

WLAN Module, DT60M

Neratec DT60M is a small sized wireless embedded communication solution targeted for industrial short range communications, and applications where small size and low power consumption is important. It allows OEMs to Wi-Fi enable devices used in an array of machine-to-machine (M2M) applications.

The DT60M can be integrated into the customer products and it supports a wide variety of applications including for example control and maintenance, wireless voice communication and wireless video. Once the initial configuration is done, it can be remotely managed using a standard Web browser or SNMP management tools.



Technology

- Based on IEEE 802.11n technology
- In-house developed software and hardware enabling unique Long Term Support, Availability and Obsolescence management
- 2.4 GHz and 5 GHz operation
- Guaranteed performance over the wide operating temperature range
- System-on-module, no driver level integration needed

Key Features

- Configurable as Access Point or Client
- High-Speed communications, Data rates up to 300Mbit/s
- Fast association for optimal link stability in multi access point installations
- Supports remote updates for device settings and firmware downloads
- Typical power consumption 2W, depending on the transmit duty cycle and interfacing options
- Small size: 37mm x 60mm



Reliable 802.11n solution
for embedded applications

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Functionality	High performance 802.11n module for embedded applications
Operating Modes	Access Point and Client
Operating Temperature Range	-30...+80°C at the Ground pads of the mounting holes
Power Feed	3.3VDC, 1A peak; 500mA average
Physical Dimensions and weight	App. 37mm x 60mm x 6mm (W x L x H) and 15g, without antennas
Wireless Standards Supported	IEEE 802.11b, 802.11g, 802.11a and 802.11n
Frequency Range	2.400...2.4835 GHz 5.150...5.350 GHz, 5.470...5.725 GHz, 5.725...5.850 GHz
Occupied Channel Bandwidth	According to the IEEE 802.11
Data Rates Supported	802.11b: 1Mbit/s, 2, 5.5 & 11Mbit/s 802.11g & 802.11a: 6Mbit/s, 9, 12, 18, 24, 36, 48 & 54 Mbit/s 802.11n 20MHz BW: 1 Nss: 65(72.2)Mbps maximal, 2 Nss: 130(144.44)Mbps maximal 802.11n 40MHz BW: 1 Nss: 135(150)Mbps maximal, 2 Nss: 270(300)Mbps maximal
RF Transmit Power 2.4GHz	Max. +15dBm conducted transmit power per antenna port: HT20:+14dBm (MCS0..4, 8..12), +13dBm (MCS5,13), +10dBm (MCS6,14), +8dBm (MCS7,15) HT40:+14dBm (MCS0..4, 8..12), +12dBm (MCS5,13), +9dBm (MCS6,14), +8dBm (MCS7,15) Note: Depending on regulatory limitations
RF Transmit Power 5GHz	Max. +20dBm conducted transmit power per antenna port: HT20:+20dBm (MCS0..4, 8..12), +19dBm (MCS5,13), +18dBm (MCS6,14), +16dBm (MCS7,15) HT40:+20dBm (MCS0..4, 8..12), +19dBm (MCS5,13), +17dBm (MCS6,14), +16dBm (MCS7,15) Note: Depending on regulatory limitations
RF Antenna interfaces	2x2 MIMO, 2 x MMCX connectors
Receiver Sensitivity (typical, 2 RX)	802.11ng HT20: -93 dBm (MCS0), -74 dBm (MCS7), -71 dBm (MCS15) 802.11na HT20: -93 dBm (MCS0), -74 dBm (MCS7), -71 dBm (MCS15) 802.11ng HT40: -90 dBm (MCS0), -71 dBm (MCS7), -68 dBm (MCS15) 802.11na HT40: -90 dBm (MCS0), -71 dBm (MCS7), -68 dBm (MCS15)
MIMO features supported	Space Time Block Coding (STBC), RX Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD), Maximum Ratio Combining (MRC)
Security	IEEE 802.11i WPA2 (AES/TKIP), RADIUS Client, Config. file encryption
Ethernet Interface	2 x Fast Ethernet over the Board-to-Board connector Hirose DF40C
Other Interfaces	USB 2.0 Host or Device modes, PCIe, GPIs and GPOs
Ethernet Routing / Networking	Fixed fallback IP, IP aliases, MAC address control lists, Port forwarding, Routing, Multicast Routing, DHCP Server/Client, Multi BSSID, Roaming, NTP client, SNMP v2c and v3 with USM authentication and encryption support, SNMP Traps
Monitoring Features	Build in monitoring sensors and diagnostics
Device Management	SNMP, Limited HTTP/HTTPS with user authentication
Standards supported	CE, FCC, IC, EN301 893 v1.7.1, EN300 328 V1.8.1, EN301 489-1/-17