



Built on the heritage of the original FHSS family of modems and combining the advanced features of the WIT2410 OEM module, there is a HN 10 Series modem that suits every need, from the relative comfort of an office to the harsh conditions on the factory floor to the unpredictable weather of an outdoor location.

Based on 2.4GHz frequency hopping spread spectrum technology, all HN 10 Series modems provide extraordinary range while providing immunity to jamming and multipath fading. All backed by extensive experience in wireless technology. All HN 10 Series standalone modems feature a high data rate (460Kbps over the air) and long range (over 5 miles using HN 10 external gain antennas). Both point-to-point and point-to-multi-point network configurations are supported.

## HN 10 Series

**HN-510**  
**HN1010**  
**HN-1510**  
**HN2010**  
**HN-3010**

## 2.4 GHz Stand-Alone Modems

**HN510****HN-510**

The HN-510 has the same components as its ruggedized siblings in a desktop-style enclosure that provides compact size and weight with a built-in rechargeable battery pack. Simply connect to a PC's RS-232 port using the 510's DB-9 connector and it's ready to go. Front panel LEDs give complete power and communications status at a glance.

**HN-1010****HN-1010**

The HN-1010 is enclosed in a NEMA 4X and I.P. 66 rated housing and can operate outdoors from -30OC to +70OC. The unit features a 9 pin I/O connector for data, power, and flow control. Transmit and receive data are RS-485 compatible differential signals while the flow control lines are single-ended RS-232. This interface can drive up to 250 feet of cable and can be converted to plain RS-232 using the HopNet 3500 data/power adapter.

**HN-1510****HN-1510**

The HN-1510 features a rugged enclosure for indoor industrial applications. The HN-1510 has a standard DB-9 connector for I/O and all data and flow control lines are RS-232 signals. Power is supplied via a separate 2-pin connector. The HN-1510 also provides a 4 LED readout for power and status indications.

**HN-2010****HN-2010**

The HN-2010 is a dual wireless modem repeater that can be used to create complex extended range networks, either point-to-point or point-to-multi-point. Half and full duplex I/O rates from 1200bps to 230.4Kbps are supported. The HN-2010 is housed in a NEMA 4X and I.P. 66 rated enclosure for outdoor operation between -30OC and +70OC. A standard DB-9 data connector is provided to allow configuration of the repeater. Because two wireless modems are used back-to-back, the full throughput of the data channel is available. Single modem, store and forward repeaters reduce the throughput of the entire system and add latency.

**HN-3010****HN-3010**

The HN-3010 is a compact stand-alone modem with an integrated patch antenna. Housed in a NEMA 4X and I.P. 66 enclosure, the HN-3010 is a cost-effective, one-piece, pole-mounted transceiver. The HN-3010 has an operating temperature range of -30OC to +70OC. A single 9 pin connector provides data, flow control, and power. Data signals are differential RS-485 compatible, while the flow control lines are RS-232.

## Specifications

	HN-510	HN1010	HN-1510	HN-2010	HN-3010
Frequency Band	2401 – 2483 MHz				
Licensing	Unlicensed under FCC Part 15, ETSI 300.328				
Number of Channels	75				
Hopping Patterns	User configurable, 64 patterns (networks) available				
I/O Data Rate	Up to 230.4 Kbps asynchronous				
RF Channel Rate	460 Kbps				
Line-of-Sight Range	>5 Miles with 9 dB omni antenna				
RF Bandwidth	750 KHz				
Modulation Type	GFSK				
Output Impedance	50 ohms				
Network Protocol	ARQ: CSMA/CA or TDMA				
Transmit Power	+18dBm	+18 dBm	+18 dBm	+18 dBm	EIRP: +24 dBm
Receive Sensitivity	-93 dBm	-93 dBm	-93 dBm	-93 dBm	-99 dBm
Power Requirements	5Vdc 750mA max.	9Vdc – 24Vdc 160mA typ. @ 9 Vdc 750mA surge	9Vdc – 24Vdc 160mA typ. @ 9Vdc 750mA surge	13Vdc – 24Vdc 500mA min. @ 13Vdc	9Vdc – 24Vdc 160mA typ. @ 9Vdc 750mA surge
Serial Data Interface	Async. RS-232	Async. RS-485/RS-232	Async. RS-232	Async. RS-232	Async. RS-485/RS-232

## Mechanical Specifications

	HN-510	HN-1010	HN-1510	HN-2010	HN-3010
Antenna	External	External	External	2 External	Integrated patch
Case Materials	Plastic	Aluminum	Aluminum	Aluminum	UV stabilized polyamide
		NEMA 4X, IP 66		NEMA 4X, IP 66	NEMA 4X, IP 66
Dimensions(mm)	130 x 95 x 25	213 x 142 x 53	200 x 145 x 51	213 x 145 x 76	175 x 160 x 61
Weight	275g	820g	725g	1590g	570g
Antenna Connector	Reverse SMA	TNC	TNC	TNC	n/a
Data Connector	DB-9	Conxall model# 3282-9SG-528	DB-9	DB-9	Conxall model# 3282-9SG-528
Power Connector	2-Pin DIN	Conxall model# 16282-2SG-311	In data connector	Conxall model# 16282-2SG-311	In data connector

## Environmental Specifications

	HN-510	HN-1010	HN-1510	HN-2010	HN-3010
Temperature Range	0°C to + 50°C	-30°C to + 70°C			
Humidity	95% at + 40°C, non-condensing				