

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	SOFDMA PHY profile for Licensed bands at 2.3 and 2.5 GHz.	
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Source(s)	Philip Barber 8302 Sebastian Inlet Frisco, TX 75035	Voice: 972-365-6314 mailto: pbarber@broadbandmobiletech.com
	John Humbert Sprint 6220 Sprint Parkway, MS KSOPHD0504 Overland Park, KS 66223	Voice: 816-210-9611 Fax: 913-794-4288 mailto: John.J.Humbert@mail.sprint.com
Re:	IEEE P802.16e/D5-2004	
Abstract	Additional profiles for the SOFDMA PHY at 2.3 and 2.5 GHz.	
Purpose	Define profiles that can be used in the 2.3 and 2.5 GHz band	
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Reason for Change

The current version of 802.16e does not contain PHY profiles that address the necessary channel bandwidth and FFT sizes needed to support operator requirements in the 2.3 and 2.5 GHz. Bands.

Proposed Text Changes**12.4.3.11 WirelessMAN-OFDMA 5 MHz channel licensed-band PHY Profile**

Profile identifier: OFDMA_ProfP10.

Systems implementing OFDMA_ProfP10 shall meet the minimum performance requirements listed in Table AAA:

Table AAA —Minimum Performance requirements for OFDMA_ProfP10

Capability	Minimum Performance
Channel bandwidth	5 MHz
Operation mode	Licensed band usage only
FFT _{size}	512
BER performance threshold, BER=10 ⁻⁶ (using all subchannels BS/SS)	
QPSK-1/2	≤ -85 dBm
QPSK-3/4	≤ -82 dBm
16QAM-1/2	≤ -78 dBm
16QAM-3/4	≤ -75 dBm
64QAM-2/3 (if 64-QAM supported)	≤ -71 dBm
64QAM-3/4 (if 64-QAM supported)	≤ -69 dBm
(Add to sensitivity 10*log ₁₀ (NumberOfSub-ChannelsUsed/32) when using less subchannels in the BS Rx)	
Reference frequency tolerance	
BS	TBD
SS to BS synchronization tolerance	TBD
Frame duration code set	{5}

12.4.3.12 WirelessMAN-OFDMA 10 MHz channel licensed-band PHY Profile

Profile identifier: OFDMA_ProfP11.

Systems implementing OFDMA_ProfP11 shall meet the minimum performance requirements listed in Table BBB:

Table BBB —Minimum Performance requirements for OFDMA_ProfP11

Capability	Minimum Performance
Channel bandwidth	10 MHz
Operation mode	Licensed band usage only
FFT _{size}	1024
BER performance threshold, BER=10 ⁻⁶ (using all subchannels BS/SS)	
QPSK-1/2	≤ -82 dBm
QPSK-3/4	≤ -79 dBm
16QAM-1/2	≤ -75 dBm
16QAM-3/4	≤ -72 dBm
64QAM-2/3 (if 64-QAM supported)	≤ -68 dBm
64QAM-3/4 (if 64-QAM supported)	≤ -66 dBm
(Add to sensitivity 10*log ₁₀ (NumberOfSub-ChannelsUsed/32) when using less subchannels in the BS Rx)	
Reference frequency tolerance	
BS	TBD
SS to BS synchronization tolerance	TBD
Frame duration code set	{5}

12.4.3.13 WirelessMAN-OFDMA 20 MHz channel licensed-band PHY Profile

Profile identifier: OFDMA_ProfP12.

Systems implementing OFDMA_ProfP12 shall meet the minimum performance requirements listed in Table CCC

Table CCC —Minimum Performance requirements for OFDMA_ProfP12

Capability	Minimum Performance
Channel bandwidth	20 MHz
Operation mode	Licensed band usage only
FFT _{size}	2048
BER performance threshold, BER=10 ⁻⁶ (using all subchannels BS/SS)	
QPSK-1/2	-79 dBm
QPSK-3/4	-76 dBm
16QAM-1/2	-72 dBm
16QAM-3/4	-69 dBm
64QAM-2/3 (if 64-QAM supported)	-65 dBm
64QAM-3/4 (if 64-QAM supported)	-63 dBm
(Add to sensitivity 10*log ₁₀ (NumberOfSub-ChannelsUsed/32) when using less subchannels in the BS Rx)	
Reference frequency tolerance	
BS	TBD
SS to BS synchronization tolerance	TBD
Frame duration code set	{5}