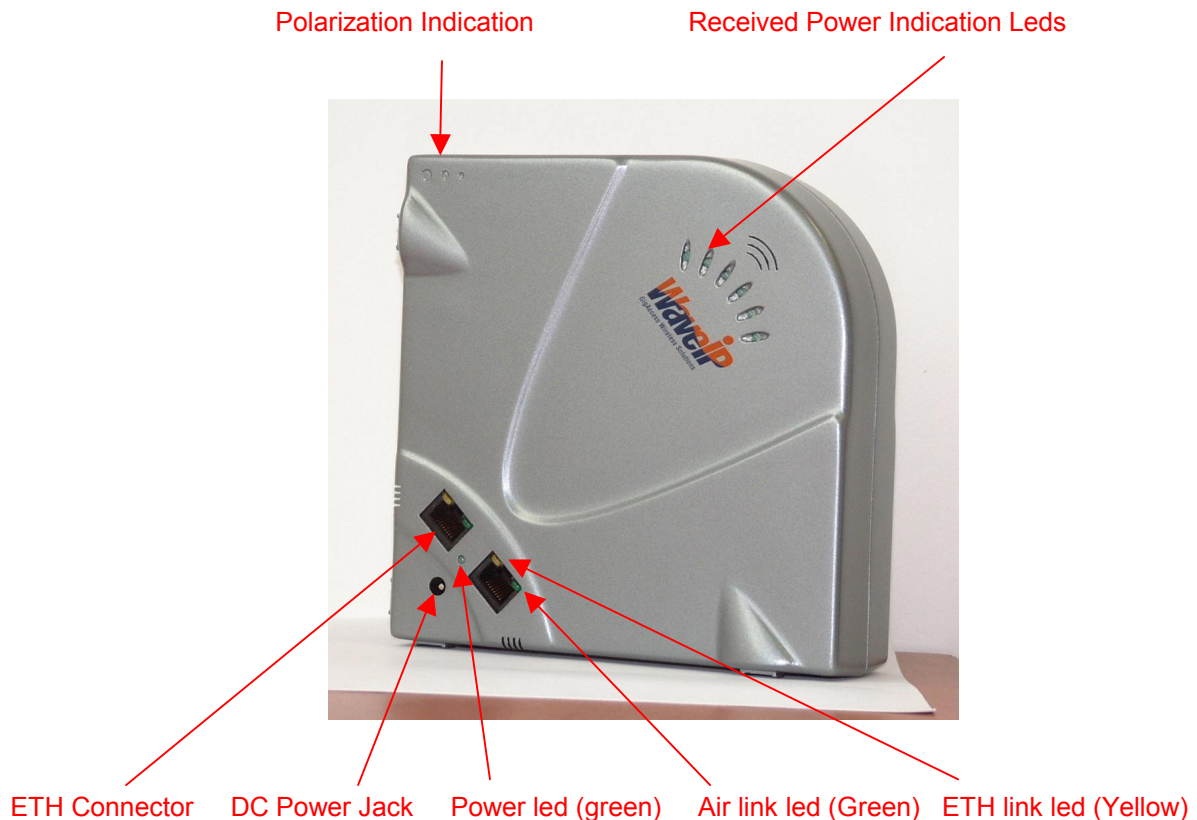


Figure 3-1: General Description for GigAccess™ 2.4 Self Install BSU/RSU

3.2. Before You Start

- 1) Make sure your computer is equipped with an Ethernet Network Interface (NIC)
- 2) Make sure your computer is set up to automatically obtain an IP address (See 3.5).
- 3) Select the appropriate location for the BSU/RSU:
 - Locate the BSU/RSU near an outside window.
 - Locate the BSU/RSU in such a way that its antenna will face your provider Access Unit (AU). Avoid any physical obstacles, which may block the signal.

3.3. Installation

The installation process should follow the following steps:

- 1) Connect the CAT5 Ethernet cable between the BSU/RSU and your PC NIC. Note that your BSU/RSU consists two Ethernet ports, so you can connect your PC to either of them, or to connect two PCs.
- 2) Connect the power supply to the AC wall socket and to the BSU/RSU DC power port.

WARNING! Use only with the supplied Power Supply adapter

- 3) Align the BSU/RSU until you get the maximum receive signal from your service provider. Best received indication when maximum "Received Power Indication leds" are light. Check both vertical and horizontal polarization and select the polarization that gives you the best receiving power. The BSU/RSU antenna polarization must be the same as in the AU antenna. In most applications, the

preferred orientation is vertical polarization. (Above ground propagation of the signal is better when it is polarized vertically).

- 4) The BSU/RSU will automatically acquire the radio channel of the AU.
- Verify that the Air link led flashes (green led on the Ethernet connector), which indicated reception from the AU.
 - Verify that the Ethernet link led light (yellow led on the Ethernet connector) when the PC is connected. This led will flash in case of Ethernet data transaction between the RSU and the PC.

Now you are ready to surf into the Internet.

WARNING! A minimum separation distance of 20 cm (8 inches) must be maintained between the device in operation and all persons.

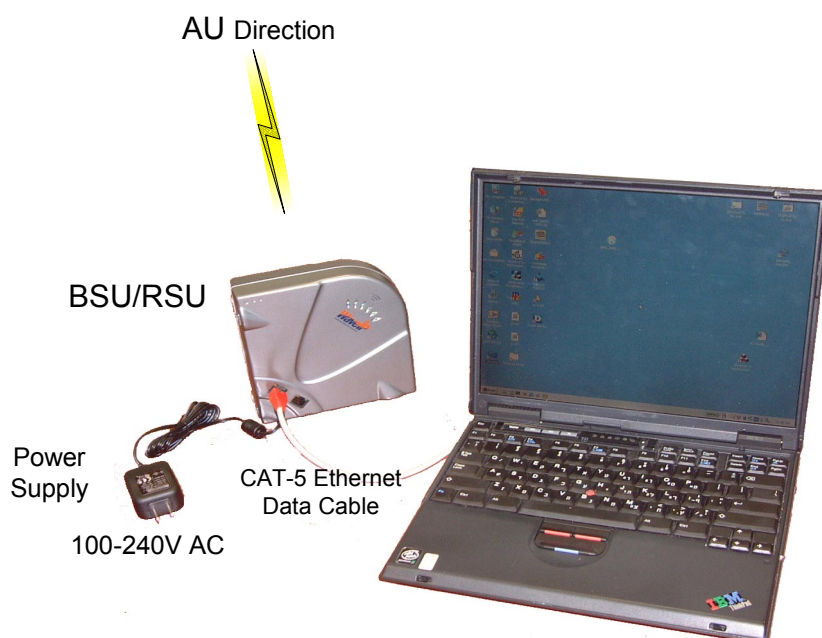


Figure 3-2: GigAccess™ 2.4 BSU/RSU - Installation Scheme

3.4. Radio Channel Selection

The radio channel is defined at the AU side.

The RSU is pre-configured to scan all channels. Therefore it will acquire the AU channel automatically.

3.5. User PC Setup

Configure the PC NIC to obtain an IP address from DHCP server.

For this configuration follow the following steps:

- Press right click on the Network Neighborhood Icon.
- Select the Protocol tab and press properties.
- Choose Obtain an IP address from DHCP server.

3.6. Safety

1. Do not immerse the equipment in any type of liquid.
2. Only operate the BSU/RSU with the **supplied Power Supply!** Any other type of input power source may cause damage and voids the warranty.
3. Do not place the equipment on an unstable surface.
4. Do not disassemble the equipment. Removing covers voids the warranty.
5. Do not expose the equipment to extreme hot or cold temperatures.

3.7. FCC Information

Notice: This device has been tested and found to comply with Radio Frequency Exposure Limits. A minimum separation distance of 20 cm (8 inches) must be maintained between the device in operation and all persons.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received, including interference that may cause undesired operation.
-

FCC Notice, USA

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the relocate-receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device must accept any interference received including interference that may cause undesired operation. Any unauthorized modification or changes to this device without the express approval of WaveIP may void the user's authority to operate this device. Furthermore, this device intended to be used only when installed in accordance with the instructions outlined in this manual. Failure to comply with these instructions may also void the user's authority to operate this device and/or the manufacturer's warranty

4. GigAccess™ 2.4 BSU/RSU Technical Specifications

Operating Frequency	2.412 – 2.462 GHz ISM band (CH1 - CH11)
Number of Channels	11
Access technology	TDMA (Time division multiple access)
Duplexing schemes	TDD (Time division duplex)
RF Waveform	Direct Sequence Spread spectrum (DSSS)
Modulation	DQPSK, 16CCK ¹ , 256 CCK
Raw Data Rates	5.5 Mbps and 11 Mbps
Data Throughput	Up to 8.5 Mbps for BSU Up to 2.0 Mbps for RSU
Radio Sensitivity	@11 Mbps: -82 dBm, IE-2 PER ² @5.5 Mbps: -87 dBm, IE-2 PER
EIRP	36 dBm (max)
Antenna Gain	11.5 dBi
Antenna Polarization	Vertical or Horizontal
Wireless MAC Interface	Proprietary based on IEEE 802.16a
Physical Interface	2 x 10/100 Base-T (RJ-45)
Protocol Supported	IP, ICMP, ARP, TCP, UDP, DHCP, and HTTP
Software Update	Over the Air Download via TFTP
Operating Temperature	0°C - +40°C
Power	3.3 VDC, < 4 Watt
AC Input Voltage	100 – 240 VAC, 47 – 63 Hz
Mechanical	160 mm x 160 mm x 45 mm

¹ CCK - Complementary Code Keying

² PER - Packet Error Rate

5. FCC Declaration of Conformity

We, the undersigned,

Company: **WaveIP Inc.**

Address: 4101 East Lake Estates DR. Davie FL 33328

Country: USA

Telephone number: 954-4527-580, 954-9938-335 (Mobile)

Fax number: 305-3746-538

are the Responsible Party for this Declaration, certify and declare under our sole responsibility that the following equipment:

Brand	Type	Product description
WaveIP	GigAccess 2.4-RSU	Desktop broadband wireless access radios for residential customers

Complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Drawn up in...U.S.A.....

on

(date)

.....

.....

(company stamp)

(signature)

...Roni Cohen - President....

