

HOPNET 250 2.4GHz FREQUENCY HOPPING WIRELESS DATA MODEM



The HopNet 250 (HN-250) is a versatile, low cost, multi-purpose 2.4 GHz frequency-hopping wireless data modem. The HN-250 communicates through a serial port over the air at 460.8Kbps and supports both point-to-point and point-to-multipoint networks.

With a NEMA 4X weatherproof enclosure and aluminum mounting flange, the HN-250 is simple to install on the side of a building or attached to a mast. With no antenna to connect, the HN-250 is simply mounted where the antenna would ordinarily be mounted. This removes the need for long antenna cable runs, expensive in terms of both cost and performance.

The HN-250 comes with a 50-foot cable that connects to an indoor serial adapter box (included) that provides a standard RS-232 serial 9-pin D connection. The HN-254 comes with just a 4-foot cable for use when long cable runs are not needed. The serial adapter box also provides power to the HN-250 through a universal 110/220 50/60 wall-mount power supply (also included).

The integral 6dB patch antenna provides a line-of-site range of several miles, making the HN-250 ideal for a variety of "last mile" applications. For applications requiring more antenna gain, the HN-250X replaces the built-in patch antenna with an external TNC connector. For situations where extended range and/or transmission around obstructions is needed, the HN-250 also supports store-and-forward repeating while operating as a node.

The HN-250 also is ideal for use in SCADA applications as remote modems in multipoint configurations and is an extremely cost-effective solution for point-to-point installations. Selectable transmit power levels of 10dB, 18dB, and 24dB allow the HN-250 to be used worldwide, even with the gain of the patch antenna.

Based on Cirronet's WIT2450 spread spectrum frequency-hopping radio, the HN-250 has exceptional multipath fade rejection as well as immunity to jamming. The WIT2450 is a field proven performer that delivers robust, reliable, real-world performance.

The HN-250 is both FCC and CE marked. Operating in the 2.4GHz ISM band, the HN-250 can be deployed around the world without a license.

Features:

- 2.4GHz frequency hopping spread spectrum technology
- 460Kbps over the air and 115Kbps I/O data rates
- Store-and-forward repeating while operating as a node
- 64 hopping patterns
- FCC certified and CE marked
- Integral 6dB patch antenna
- RS-232 asynchronous or USB serial interface

Benefits:

- Exceptional immunity to multipath fading and jamming
- Supports high speed applications needing long range
- Co-location of multiple networks without interference
- License-free application worldwide
- Cost-effective, simple installation
- Connects to PC serial ports

Let us be your experts. Cirronet has delivered high-performance wireless products since 1987. To find out how to put our experience to work for you, call **+1.678.684.2000** or visit our website at **www.cirronet.com**



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HN-250 SPECIFICATIONS

Product	HN-250	HN-250X	HN-254
Frequency Band	2401 - 2471 MHz (USA) 2452 - 2478 MHz (Canada)		
Licensing	Unlicensed under FCC Part 15, ETSI 300.328		
Number of Channels	86 USA; 50 Canada, software selectable		
Hopping Patterns	User configurable, 64 patterns (networks) available		
I/O Data Rates	Up to 115.2 Kbps asynchronous		
RF Channel Rate	460 Kbps		
Line of Site Range	> 5 miles		
RF Bandwidth	750 KHz		
Modulation Type	GFSK		
Output Impedance	50 ohms		
Network Protocol	Dynamically assigned TDMA with ARQ		
Transmit Power	EIRP: +16dBm/+24dBm		
Receive Sensitivity	-99dBm for 10 ⁻⁵ BER	-93 dBm for 10 ⁻⁵ BER	-99dBm for 10 ⁻⁵ BER
Power Requirements	9 Vdc 160mA typ. 750mA surge		
Serial Data Interface	Async. RS-232		

MECHANICAL SPECIFICATIONS

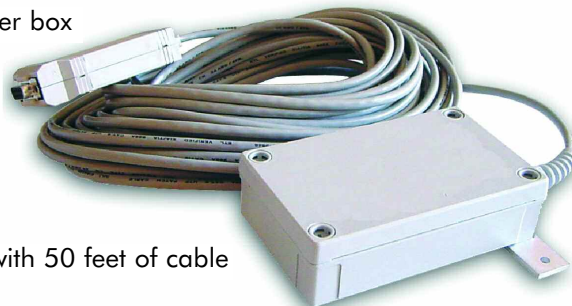
Product	HN-250	HN-250X	HN-254
Antenna	Integrated 6dB patch	n/a	Integrated 6dB patch
Case Materials	Polycarbonate, NEMA 4X		
Dimensions (mm)	130 x 79 x 35 (excl. flange)		
Weight excl. cable	235g		
Antenna Connector	n/a	Rev. TNC male	n/a
Data Connector	9-pin D/USB B		
Power Connector	2 pin DIN		

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	-30°C to +70°C (radio enclosure)
Humidity	95% at +40°C, non-condensing

HN-250 COMPONENTS

Serial adapter box



HN-250 with 50 feet of cable



Power supply