



WDE1000

Wireless Device Enabler • for MOTOMESH

The WDE1000 enables MOTOMESH users to wirelessly access broadband applications with the first combined 2.4GHz / 4.9GHz Wi-Fi card.

By simply inserting 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 a PCMCIA 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 predeployed network infrastructure, Motorola gives you the flexibility required for Mission Critical situations. Designed specifically for rugged environments, the WDE1000 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 predeployed infrastructure, or an instant, ad hoc, broadband network formed with other users, Motorola's wireless networking technology delivers real-time data to detect, prevent, respond.

Broadband Designed for Public Safety

The WDE1000 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 WDE1000 offers an unmatched combination of throughput, mobility and connectivity that first responders need.

Robust Data Rates for Mobile Broadband

The WDE1000 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.

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 WDE1000 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 unique internal antenna configuration, external diversity antennae 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 WDE1000 supports end-to-end, standards based Internet Protocol (IP). Any IP-based application or IP-capable device will work seamlessly within a MOTOMESH network.

WDE1000 RADIO CHARACTERISTICS

	2.4GHz • 802.11b/g	4.9GHz • 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	22MHz	5, 10, or 20MHz (User Selectable)

Antenna Type	Omnidirectional
Antenna Connectors	MMCX (one each for 2.4GHz and 4.9GHz use)
Host Interface	CardBus (PCMCIA Type II form factor)

DEVICE DRIVER

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

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

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

PHYSICAL

Dimensions	5.079" x 2.126" x 0.543" (12.9cm x 5.4cm x 1.38cm)
Weight	2.54 oz (72g)
Packaging	Standard PCMCIA Type II form factor, with antenna extension
LED Indicators	Power and transmit/receive

ENVIRONMENTAL

Temperature Range	-30 to 60 °C
Humidity	0 to 95% , non-condensing
Certifications	FCC Part 15 B, FCC Certified at 2.4GHz and 4.9GHz

WDE1000 Wireless Device Enabler Features

- 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 and a Built-in, High Performance Antenna Create 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



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