Table 1: 802.16e/WiMAX Device and System Operating Parameters

Description	Parameter	Comment
FCC ID	NM8QUAR100	Identify all related FCC ID
Radio Service	Part 27M	Rule parts
Transmit Frequency Range (MHz)	2501 MHz to 2685 MHz	System parameter
System/Channel Bandwidth (MHz)	10 MHz	System parameter
System Profile	3A-10	Defined by WiMAX Forum
Modulation Schemes	QPSK 1/2, QPSK 3/4, 16QAM 1/2, 16QAM 3/4	Identify all applicable UL modulations
Sampling Factor	28/25	System parameter
Sampling Frequency (MHz)	11.2 MHz	(F_S)
Sample Time (ns)	89 ns	($1/F_S$)
FFT Size (N_{FFT})	1024	(N_{FFT})
Sub-Carrier Spacing (kHz)	10.94 kHz	(Δf)
Useful Symbol time (μs)	91.43 μs	($T_b=1/\Delta f$)
Guard Time (μs)	11.43 μs	(T_g=Tb/cp); cp = cyclic prefix
OFDMA Symbol Time (μs)	102.857 μs	($T_S=T_b+T_g$)
Frame Size (ms)	5 ms	System parameter
TTG + RTG (μs or number of symbols)	165.8 μs	Idle time, system parameter
Number of DL OFDMA Symbols per Frame	Max: 29; Min: 35	Identify the allowed & maximum symbols, including both traffic & control symbols
Number of UL OFDMA Symbols per Frame	Max: 18; Min: 12	
DL:UL Symbol Ratio	Max: 29:18 (UL duty factor: 18/47 = 38.3%) Min: 35:12 (UL duty factor: 12/47 = 25.53%)	For determining UL duty factor
Power Class (dBm)	Power class 1 (QPSK, 16QAM) 20 ≦ PTX_{max} < 23	Identify power class and tolerance
Wave1 / Wave2	Wave2: Two antennas, Antenna 1(Main) is for Tx/Rx, Antenna 2(Aux.) is for Rx only	Describe antenna diversity info and MIMO requirements separately
UL Zone Types (FUSC, PUSC, OFUSC, OPUSC, AMC, TUSC1, TUSC2)	PUSC only. UL AMC is not used in the current profile.	Describe separately the symbol and sub-carrier/sub-channel structures applicable to each zone type
Maximum Number of UL Sub-Carriers	Null Sub-carriers: 184 Pilot Sub-carriers: 280 Data Sub-carriers: 560	Identify the allowed and tested / to be tested parameters; include separate explanations on the types of control symbols and how the power levels are determined
UL Burst Maximum Average Power	10 MHz: 21.36 dBm	
Number and type of UL Control Symbols	Total: 10 1 for preamble 6 for DL control overhead 3 for UL control overhead	
UL Control Symbol Maximum Average Power	10 MHz BW: 28.57 mW	
UL Burst Peak-to-Average Power Ratio (PAR)	With DL:UL ratio = 29:18, PAR is between 8.53 ~ 9.09 dB With DL:UL ratio = 35:12, PAR is between 7.95 ~ 8.39 dB	Identify the expected range and measured/tested PAR; explain separately the methods used / to be used to address SAR probe calibration and measurement error issues
Frame Averaged UL Transmission Duty Factor (%)	The duty cycle is 31.7 %. Crest factor is 1/0.317 = 3.15 with 29:18 DL:UL ratio.	Show calculations separately and explain how the applicable CF (*crest factor*) used / to be use in the SAR measurements is derived and how the control symbols are accounted for

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