

## Ultra Wideband Frequency Hopping with Uplink/Downlink Diversification

Ultra robust RF link with wide frequency hopping from 300 MHz to just below 3GHz. The Radio supports Frequency Hopping Diversity on the Uplink and Downlink, so the user can program different hop patterns such that Uplink and Downlink frequency are completely different. High Input IIP3, special RF filtering, and wide band frequency hopping makes the radio very robust and hard to jam in harsh RF environments.

Weighs only 5 grams!



1.3" X 1.05" X 0.13"

Software PGM Independent Uplink & Downlink Frequency Hopping

Strong Interference Rejection

300MHz to 3GHz Frequency Hopping

Data Rate 2kbps to 500kbps\*

High Power (1W)\*\*

Optional AES256 Encryption

Excellent Sensitivity (Up to -124dBm)

## Features

- Independent Uplink & Downlink Frequency Hopping
- Software Selectable Multi-Frequency, 300MHz to 3GHz
- Wireless Data Rates from 2 kbps to 500 kbps\*
- Strong Interference Rejection
- Point-to-Point, Point-to-Multipoint, Store & Forward Repeater
- Industrial Temperature (-40°C to +85°C)
- 1W TX Power Across 3GHz
- 32 bits of CRC, selectable Forward Error Correction with retransmission
- Extremely Small Footprint (26.5 x 33 x 3.5mm | 1.3 x 1.05 x 0.15")

Available only to Qualified Customers under NDA



Microhard - Confidential

\* Future - Higher Data Rates

\*\* External Amplifiers can add more power, see Microhard PA Series for higher power

# Specifications

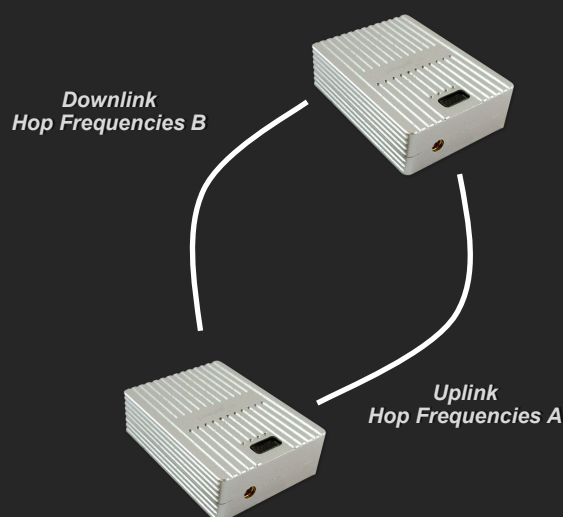


<b>Frequency</b>	300MHz to 3GHz (Software Selectable) <i>Exact under NDA</i>
<b>Spreading Method</b>	Robust Frequency Hopping
<b>Wireless Data Rate</b>	2kbps to 500kbps*
<b>Forward Error Correction</b>	Hamming BCH Golay Reed-Solomon Viterbi
<b>Error Detection</b>	32 bits of CRC, ARQ
<b>Encryption</b>	Optional (see -AES option)
<b>Output Power</b>	Up to 1W **
<b>Sensitivity</b>	Up to -124dBm
<b>Range</b>	> 200km
<b>Serial Interface</b>	3.3V CMOS RS232/485 (Selectable)
<b>Serial Baud Rate</b>	300bps to 230kbps
<b>Operating Modes</b>	Point-to-Point, Point-to-Multipoint, Store & Forward Repeater, Peer-to-Peer
<b>Signals Interface</b>	RSSI LEDs, Tx/Rx LEDs, Reset, Config, Wake-up, RSmode, 4 Digital Inputs/Outputs, 1 Analog Input, 1 Analog Output
<b>Remote Diagnostics</b>	Battery Voltage, Temperature, RSSI, Packet Statistics
<b>Core Voltage</b>	<b>OEM</b> 3.3/5VDC <b>Enclosed</b> 7-30VDC <b>SWP</b> 7-30VDC
<b>Connectors:</b>	<b>OEM</b> Antenna: UFL Data: 80 Pin SMT <b>Enclosed</b> Antenna: RP-SMA Female Bulkhead Data: DB9-F <b>SWP</b> Antenna: MMCX Power, Data: 10-Pin (GHR-10V-S)

<b>Power Consumption (3.3V)</b>	Sleep: < 1mA Idle: 20mA Rx: 45mA to 98mA Tx Peak: 2A
<b>Environmental</b>	<b>Temperature</b> -40°C to +85°C <b>Humidity</b> 5-95% humidity, non-condensing
<b>Weight</b>	<b>OEM</b> ~ 5 grams <b>Enclosed</b> ~ 120 grams <b>SWP</b> ~ 37 grams
<b>Dimensions</b>	<b>OEM</b> ~ 26.5 x 33 x 3.5 mm <b>Enclosed</b> ~ 46 x 66 x 25 mm <b>SWP</b> ~ 36 x 48 x 15 mm

## Order Options

Pico-X	Multi Frequency Radio up to 3GHz.
-AES256	256-bit AES Encryption. Requires export permit.
-ENC	Enclosed Model
-SWP	SWP Series



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