

## Miniature High Power 900 MHz OEM Wireless Modem

The all new HP900, which is 1/2 the size of our standard Pico Series Radio, delivers the ultimate solution for cost and size sensitive applications. The HP900 offers a 900 MHz ISM Band, low cost, serial radio with the reliability, features, and performance of our larger modems!



**Weighs only 2 grams!**

**26.5 x 19 x 2.75mm**

**High Power (up to 4W)**

**Very Low Cost**

**PMP | PTP**

**Extended Temperature**

**Only 2 grams!**

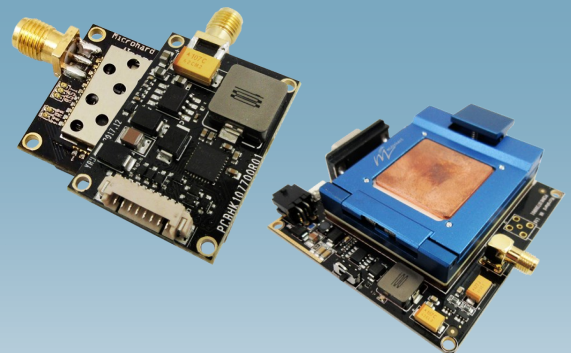
**Excellent Sensitivity**

**-122 dBm @ 19.2 kbps**

### Features

- Very Low Cost
- Link Rates from 19.2 kbps to 500 kbps!
- Multi Stage, SAW Filters provide Extreme Noise and Interference Rejection
- Point-to-Multipoint & Point-to-Point Network Topology
- Master & Remote Operating Modes
- Industrial Temperature (-55°C to +85°C)
- Adjustable Tx power (up to 4W)
- Frequency Hopping or Fixed Frequency Operation
- Low Power consumption in Sleep and Sniff modes
- 32 bits of CRC, selectable Forward Error Correction with retransmit
- Extremely Small Footprint (26.5 x 19 x 2.75mm | 1.05 x .75 x .11")

**HP900 Motherboard**



**HP900 Test Jig**

# HP900 Specifications



<b>Frequency</b>	902-928 MHz
<b>Spreading Method</b>	Frequency Hopping or Fixed Frequency
<b>Forward Error Detection</b>	Hamming BCH Golay Reed-Solomon
<b>Error Detection</b>	32 bits of CRC, ARQ
<b>Encryption</b>	128-bit AES. Optional - Requires Export Permit (See order options)
<b>Range</b>	50+ miles (80+ km)
<b>Sensitivity (@10<sup>-4</sup>)</b>	-122 dBm @ 19.2 kbps -119 dBm @ 38.4 kbps -115 dBm @ 115.2 kbps -112 dBm @ 172.8 kbps -111 dBm @ 230.4 kbps -109 dBm @ 345.6 kbps -108 dBm @ 500 kbps
<b>Output Power</b>	<b>HP900</b> 1W Frequency Hopping <b>HP900-PRO</b> 1W FHSS, 4W Fixed Frequency <b>HP900-MAX</b> 4W FHSS, 4W Fixed Frequency
<b>Serial Interface</b>	3.6V CMOS
<b>Serial Baud Rate</b>	Up to 230.4 kbps
<b>Link Rate</b>	19.2 to 500 kbps (FCC/IC version limited to 400 kbps)
<b>Operating Modes</b>	Master, Remote
<b>Connectors:</b>	54 Pin SMT
<b>Signals Interface</b>	RxD, TxD, RTS, CTS, DCD, DSR, DTR, RSSI, Tx/Rx, Reset, Config
<b>Blocking</b>	+/- 1 MHz > 55 dBc +/- 2.5 MHz > 60 dBc +/- 5 MHz > 65 dBc > 930 MHz > 70 dBc < 890 MHz > 70 dBc
<b>Remote Diagnostics</b>	Battery Voltage, Temperature, RSSI, Packet Statistics
<b>Core Voltage</b>	3.3 - 3.6VDC
<b>Environmental</b>	-55°C to +85°C
<b>Weight</b>	~32 grams
<b>Dimensions</b>	~1.60" x 1.185" x 0.56" (40.5mm x 30mm x 14.5mm)
<b>Approvals</b>	FCC ISED (Industry Canada)

HP900 OEM Current Consumption			
Tx Power (dBm)	Vcc (Vcc)	VRF (mA)	Vdd (mA)
21	3.6	520	30
25	3.6	720	33
28	3.6	990	36
30	3.6	1290	38
33	3.6	1800	54
Rx	3.6	0	47
Rx (link)	3.6	0	47-56

Order Options	
<b>HP900</b>	900 MHz, 1W FHSS, FCC/ISED
<b>-PRO</b>	1W FHSS, 4W Fixed, Higher Data Rates.
<b>-MAX</b>	4W FHSS, 4W Fixed, AES128, Higher Data Rates. Requires Export Permit.
<b>-ENC</b>	Enclosed Model
<b>-AES</b>	128-bit AES Encryption. Requires Export Permit.

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