GigAccess 2.4 Self Installed BSU/RSU General Description

The Business/Residential Subscriber Unit (BSU/RSU) are part of the GigAccess™ system. This unit is a desktop wireless radios for SOHO and residential customers. It is a self-installed, plug and play unit, which requires minimum operation from the user.

GigAccess™ is a 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/BSUs/RSUs) each with full-duplex communication and the WAN via the AU.

The BSU and RSU HW are identical and the units differ only in their Ethernet data throughput. The BSU provide Ethernet data throughput of up to 8.5 Mbps while the RSU throughput is limited to 2 Mbps. The radio transmission rate in both cases is the same and only the transmit duty cycle is different.

The BSU/RSU consists an integrated 11.5 dBi flat antenna.

The BSU/RSU uses a single radio channel frequency that carries up to 11 MBPS of data throughput. The data bandwidth is divided between the traffic from the AU to BSUs/RSUs (downstream) and the traffic from the BSUs/RSUs to AU (upstream). GigAccess™ utilizes Time Domain Duplex (TDD) technique in order to divide the bandwidth periodically, based on FRAME SIZE. The portion of the frame, which is allocated to the upstream traffic between the BSUs/RSUs, is TDMA (Time Division Multiplex Access) time domain technique.

It is controlled dynamically and allows a very efficient way of channel capacity utilization. A small portion of the capacity is allocated for new BSU/RSU registration. The registration slot is allocated to the BSU/RSU based on slotted aloha algorithm.

The GigAccess™ MAC layer is based on IEEE 802.16 MAC standard.

GigAccess™ networking enables routing and QoS (Quality of Service) queuing of traffic, based on classification of packets information in layer 2, 3 & 4. In certain instances QoS queuing can be done using packet information (priority defined by the management).

Operating in the unlicensed 2.4 GHz frequency band, GigAccess™ 2.4 leverages Direct Sequence Spread Spectrum (DSSS) technology to deliver high data rates, high spectral efficiency in addition to immunity to interference and line of site boundaries via patent pending consecutive-AP™ technology. GigAccess™ 2.4 ensures always-on connectivity to full range of IP-based services, including fast Internet streaming video and VOIP. GigAccess™ 2.4 provides an independent infrastructure, which is easy to deploy with very low operating costs.

For technical specifications and more details see our GigAccess™ BSU/RSU user Guide.