

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >
Title	802.16e OFDMA Profile for 5 MHz
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Re:	IEEE 802.16e/D6 Sponsor Ballot
Abstract	This contribution proposes include a profile for OFDMA 5 MHz with 10 ms frame duration for the base station and 10 ms and 5 ms for the subscriber station.
Purpose	Adoption
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1 Explanation:

We propose to include in the text a profile for OFDMA systems with 5 MHz bandwidth. The frame duration shall be 10 ms for the base station and 10 ms and 5 ms (with auto detect) for the subscriber station.

The unresolved comment 1855 referred to the need of a 5 MHz profile. Several other comments and contributions recognized the need for additions and changes in the profile section.

2 Remedy:

In Chapter 12 insert the following table in the OFDMA section.

12.4 WirelessMAN-OFDMA and WirelessHUMAN(-OFDMA) system profiles

Table 411—Profile definitions

Identifier	Descriptions	Frequency Band
....
OFDMA_profP10	WirelessMAN-OFDMA 5 MHz channel basic PHY mode	3.4 – 3.6 GHz

12.4.3.11 WirelessMAN-OFDMA 5 MHz channel basic PHY Profile (3.4 – 3.6 GHz)

Profile identifier: OFDMA_ProfP10

Systems implementing OFDMA_ProfP10 shall meet the minimum performance requirements listed in Tables 422a and 422b:

Table 422a –Base Station Minimum Performance Requirements for OFDMA_ProfP10

Capability of Base Station	Minimum performance
Channel bandwidth	5 MHz (3.4 – 3.6 GHz)
Operation mode	TDD (Licensed bands)
BER performance threshold, BER = 10^{-6} (using all subchannels BS/SS)	
QPSK-1/2	≤ -86 dBm
QPSK-3/4	≤ -84 dBm
16QAM-1/2	≤ -79 dBm
16QAM-3/4	≤ -77 dBm
64QAM-2/3 (if 64QAM is supported)	≤ -72 dBm
64QAM-3/4 (if 64QAM is supported)	≤ -71 dBm
Reference frequency tolerance BS	$\leq \pm 2 \cdot 10^{-6}$
Frame duration code set BS	{4, 6}

Table 422b – Subscriber Station Minimum Performance Requirements for OFDMA_Prof10

Capability of Subscriber Station	Minimum performance
Channel bandwidth	5 MHz (3.4 – 3.6 GHz)
Operation mode	TDD (Licensed bands)
BER performance threshold, BER = 10^{-6} (using all subchannels BS/SS)	
QPSK-1/2	≤ -86 dBm
QPSK-3/4	≤ -84 dBm
16QAM-1/2	≤ -79 dBm
16QAM-3/4	≤ -77 dBm
64QAM-2/3 (if 64QAM is supported)	≤ -72 dBm
64QAM-3/4 (if 64QAM is supported)	≤ -71 dBm
SS to BS synchronization tolerance	≤ 50 Hz
Frame duration code set SS	{4, 6} with auto detect