



HOPERF

Leading Manufacturer of IoT Key Components

RF

RF IC		RF Module	
	Develop Tool Kit		RF Solution

SENSOR

Pressure Sensor	Humiture Sensor		Customized Sensor
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WiFi Module **BLE Module** **4G-LTE Module** **NB-IoT Module**



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IC | Module | Solution
HOPE MICROELECTRONICS CO., LTD

HOPERF

HOPE MICROELECTRONICS CO.,LTD

ADD.: 2/F Building 3, Pingshan Private Enterprise S.T. Park,
Xili, Nanshan, Shenzhen, Guangdong, China 518057
Tel: +86-755-82973805 82973807 86106673
Fax: +86-755-82973550 Service Line: 4001-189-180
E-mail: sales@hoperf.com
Website: <http://www.hoperf.com>



RF IC ▶▶

CMOSTEK

RF Tx & Rx

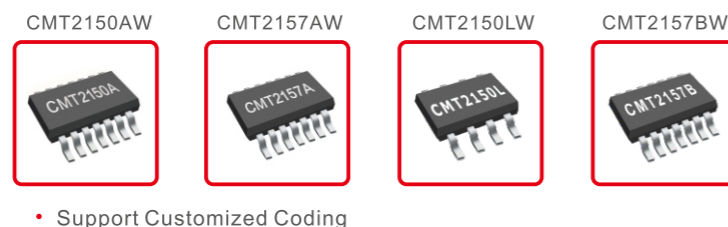
NextGenRF™



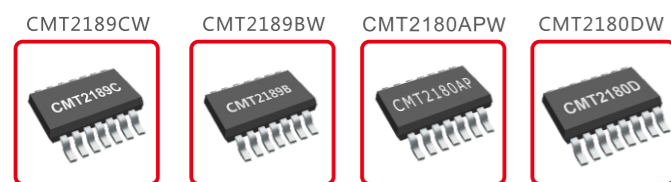
RF TRx



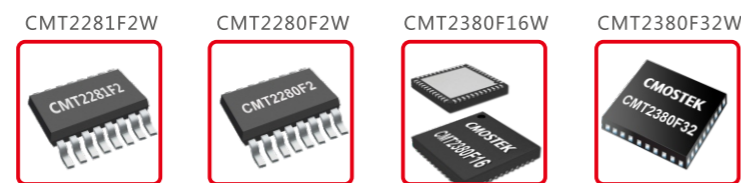
RF with Encoder



RF Tx SoC



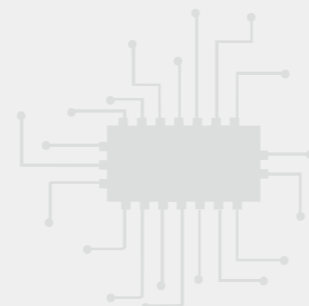
RF Rx SoC



RF TRx SoC

Superiority ▶▶

- ▶ Parameters flexibly configurable and modifiable with UI software, without software programming
- ▶ Built-in EEPROM(optional), support online million times of modification
- ▶ Ensure 100% pass of the safety certification of CE and FCC
- ▶ Key arbitrarily configurable, avoiding crack
- ▶ Pin to pin compatible, replacing directly
- ▶ Save raw materials, improve production efficiency



CMOSTEK

▶▶ Selection Guide of CMT Series ◀◀





Trx	PN	Modulation	Maximum Data Rate	Frequency Range	Sensitivity	Output Power	Size	Package	Remark
TRx	CMT2300AW	OOK/(G)FSK / (G)MSK	0.5-300Kbps(FSK) 0.5-40Kbps(OOK)	127-1020MHZ	-120 dBm	20dBm	3*3*0.75mm	QFN(16)3x3	3+1 wire SPI
Tx	CMT2110AW	OOK	0.5-30Kbps	240-480 MHZ	-	13dBm	2.92*2.8*1.1mm	SOT23-6	1-wire Interface
Rx	CMT2210LBW	OOK	0.1-40Kbps	300-480 MHZ	-113dBm	-	4.92*6*1.65mm	SOP8	Standalone + 1 Dout
Rx	CMT2210LHW	OOK	0.1-40Kbps	300-480 MHZ	-109dBm	-	4.92*6*1.65mm	SOP8	Standalone + 1 Dout
Rx	CMT2217LBW	OOK	0.1-40Kbps	300-920MHZ	-113dBm	-	4.92*6*1.65mm	SOP8	Standalone + 1 Dout
Rx	CMT2217BW	OOK	0.1-40Kbps	300-920MHZ	-113dBm	-	3*3*0.75mm	QFN16	Standalone + 1 Dout
Tx	CMT2119AW	(G)FSK/OOK	0.5-100Kbps (FSK/GFSK) 0.5-30Kbps(OOK)	240-960MHZ	-	13dBm	2.92*2.8*1.1mm	SOT23-6	1-wire Interface + TWI
Rx	CMT2219AW	OOK/(G)FSK / (G)MSK	0.1-100Kbps(FSK) 0.5-30Kbps(OOK)	300-960 MHZ	-114dBm	-	3*3*0.75mm	QFN16	3+1 wire SPI
Tx	CMT2119BW	(G)FSK/OOK / (G)MSK	0.5-300Kbps(FSK) 0.5-40Kbps(OOK)	127-1020MHZ	-	20dBm	3*3*0.75mm	QFN16	3+1 wire SPI
Rx	CMT2219BW	(G)FSK/OOK / (G)MSK	0.5-300Kbps(FSK) 0.5-40Kbps(OOK)	127-1020MHZ	-120dBm	-	3*3*0.75mm	QFN16	3 wire SPI +1-wire Interface
Rx	CMT2218BW	(G)FSK	0.5-300Kbps	127-1020MHZ	-120dBm	-	3*3*0.75mm	QFN16	Direct Mode
Tx	CMT2150LW	OOK	0.5-40 kbps	240-480MHZ	-	13dBm	4.92*6*1.65mm	SOP8	Encoder + 6 Keys
Tx	CMT2157BW	OOK	0.5-40 kbps	240-960MHZ	-	13dBm	8.65*6*1.75mm	SOP14	Encoder + 10 Keys
Tx	CMT2189BW	OOK	1-40Kbps	240-960MHZ	-	13dBm	8.65*6*1.75mm	SOP14	With PIC-Like MCU
Tx	CMT2189CW	OOK/(G)FSK	1-100Kbps(FSK) 1-30Kbps(OOK)	240-960MHZ	-	13dBm	8.65*6*1.75mm	SOP14	With PIC-Like MCU
Tx	CMT2180DW	OOK	1-30Kbps(OOK)	300-480MHZ	-	13dBm	10*6.2*4.4mm	SOP16	With PIC-Like MCU
Rx	CMT2280F2W	OOK	1-40Kbps	300-960MHZ	-113dBm	-	10*6.2*4.4mm	SOP16	With PIC-Like MCU
Rx	CMT2281F2W	OOK	1-40Kbps	300-960MHZ	-109dBm	-	10*6.2*4.4mm	SOP16	With PIC-Like MCU
TRx	CMT2380F16W	OOK/(G)FSK / (G)MSK	0.5-300Kbps(FSK) 0.5-40Kbps(OOK)	127-1020MHZ	-120dBm	20dBm	6*6*0.75mm	QFN48	With 8051 Core MCU
TRx	CMT2380F32W	OOK/(G)FSK / (G)MSK	0.5-300Kbps(FSK) 0.5-40Kbps(OOK)	127-1020MHZ	-120dBm	20dBm	5*5*0.75mm	QFN40	With Cortex M0+







* We provide customized service for module products. Please consult the sales staffs for more information.





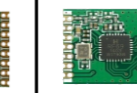
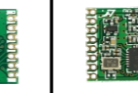
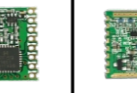


RF Module ▶▶

RF COB Module

Model No.	RFM110W (TX)	RFM217LBW (RX)	RFM210LBW (RX)	RFM217BW (RX)
Photo				
Frequency(MHz)	315/433	315/433/868/915	315/433	315/433/868/915
VDD(V)	1.8-3.6	1.8-3.6	1.8-3.6	1.8-3.6
Modulation	OOK	OOK	OOK	OOK
Max. Data Rate (kbps)	30	40	40	40
Current (mA)	Tx	-	-	-
	Rx	-	3.8	3.8
Sensitivity (dBm)	-	-113	-113	-113
Output Power (dBm)	13	-	-	-
Size(mm)	17.8x12.8x5	32x11x5	32x11x5	32x11x5
Interface	TWI	TWI	TWI	TWI





Model No.	RFM210LCFW (RX)	RFM119W (TX)	RFM119SW (TX)	RFM119BW (TX)	RFM219BW (RX)	RFM219SW (RX)
Photo						
Frequency(MHz)	315/433	315/433/868/915	315/433/868/915	315/433/868/915	315/433/868/915	315/433/868/915
VDD(V)	1.8-3.6	1.8-3.6	1.8-3.6	1.8-3.6	1.8-3.6	1.8-3.6
Modulation	OOK	(G)FSK/OOK	(G)FSK/OOK	(G)FSK/OOK	(G)FSK/OOK	(G)FSK/OOK
Max. Data Rate (kbps)	40	100/30	100/30	300/40	300/40	100/30
Current (mA)	Tx	-	33	33	75	-
	Rx	3.8	-	-	-	7
Sensitivity (dBm)	-113	-	-	-	-120	-109
Output Power (dBm)	-	13	13	20	-	-
Size(mm)	32x11x5	17.8x12.8x5	17.8x12.8x5	16x16x1.9	16x16x1.9	16x16x5
Interface	TWI	TWI	TWI	SPI	SPI	SPI

Model No.	RFM300W (TRX)	RFM300HW (TRX)	RFM63W (TRX)	RFM64W (TRX)	RFM69CW (TRX)	RFM69HCW (TRX)	RFM23BPW (TRX)
Photo							
Frequency(MHz)	315/433/868/915	315/433/868/915	868/915	315/433	315/433/868/915	315/433/868/915	433/868/915
VDD(V)	1.8-3.6	1.8-3.6	2.1-3.6	2.1-3.6	1.8-3.6	1.8-3.6	5-6
Modulation	(G)FSK/OOK	(G)FSK/OOK	FSK/OOK	FSK/OOK	(G)FSK/OOK	(G)FSK/OOK	FSK/OOK
Max. Data Rate (kbps)	300/40	300/40	200	200	300	300	256
Current (mA)	Tx	28	75	25	25	45	130
	Rx	7	7	3	3	16	16
Sensitivity (dBm)	-120	-120	-110	-110	-120	-120	-120
Output Power (dBm)	13	20	12	12	13	20	30
Size(mm)	16x16x1.9	16x16x1.9	19.7x16x1.9	19.7x16x1.9	16x16x1.9	16x16x1.9	33x18x1.9
Interface	SPI	SPI	SPI	SPI	SPI	SPI	SPI

*We provide customized service for module products
Please consult the sales staffs for more information





RF Data Module

SoC COB Module






Model No.	HM-TRLR-SW (TRX)	HM-TRLR-DW (TRX)	HM-TRPW (TRX)	RFM50W (TRX)
Photo				
Frequency(MHz)	434/470/868/915	434/470/868/915	434/470/868/915	315/433/868/915
VDD(V)	2.4-3.6	3.6-5.5	2.4-3.6	1.9-3.6
Modulation	LoRa/(G)FSK/OOK	LoRa/(G)FSK/OOK	(G)FSK/OOK	(G)FSK/OOK
Max. Data Rate (kbps)	37.5 (LoRa) 300 (GFSK)	37.5 (LoRa) 300 (GFSK)	115.2	256
Current (mA)	Tx	120	100	85
	Rx	16	16	25
Sensitivity (dBm)	-139	-139	-117	-126
Output Power (dBm)	20	20	20	20
Size(mm)	16X20X2	47X26X10	16X20X2	16x16x1.9
Interface	TTL	TTL/RS485/RS232	TTL/RS485/RS232	SoC




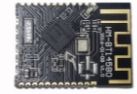
2.4GHz Module







LoRaWAN Module

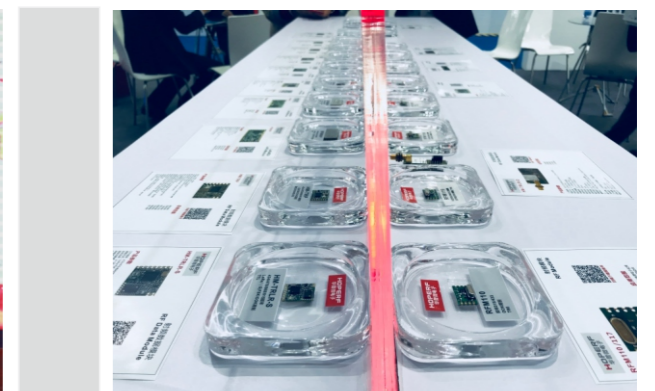
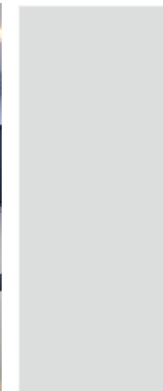
Model No.	RFM75W (TRX)	RFM75PW (TRX)	HM-LWNH	
Photo				
Frequency(MHz)	2400~2483	2400~2483	868/915 MHz	430-510/780-928 MHz
VDD(V)	1.9-3.6	3.3-4.2	1.8~3.6V	1.8~3.6V
Modulation	(G)FSK	(G)FSK	LoRa	LoRa
Max. Data Rate (kbps)	250K/1M/2M	250K/1M/2M	9600 bps	9600 bps
Current (mA)	Tx	18	138mA(Max.145mA)	138mA(Max.145mA)
	Rx	16	21	1.8uA (睡眠)
Sensitivity (dBm)	-96	-107	-129 dBm	-129 dBm
Output Power (dBm)	4	28	19.5 dBm	19.5 dBm
Size(mm)	16.8x12.8x2	33X18X2	32X21X2.5mm	32X19X2.5 mm
Interface	SPI	SPI	TTL/RS485/RS232	TTL/RS485/RS232

LoRa Module

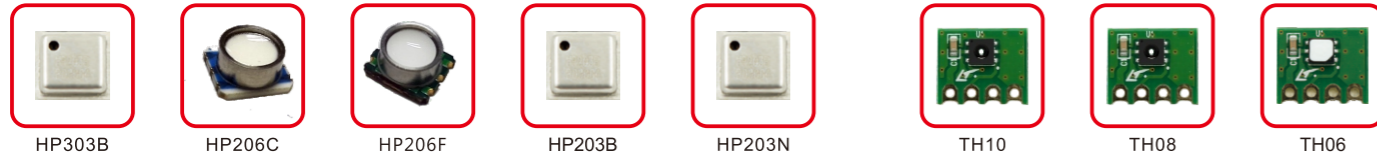
Model No.	RFM95W (TRX)	RFM95PW (TRX)	RFM96W (TRX)	RFM98PW (TRX)	RFM98W (TRX)
Photo					
Frequency(MHz)	869/915	869/915	433/470	169/433/470	433/470
VDD(V)	1.8~3.7	5.0~6.4	1.8~3.7	5.0~6.4	1.8~3.7
Modulation	LoRa/(G)FSK/OOK	LoRa/(G)FSK/OOK	LoRa/(G)FSK/OOK	LoRa/(G)FSK/OOK	LoRa/(G)FSK/OOK
Max. Data Rate (kbps)	37.5 (LoRa) 300 (GFSK)	37.5 (LoRa) 300 (GFSK)	37.5 (LoRa) 300 (GFSK)	37.5 (LoRa) 300 (GFSK)	37.5 (LoRa) 300 (GFSK)
Current (mA)	Tx	120	450	120	300/500
	Rx	10.3	10.3	10.3	10.3
Sensitivity (dBm)	-139	-139	-139	-139	-139
Output Power (dBm)	20	27	20	27/30	20
Size(mm)	16X16X1.8	18X35.4	16X16X1.8	18X35.4	16X16X1.8
Interface	SPI	SPI	SPI	SPI	SPI

WiFi Module		LoRaWan Module		BLE Module
Model No.	HP-WF8266	HM-LWNH	RFM6501	HM-BT4501
Photo				
Frequency(MHz)	2.4GHz (2412-2484)	868/915 MHz	470/868/915 MHz	2402-2480 MHz
VDD(V)	2.5~3.6V	1.8~3.6V	2.4~3.7V	1.8~3.6V
Modulation	802.11b/g/n	LoRa	LoRa	BLE
Max. Data Rate (kbps)	4608 Serial port	9600 bps	9600 bps	115.2Kbps
Current (mA)	Tx	170mA (Typ.)	138mA(Max.145mA)	<8mA
	Rx	<20uA(Deep-Sleep)	1.8uA(Typ.)	2uA(Typ.)
Sensitivity (dBm)	-91dBm(11Mbps)	-129 dBm	-129 dBm	-97dBm (Receiving)
Output Power	17dBm	19.5 dBm	19.5 dBm	+10dBm
Size(mm)	16x24x3.2mm	32X21X2.5mm	16x16x2.8mm	12.5x17x2.5mm
Interface	UART	UART	UART	UART

NB-IoT Module		4G-LTE Data Module	4G-LTE Smart Module				
Model No	HPM152	Model No.	HPM750	HPM755	HPM756	HPM757	HPM758
Photo		Photo					
Frequency	B5, B8	Operation System	MDM9x07	MSM8909	MSM8909	MSM8917	MSM8953
VDD	3~4.2V	Territory	China, Europe, Asia, North American, South American	China, North American	China, Europe, Asia, North American, South American	China, Europe, Asia, North American, South American	China, Europe, Asia, Japan
Consumption	5 uA @PSM(Type)	Memory Size		8GB eMMC + 1GB LPDDR3 16GB+2GB *Optional	8GB eMMC + 1GB LPDDR3	8GB eMMC + 1GB LPDDR3 16GB+2GB *Optional	16GB eMMC+2GB LPDDR3 32GB+4GB *Optional
	2.5mA @DRX=1.28(Type)	Data Input	Cat4 FDD-LTE 150/50Mbps Cat4 TD-LTE 117/30Mbps DC-HSPA+ 42/11.2Mbps TD-HSPA 2.8/2.3Mbps EVDO Rev.A 3.1/1.8Mbps EDGE 236.8kbps/236.8kbps GPRS 85.6kbps/85.6kbps	Cat4 FDD-LTE 150/50Mbps Cat4 TD-LTE 117/30Mbps DC-HSPA+ 42/11.2Mbps TD-HSPA 2.8/2.3Mbps EVDO Rev.A 3.1/1.8Mbps EDGE 236.8kbps/236.8kbps GPRS 85.6kbps/85.6kbps	Cat4 FDD-LTE 150/50Mbps Cat4 TD-LTE 117/30Mbps DC-HSPA+ 42/11.2Mbps TD-HSPA 2.8/2.3Mbps EVDO Rev.A 3.1/1.8Mbps EDGE 236.8kbps/236.8kbps GPRS 85.6kbps/85.6kbps	Cat4 FDD-LTE 150/50Mbps Cat4 TD-LTE 117/30Mbps DC-HSPA+ 42/11.2Mbps D-HSPA 2.8/2.3Mbps EVDO Rev.A 3.1/1.8Mbps EDGE 236.8kbps/236.8kbps GPRS 85.6kbps/85.6kbps	Cat4 FDD-LTE 150/50Mbps Cat4 TD-LTE 117/30Mbps DC-HSPA+ 42/11.2Mbps TD-HSPA 2.8/2.3Mbps EVDO Rev.A 3.1/1.8Mbps EDGE 236.8kbps/236.8kbps GPRS 85.6kbps/85.6kbps
Interface	1*Power Key ; 3*UART 1*SIM Card Socket ; 1*I2C 1*Reset ; 1*ADC ; 1*DAC 1*SPI ; LED_STATUS WAKEUP_IN & WAKEUP_OUT	Package Size	32.0x29.0x2.4mm LCC封装 (80pin)+LGA 64pin	40.5x40.5x3.0mm Stamp Hole Packaging Bottom Pad 130pin	44.0x39.0x3.0mm Stamp Hole Packaging Bottom Pad 130pin	41.0x41.0x3.0mm Stamp Hole Packaging Bottom Pad 146pin+92pin LGA	41.0x45.5x3.0mm 160pinLCC + 112pin LGA
Output Power	23±2dBm	Main Features	Support Multiple Voice Coding (HR, FR, EFR, AMR, AMR-WB) Support SRLTE/CSFB/VOLTE (*Optional) Support High-speed USB 2.0 Support RF MIMO/Receive diversity Improve the communication feature	Voice, Message, Address Book WiFi 2.4G, BT4.1 GPS/Beidou/Glonass.	Voice, Message, Address Book WiFi 2.4G, BT4.1 GPS/Beidou/Glonass.	Voice, Message, Address Book WiFi 2.4G, BT4.1 GPS/Beidou/Glonass. Galileo	Voice, Message, Address Book WiFi 2.4G, BT4.1 GPS/Beidou/Glonass, Galileo Support Dual 1300W Pixels 3D Camera & Depth of Focus
Protocol	TCP/UDP/SSL /MQTT/COAP	Camera (Front/Rear)		Camera Pixel: Max: Front 5MP/Rear 8MP	Camera Pixel: Max: Front 5MP/Rear 8MP	Camera Pixel: Max: Front 8MP/Rear 16MP	Camera Pixel: Max: Front 13M/Rear 13-24M Dual ISP support Dual 13MP
Size	17.6x15.9x2.3mm	Temperature	-40°C to 85°C	-25°C to 75°C	-25°C to 75°C	-30°C to 75°C	-30°C to 75°C



SENSOR ▶



Pressure Sensor

P/N	Pressure Range (mbar)	Pressure Accuracy (mbar)	Pressure Resolution (mbar)	Altitude Resolution (m)	Temp Range (°C)	Temp Accuracy (°C)	Temp Resolution (°C)	Working Voltage (V)	Working Current (μA)	Sleep Current (μA)	Size (mm)	Package	Interface	Picture
HP303B	300~1200	±1.5	0.01	±0.05	-40~+85	±1	0.01	VDDIO: 1.2~3.6 V VDD: 1.7~3.6 V	5.7	< 0.1	3.8X3.6X1.2	QFN8	I ² C SPI	
HP206C	0~10000	±1.5	0.1	0.2	-40~+85	±1	0.01	1.8~3.6	5.7	< 0.1	6.8X6.2X3.0	QFN6	I ² C	
HP206F	300~1200	±3.5	0.01	0.2	-20~+85	±1	0.01	1.8~3.6	5.3	< 0.1	6.8X6.2X3.0	QFN6	I ² C	
HP203B	300~1200	±1.5	0.01	0.2	-20~+85	±1	0.01	1.8~3.6	5.7	< 0.1	3.8X3.6X1.2	QFN8	I ² C	
HP203N	300~1200	±2	0.01	0.2	-20~+85	±1	0.01	1.8~3.6	5.7	< 0.1	3.8X3.6X1.2	QFN8	I ² C	

Humiture Sensor ▶

P/N	Temp Range (°C)	Temp Resolution (°C)	Humidity Range (%)	Humidity Resolution (%)	Working Voltage (V)	Sleep Current (μA)	Size (mm)	Interface	Picture
TH10	-40~+85	0.1	0%~100%	±1.5%	2.4~5.5	<180	10.8x9.1x1.8	I ² C	
TH08	-40~+85	0.3	0%~100%	±2%	1.9~3.6	<180	10.8x9.1x1.8	I ² C	
TH06	-40~+125	0.5	0%~100%	±4%	1.9~3.6	<180	10.8x9.1x1.8	I ² C	

Customized Sensor ▶

Custom Types	Measurement Range	Application	Picture
Gauge Pressure Sensor	15kpa~3.5MPa	Tire Pressure Monitoring, Security, Air Conditioning, Industrial Control, Industrial Instrument, Etc.	
Differential Pressure Sensor	2kpa~3.5MPa	Flow, Level, Medical, Leak Detection, Etc.	

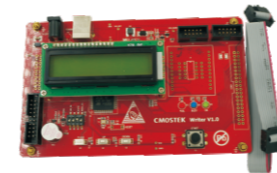
Advantages

- High performance of waterproof 100m, 100atm, 10bar
- 24 bits ADC with DSP, output of the pressure, altitude and temperature values directly
- 14 items of reliability test such as high / low temperature, vibration, fall and waterproof, ensure the consistency of products.
- Reflow soldering allowed, enabling efficient placement

Applications

- Measuring the absolute altitude and relative height
- Forecast 3-6 kinds of weather conditions of the next 6 hours
- Set high, slow descent, hover and return for aeromodelling toys
- Locate fast and accurately with fusion algorithms of GPS and pressure
- High pressure with more dissolved oxygen, to determine the depth of fishing spots & bait
- Test the pressure of coal gas, fue gas and warm gas pipelines

P/N	Qty/Up(pcs)	Packing Qty / GW		
		GW/Up(kg)	Qty/Ctn(pcs)	GW/Ctn(kg)
HP303B	3000	0.45	30000	5.5
HP206C	1000	0.64	10000	7.4
HP206F	1000	0.67	10000	7.7
HP203B	3000	0.45	30000	5.5
HP203N	3000	0.45	30000	5.5
TH06	1040	0.53	9360	5.8
TH08	1040	0.53	9360	5.8
TH10	1040	0.53	9360	5.8



Writer



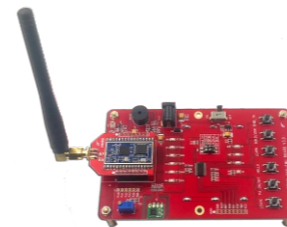
USB Programmer

HopeDuino™

- * Compatible for Arduino IDE
- * Support whole series of HOPERF Module development



RF-EB



LoRa Demo Board



LoRaWan Gateway

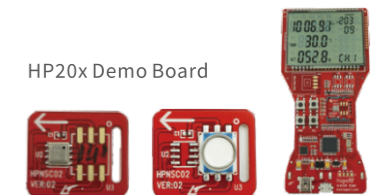


HP20x Demo Board



HopeDuino™

- * Compatible for Arduino IDE
- * Support whole series of HOPERF Sensor Module development



About HOPERF



HOPERF Micro-Electronics Co., Ltd. (hereinafter referred to as "HOPERF"), established in 1998, is a national level high tech company which specialized in the design and manufacture wireless radio frequency and sensor products. With a global operation comprising a vertically integrated factory, HOPERF has developed into the first intact industry chain group company in China which integrating ASIC chip design, MEMS sensor chip design, package test calibration technique and application services.

HOPERF has a top R&D team with more than 80 global employees, and 60% of them are professionals that from international top-grade enterprises in like Germany, United States, Switzerland, etc. HOPERF has multiple international leading technologies in internet-of-thing field, and the unique patent NextGenRF™ algorithm in chip design aspect can fill up the blank in domestic. It also got 8 enterprise certifications, 26 special inventions & 9 software copyrights.

HOPERF built up a 30,000 square meters' modern manufactory in Wuxi Taihu Technology Park and imported advanced top-ranking encapsulation & testing equipments with high-precision test measuring system which can perform strictly production management according to ISO9001 thus to fully ensure the reliability and stability of product quality.

Our RF product line mainly includes Sub-1GHz RF chip with independent intellectual property rights (the CMT series) and all kinds of RF modules. We are good at providing personalized customization development and Internet of things application program development for customers. Compliance with ROHS and other standards that assured by the top of the range SMT machinery, fully automated assembly, testing and oven reflow. Our factory is vertically integrated to perform such processes as Wafer release, MEMS die attach, Automation inorganically bonded, Encapsulation and test, Calibration...through all phases of the processes. A fully integrated company and manufacturing management system allows us to provide our customers with complete project management.

We are well-placed to handle OEM projects and more standard sensor requirements for customers from world- wide. We have abilities to realize fast delivery and provide technical supports after-sales.

HOPERF's products have already applied in 33 countries and served for more than 2000 brand customers from world-wide. Our products were comprehensively applied in security system, wireless meter reading, smart home, automotive electronics, environmental monitoring, medical monitoring, intelligent health and much more other fields.

We pay attention to the value of long-term strategic partners, and offer top quality service and customer support. We are looking forward to cooperate with you!



President:

武招康



Talents On RF & Sensor ▶▶



Smart Home Remote Control

- a. Sub-GHz remote control/kinetic energy (elf-powered) switch / socket scheme
- b. Sub-GHz remote control/kinetic energy (elf-powered)doorbell scheme
- c. Sub-GHz thermostat



Security Control

- a. Wireless magnetometer
- b. Emergency call / alarm remote control
- c. Alarm host data receiving module



Electric vehicle, car rear loading electronic

- a. Electric vehicle / motorcycle anti-theft device
- b. One way anti-theft for car rear loading
- c. Bi-directional anti-theft device for car rear loading
- d. Car rear loading TPMS (tire pressure monitoring) etc.



Instruments & Apparatuses

- a. Data transparent transmission module
- b. Data transmission module developed by a specified protocol
- Remark: Not involving measurement and measurement parts



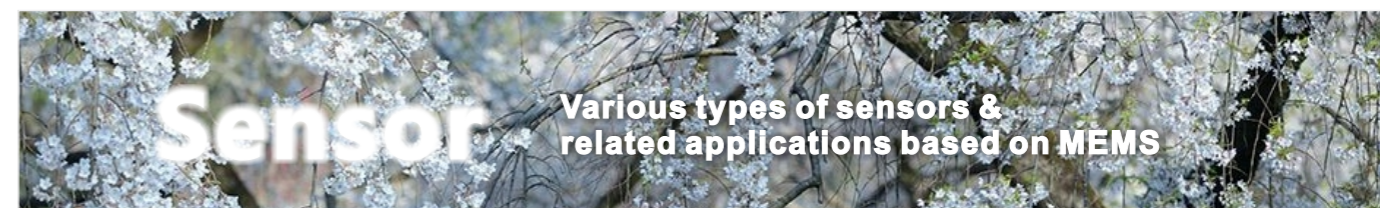
Lighting control

- a. Sub-GHz dual color LED remote control and dimming scheme



Active RFID

- a. Low power Sub-GHz active label product scheme



Pressure Sensors

- a. High precision and stable capacitive digital pressure sensor used to model high, floor detection, outdoor wear, specific industrial applications
- b. High precision digital pressure sensor for resistance type, used in barometer, weather forecast machine, altimeter



Temperature & Humidity sensors

- a. High precision digital temperature sensor that used in the heater, HVAC, ventilation facilities, constant temperature environment, indoor temperature measurement, medical contact temperature measurement
- b. High precision digital temperature and humidity sensor Used for heating humidifier, constant temperature & humidity environment, air conditioning, measurement of medical respiration temperature and humidity



Waterproof Pressure Sensors

High stability waterproof type digital pressure sensor Used for wearable equipment, outdoor waterproof equipment, dive depth detection, industrial pressure measurement



SOP Pressure Sensors

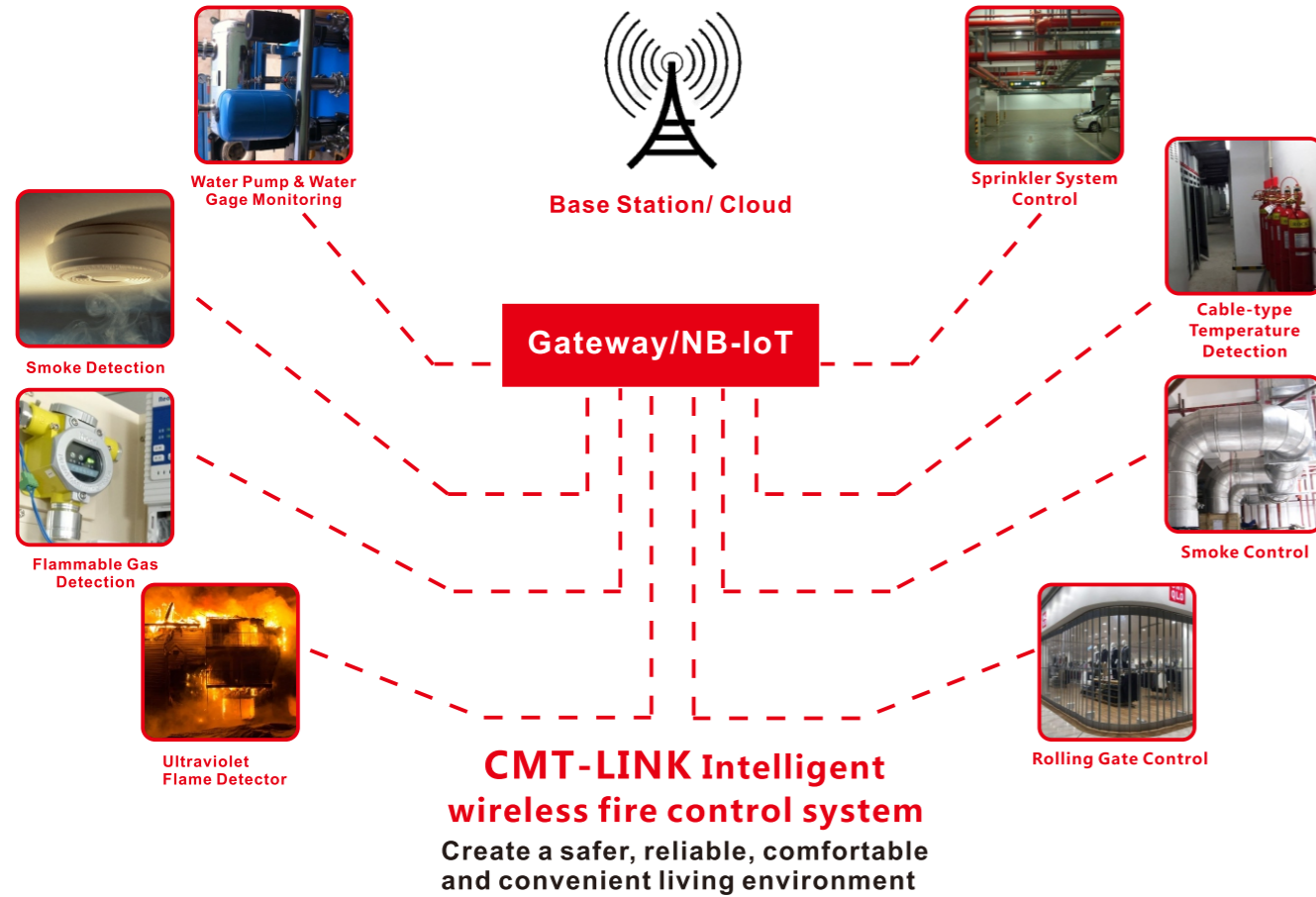
High precision pressure gauge SOP package Sensor (analog quantity)
For the sphygmomanometer, the ventilator, the pressure gauge, ventilation system, smart home



Personalized Custom Sensors

Customizing Sensors

CMT-LINK Star Network Structure Intelligent Bi-directional IoT Control System



Features ▶▶

- Two way FSK wireless communication protocol is adopted in the system
- A star network structure between gateway nodes and nodes and the maximum number of nodes is up to 50
- Long communication distance and gateway nodes reach a distance of 1000 meters(10Kbps) from the maximum distance from the node
- The communication rate can be up to 300Kbps
- Lower power consumption, and the standby is 1uA
- Conforming to 802.15.4 physical underlying protocol
- Support ED, CS, LQI, CSMA-CA and other data link layer protocol
- Automatic channel switching, automatic offline reconnecting, automatic power controlling
- Active alarm mechanism from nodes
- Connect with the NB-IOT module, 4G/3G/2G module, WIFI module or BLE module through SPI or UART communication port

More Applications of CMT-LINK

<p>Smart Home Household Automation Security Monitoring Kitchen & Bath Security Monitoring Home Information Center Home Environment Controlling</p>	<p>Landscape Sites To provide facilities of security, lighting, flow control, guidance, weather, etc for scenic spots To provide basis for the protection of scenic areamart Animal Farm</p>	<p>Intelligent Nursing Home Management Monitor the physical condition of the elderly Whether the elderly is out of the range Provide a good environment for the elderly Provide timely information to kinsfolk</p>
<p>Intelligent Streetlight Lighting Automation Controlling, Single Lamp Switch & Brightness Control Power Supply Circuit Controlling & Circuit Detection</p>	<p>Smart Metering Smart Water Meter, Smart Gas Meter, Smart Heat Meter Pressure Data, Pipe Leakage Detection Temperature Data, Abnormity Warning Remote Parameter Configuration</p>	<p>Intelligent Hospital Infusion Management Monitor infusion Situation Whether the patient is out of the range Remind the nurse in time Provide Mega Data for Hospital Infusion</p>
<p>Intelligent Photovoltaic Management Environmental Parameter Detection Photovo Itaic Power Generation Efficiency Detection Inverter Condition Detection Troubleshooting</p>	<p>Smart Agriculture Shed Light Intensity Detection, CO2 Detection, Humiture Detection Soil Temperature-moisture and Fertilizer Detection Spray & Irrigation Controlling Sunshade & Aerofluxus Controlling</p>	<p>Smart Manhole Cover Intelligent Lock, Personal Identification Position Demanding, Manhole Cover Stealing Warning Water-level Monitoring, Flood Warning Water Quality Sampling, Biochemical Analysis</p>
<p>Farming monitoring Environmental Status Detection Environmental Control Equipment Electronic Fence, Leaving Alarm Animal Physical Condition Detection</p>	<p>Intelligent Aquiculture Farms Water Temp & O2 Concentration Detection Water Quality Parameter Detection Water Pump Detection & Water Quality Adjustment Fish Growth Density Detection</p>	<p>Cultural Relics Safety Protection Provide high-tech security for cultural relics, monuments and museums Combined remote control lighting, alarm, camera Intelligent Control of Scenic Spot</p>
<p>Intelligent Pipeline System Pipeline Hydraulic & Pressure Detection, Wireless Warning in time Remote Valve Controlling Monitoring Safety Controlling</p>	<p>Intelligent City Remote Controlling Operation Analysis, Proactive Maintenance Tumble Recognition, Abnormity Warning Ads Service</p>	<p>Intelligent Outdoor Environmental Detection Base Station Signal Coverage, Environmental Monitoring, Advertising Display, Charging Pile</p>
<p>Central Air-conditioning Control Remote Controlling Intelligent Temperature Controlling To achieve the energy saving and efficient operation of the central air-conditioning system Elevator Net-connected</p>	<p>Intelligent Parking Collecting Parking Information Parking Guidance Back/Finding Cars Parking Charge</p>	<p>Intelligent Hillside Soil and Water Monitoring To monitor mountain slope moisture for soil-water protection All-time surveillance of important slopes, tunnels, riverbanks, reservoirs, railways, etc</p>
<p>Vehicle Engineering Management Fuel Consumption Monitoring, Operation State Monitoring Operational Monitoring, Intelligent Scheduling Track Playback, Speed Limit Area</p>	<p>Intelligent Agriculture Soil Moisture Monitoring, Agricultural Environmental Monitoring Meteorological Monitoring, Air Quality Monitoring Water Conservancy and Hydrology, Water Quality Detection</p>	<p>Intelligent Wastebin Intelligent sending full/empty flag of rubbishes for better controlling Air cleaning for better environment Sensor switch for better experience of dumping wastes</p>



HOPE MICROELECTRONICS CO., LTD
Leading Manufacturer of IoT Key Components
Based on China and to serve the global industry