

# SDR400 Series

## Long distance, micro volume, low cost, 400/800 / 900MHz multi-band High-speed Frequency Hopping Digital Radio(Module)

The SDR400 series of high-speed FM radio(modules) based on software radio (SDR) technology provide a small, reliable and reliable remote communication solution for low-cost, space-constrained applications. The same radio(module) can be set to select the work in the 400/900MHz or 800MHz band.

400 MHz Licensed

800/900 MHz ISM

Up to 2 Watts

Extended Temperature

Dual Serial Ports

Excellent Sensitivity

Weighs only 5 grams!



1.3"x1.05"x0.13"(TTL,3.3/3.6V)



SDR400 Enclosed

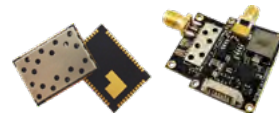
46x66x25mm, 120g (2W, 232/485, 9-30V)

SDR400 series of high-speed frequency hopping digital radio (module) with long-range, high-speed reliable, low latency and secure data communication advantages. Supports full duplex serial communication and diagnostic communication. SDR400 series of high-speed frequency hopping digital radio (module) has a very high noise suppression, jamming exclusion and flexible frequency synthesis, digital modulation and matched filter detection technology.

SDR400 series of high-speed frequency hopping digital radio (module) super-class performance and technical indicators, excellent resistance to electromagnetic jamming and reliable communication capabilities and advanced encryption communication function, is the industry's leading super digital transmission products.

### SDR400 Features

- Point-to-point, point-to-multipoint, TDMA, store forwarding, roaming
- The software can be set to select the 400 / 900MHz or 800MHz operating frequency band
- Air speed up to 345kbps (@ 900MHz)
- Ultra low noise and jamming suppression 4-level filtering
- Transmit power 2 W / 5 W / 25 W (adjustable)
- 32-bit CRC with retransmission, selectable forward error correction
- Independent diagnostic port - real-time remote diagnostics and wireless network control
- Low power consumption of sleep and perception modes
- Industrial temperature range
- Very small size
- Aviation, military grade connection plug package options
- Compatible with Microhard N920F
- Compatible with PCC, Trimble, Satel GNSS / RTK data link protocol



hp840/hp900  
(26.5x19x2.75/34.5x25.5x6.5mm, 2/12g)  
(2Watts, CMOS/232, 3.3-3.6/7-30V, 2A)



SDR400M  
(65x36x13mm, 25g)  
(2Watts, 232/TTL/485/422, 5-25V/2A)



SDR400L Enclosed  
(65x36x13/40x67x15mm, 25/57g)  
(2Watts, TTL/USB/232/485/422, 5-25V/2A)



SDR400H Enclosed  
(8.3x4.8x1.7/5.7x9.8x4.3cm, 50/228g)  
(7Watts, 232/485/422, 10-16V/2A)



SDR400-10/25Watts Enclosed  
(9.1x6x2.1/10.5x8.2x3.7/10.5x7.9x4.2cm, 156/365g)  
(5/15/25W, 19.2-345kbps, 232/485/422, 9-16V/10.5-16V/3-6A) (19.2-345kbps, Multichannel, 232/485/422, 6-25V/2A)



SDR400-Multichannel (data, voice, GPS)  
(11.4x9.8x4.3/8.7x5.4x2.2mm, 300/135g)



Microhard N920 compatible    MDS EL805 compatible    Digi 9XTend compatible

# SDR400 Series

# Specifications

<b>Frequency</b>	410-480MHz/840-845MHz/902-928MHz	<b>Frequency 410 to 480MHz(Licensed Band)</b>				
<b>Spreading Method/ Modulation Scheme</b>	Frequency Hopping GMSK,2GFSK,4GFSK,QPSK	<b>Rate(kbps)</b>	<b>power</b>	<b>Sensitivity(dBm)</b>	<b>Bandwidth (kHz)</b>	<b>Regulatory</b>
<b>Forward Error Correction</b>	Hamming,BCH,Golay,Reed-Solomon,Viterbi	3.6	2W	-118	6.25	FCC/IC/CE
<b>Error Detection</b>	32 bits of CRC,ARQ	4.8	2W	-117	12.5	FCC/IC/CE
<b>Encryption</b>	Optional(see-AES option)	9.6	2W	-115	12.5	FCC/IC/CE
<b>Serial Interface</b>	3.3V CMOS,RS232/485(Selectable)	19.2	2W	-114	25	IC/CE
<b>Serial Baud Rate</b>	300bps to 230.4kbps	<b>Frequency 410 to 480MHz(Frequency Hopping)</b>				
<b>Operating Modes</b>	Point-to-Point,Point-to-Multipoint, TDMA,Store&For-ward Repeater, Peer-to-Peer	56	2W**	-113	60	None*
<b>Signals Interface</b>	RSSI LEDs,Tx/Rx LEDs,Reset ,Config, Wake-up,RSmode,4 Digital Inputs/ Outputs,1Analog Input,1Analog Output	115.2	2W**	-109	150	None*
<b>Remote Diagnostics</b>	Battery Voltage,Temperature,RSSI, Packet Statistics	172.8	2W**	-108	180	None*
<b>Rejection</b>	Adjacent Channel @ 400 MHz:60 dB Alternate Channel @ 400 MHz:70 dB Adjacent Channel @ 900 MHz:57 dB Alternate Channel @ 900 MHz:65 dB	230.4	2W**	-106	230	None*
<b>Core Voltage</b>	3.3VDC is required for 1W 3.6VDC is required for 2W	276.4	2W**	-105	230	None*
<b>Power Consumption (3.3V)</b>	Sleep: <1mA(Future) Idle: 20mA Rx: 45mA to 98mA Tx Peak: 2A	345	2W**	-103	400	None*
<b>Connectors</b>	Antenna:UFL Data :80 Pin SMT	<b>Frequency 840-845/902-928MHz(Frequency Hopping)</b>				
<b>Environmental</b>	-55°C ~+85°C 5~95% humidity,non-condensing	19.2	1W	-116	25	FCC/IC
<b>Weight</b>	Approx. 5 grams	56	1W	-113	60	FCC/IC
<b>Dimensions</b>	Approx. 1.05"x1.3"x.13" (26.5mm x 33mm x 3.5mm)	115.2	1W	-109	150	FCC/IC
<b>Approvals</b>	FCC Part 15.247 Pending IC RSS210 Pending FCC Part 15.90 Pending IC RSS119 Pending CE Pending	172.8	1W	-108	180	FCC/IC
		230.4	1W	-106	230	FCC/IC
		276.4	1W	-105	230	FCC/IC
		345	1W	-103	400	FCC/IC
		19.2	2W**	-115	25	None*
		56	2W**	-110	60	None*
		115.2	2W**	-109	150	None*
		172.8	2W**	-108	180	None*
		230.4	2W**	-106	230	None*
		276.4	2W**	-105	230	None*
		345	2W**	-103	400	None*
		<b>Order Options</b>				
		SDR400	Base Model(1W 900MHz FHSS & 2W 400MHz Narrow-band Operation)			
		-840	840-845MHz Frequency Hopping & Single Channel			
		-AES	128-bit AES Encryption			
		-C1S	1W @ 900MHz,400MHz Hopping & 2W 400MHz Licenced & 128-bit AES			
		-C2S	2W @ 900MHz,400MHz Hopping & 2W 400MHz Licenced & 128-bit AES			



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