

WDE1100

Wireless Device Enabler • for MOTOMESH



The WDE1100 enables MOTOMESH™ users to wirelessly access broadband applications with the first combined 2.4GHz / 4.9GHz Mini-PCI Wi-Fi card.

By installing the Wireless Device Enabler (WDE), standards-based Wi-Fi network access via licensed 4.9GHz or unlicensed 2.4GHz frequencies can be added to devices with an internal Mini-PCI card slot. With burst data rates of up to 54 Mbps and the ability to instantly form ad hoc, peer-to-peer, single-hop broadband networks with or without pre-deployed network infrastructure, Motorola gives you the flexibility required for Mission Critical situations. Designed specifically for rugged environments, and capable of being internally installed, the WDE1100 provides reliable connectivity in even the harshest conditions.

Motorola's wireless networking technology enables users to access critical broadband applications seamlessly – virtually any time and anywhere. Whether utilizing pre-deployed infrastructure or an instant, ad hoc, broadband network formed with other users, Motorola's wireless networking technology delivers real-time data to detect, prevent, and respond.

Broadband Designed for Public Safety

The WDE1100 operates in the 4.9GHz band that is licensed exclusively for public safety use. This band is free from civilian interference and usage, maximizing the bandwidth and accessibility available to first responders. For connectivity when the public safety network is not available, the Wireless Device Enabler can operate in the 2.4GHz band via 802.11b/g. The ability to operate in this unlicensed band enables network and peer-to-peer access when outside the range of the 4.9GHz system. The WDE1100 offers an unmatched combination of throughput, mobility and connectivity that first responders need.

Robust Data Rates for Mobile Broadband

The WDE1100 delivers up to 54 Mbps burst data rates on both the uplink and downlink for voice, video, and data. High bandwidth applications, such as web browsing, live streaming video, telemetry, and database access are available to users in the field at full broadband speed. Designed to be installed inside a device (laptop or other), the WDE1100 resides inside the device fully enclosed and is less prone to damage from the environment and less prone to be lost or stolen.

Create Peer-to-Peer Networks Anywhere

Client devices with Wireless Device Enabler cards can form their own ad hoc network. A high speed, broadband network can be formed between authorized devices – even in places where there is no network infrastructure. Users can effortlessly establish fast, peer-to-peer communication links.

Designed for Citywide Access, Not Coffee Shops

The WDE1100 is not your typical wireless networking card. It enables Wi-Fi network connectivity with common 802.11b/g 2.4GHz networks and 4.9GHz public safety networks. This one card, dual network approach is specifically targeted for public safety users in the field. Additionally, the antenna configuration, external diversity antenna connectivity, and higher than average power output, offer enhanced range. Imagine monitoring a high risk building incident via streaming video on a laptop – while on the other side of town.

End-to-End Industry Standard IP Support

The MOTOMESH platform along with the WDE1100 supports end-to-end, standards based Internet Protocol (IP). Any IP-based application or IP-capable device will work seamlessly within a MOTOMESH network.

WDE1100 Features

- Designed for installation inside your wireless device
- 802.11a Operating in the Licensed 4.9GHz Band, for use with Motorola's MOTOMESH Multi-Radio Broadband Network
- 802.11b/g Operating in the Unlicensed 2.4GHz Band, for use with COTS Wi-Fi Access Point and MOTOMESH Networks.
- Diversity Antenna Connectivity for External Antennas Creates a Wide Coverage Area
- Advanced Encryption Standard (AES) Support
- Layer 2 Multicast Support
- Differentiated Services using IP Quality of Service (QoS) Support
- Designed for use in Rugged Environments, including temperatures as low as -30°C

WDE1100 RADIO CHARACTERISTICS

	2.4 GHz - 802.11b/g	4.9 GHz - 802.11a
Output Power	18 dBm / 63mW	20 dBm / 100mW
RF Modulation	CCK/OFDM	OFDM
Operating Frequency (GHz)	2.4000-2.4835	4.940-4.990
Maximum Burst Data Rate	54 Mbps	54 Mbps
Spectrum Used	22 MHz	5 MHz, 10 MHz, or 20 MHz (User Selectable)
External Antenna Connector	UFL (one each for 2.4GHz and 4.9GHz use)	
Host Interface	Mini-PCI	

DEVICE DRIVER

Client Software	Motorola Client Utility
Supported Operating Systems	Windows 2000 (SP4), Windows XP (SP2) and Windows XP Tablet (SP2)

NETWORK

Network Architecture	Ad hoc peer-to-peer or infrastructure modes (available to both frequencies)
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SECURITY

Virtual Private Network (VPN)	Supports FIPS-140-2 encryption (Motorola Multi-Net Mobility)
Encryption Support	WEP, AES, TKIP
Authentication	Open, PEAP, TLS, TTLS (802.1X Infrastructure/Client)

POWER CONSUMPTION

	2.4 GHz _ 802.11b/g	4.9 GHz _ 802.11a
Transmit	1W (@ 63mW)	2.3W (@ 100mW)
Receive	0.62W	0.62W
Idle / Power Save Mode	0.05W	0.05W

PHYSICAL

Dimensions	2.35" x 1.76" x 0.19"	59.8mm x 44.6mm x 4.9mm
Weight	0.475 oz (14.2 gr)	
Packaging	Mini-PCI	
LED Indicators	N/A	

ENVIRONMENTAL

Temperature Range	-30 to 60°C
Certifications/Regularity	FCC CFR47 Part 90 Certified at 4.9GHz and Part 15,247 Certified at 2.4GHz



Motorola, Inc. • 1301 E. Algonquin Road • Schaumburg, Illinois 60196 U.S.A.
www.motorola.com/mesh • 1-800-367-2346

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R3-99-2150