

Operational Description

There is a WiMAX USB adapter operated for 2.5GHz, BW 5MHz and 10MHz. This device is a broadband wireless solution that enables convergence of mobile and fixed broadband networks through a common wide area broadband radio access technology and flexible network architecture. The device Air Interface adopts Orthogonal Frequency Division Multiple Access (OFDMA) for improved multi-path performance in non-line-of-sight environments. OFDMA support scalable channel bandwidths 5MHz and 10MHz.

The device support for QPSK, 16QAM and 64QAM are mandatory in the DL. In the UL, the device support for QPSK and 16QAM. Both Convolutional Code (CC) and Convolutional Turbo Code (CTC) with variable code rate and repetition coding are supported. Table 2 show the coding and modulation schemes supported in the device.

		DL	UL
Modulation		QPSK, 16QAM, 64QAM	QPSK, 16QAM
Code Rate	CC	1/2, 3/4, 2/3, 5/6	1/2, 3/4
	CTC	1/2, 3/4, 2/3, 5/6	1/2, 3/4
	Repetition	x2, x4, x6	x2, x4, x6

Table: Supported Code and Modulations

MAC Layer Description

The MAC layer is based on the time-proven DOCSIS standard and can support bursty data traffic with high peak rate demand while simultaneously supporting streaming video and latency-sensitive voice traffic over the same channel. The resource allocated to one terminal by the MAX scheduler can vary from a single time slot to the entire frame, thus providing a very large dynamic range of throughput to a specific user terminal at any given time.

DWM110-B1 operational Description

When plug to PC or NB. The device will auto power on. System board will detect the WIMAX function then download the WIMAX FW into device by USB interface. The WIMAX function baseband chipset control the RF chipset to go through one transmit and two receive antenna to search for Base Station and link.