

The MBW-3100 is designed to be an outdoor Wireless LAN Access Point (AP) to be installed in public wireless LAN hot spots / hot zones. A user in the vicinity of the AP, that has a laptop / PDA or cell phone with a wireless LAN NIC (Network Interface Card) can associate with the AP and be connected to the Internet.

In a public WLAN (wireless LAN) installation, the MBW-3100s will be installed by large service providers or cellular operators in areas where there will be a demand for this service, such as train stations, airports, convention centers and business areas. Another option is that the MBW-3100 will be installed in a campus (such as a university or hospital) by the "owner" of the campus.

The MBW-3100 will typically be installed either outdoors to provide outdoor coverage of Campuses or city neighborhoods, or in large indoor locations such as train stations, airports etc. In outdoor installations the MBW-3100 will typically be mounted either on a pole or on an outside wall of a building. In indoor installation, the MBW-3100 will typically be mounted on wall.

#### MBW-3100 Architecture

The MBW-3100 employs a WLAN channel. A WLAN Station (STA) can associate to any one of these channels and transmit / receive data from it. The MBW-3100's channel employs a multi element (4) antenna with a beam steering algorithm to steer a directional beam in the direction of the STA from which it is receiving information / to which it is transmitting information.

The beam steering is performed digitally on the Base Band (BB) signal. In transmission the BB signal is duplicated 4 times. Each "copy" of the signals is modified digitally and transmitted to a separate RF chain. The 4 RF chains perform up – conversion and amplification separately and drives one of the 4 antenna elements. A similar performance happens in reception.