
RF4463Pro-915-H1 Wireless Module with U.FL (IPEX) connector

1. Description

RF4463Pro-915-H1 adopts Silicon Lab EzradioPro2 RF transceiver Si4463, which is a highly integrated wireless ISM band transceiver chip. The features of high sensitivity (-121 dBm), low current consumption, 10PPM crystal, and good RF matching circuit make this module work well in hot/cold environment with reliable communication and long distance.



2. Features

- Frequency Range: 902.5-927.5MHz
- Sensitivity up to -126 dBm
- Software Version:RF4463 TEST DEMO
- Hardware Version:RADIOBOARD V3.3
- 10mA@receiver mode
- Data transfer rate: 0.1-1000 kbps
- FSK, GFSK and OOK Modulation mode
- 1.8-3.6 V Power supply
- Ultra-low consumption shutdown mode
- Digital received signal strength indicator (RSSI)
- Timed wake-up function
- Excellent antenna match circuit and bi-direction communication
- Preamble detection
- Configurable packet structure
- Built-in crystal adjustment function
- Low-battery detection
- Temperature sensor and 8-bit analog-to-digital converters
- Operating Temperature Range: -40 ~ + 85 °C
- Integrated voltage regulator
- Frequency hopping
- Power-on reset function
- 64/128byte transmit and receive data register (FIFO)

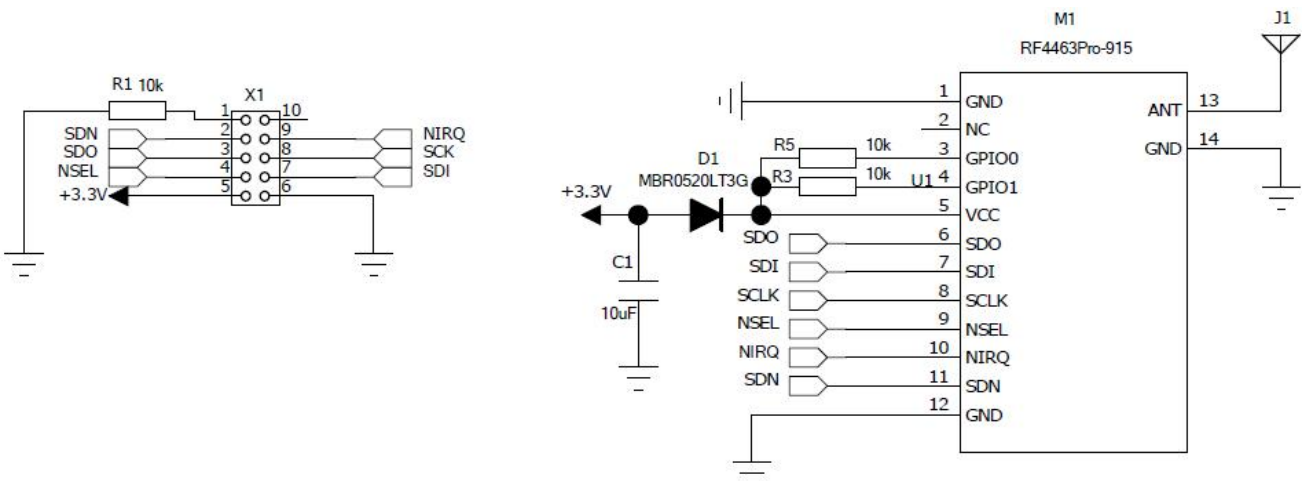
3. Application

- Remote control
- Remote meter reading
- Home security alarm and remote keyless entry
- Industrial control
- Home automation remote sensing
- Individual data records
- Toys control
- Sensor network
- Tire pressure monitoring
- Health monitoring
- Wireless PC peripherals
- Tag reading and writing

4. Electrical Specifications

Parameter	Min	Typ	Max	Unite	Condition
Working condition					
Working voltage range	1.8	3.3	3.6	V	
Temperature voltage	-40		85	°C	
Current consumption					
Receiving current		13.5		mA	High performance mode
Receiving current		10.7		mA	Low power mode
Transmitting current		85		mA	@20dBm
Sleep current		<0.1		uA	
parameter					
	902	915	928	MHZ	@915MHZ
Modulation rate	0.123		1000	Kbps	FSK
Output power range	-5		20	dBm	
Receiving sensitivity		-126		dBm	@data=500bps,Fdev=3kHZ

5. Schematic

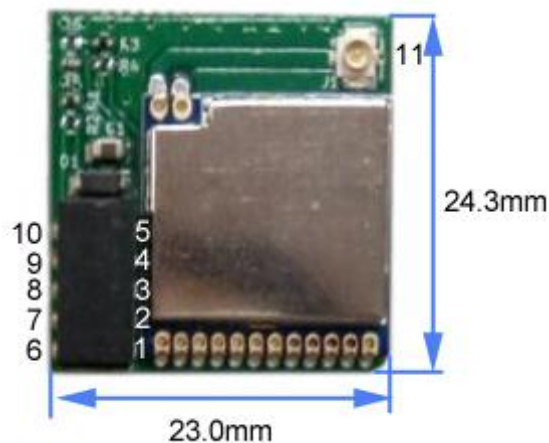


6. Pin Configuration



Pin NO.	Pin name	Description
1	IO	
2	SDN	Power down control. SDN = 1, power down SDN = 0, normal working
3	SDO	Serial data out for SPI interface.
3	GPIO0	GPIO0 of Si4463
4	nSEL	Serial data selection for SPI interfaces.
5	VCC	Positive power supply 3.3V
6	GND	power ground
7	SDI	Serial data in for SPI interface
8	SCLK	Serial data clock for SPI interface
9	nIRQ	Interrupt output
10	NC	
11	ANT	Connect with 50 ohm coaxial antenna

7. Mechanism dimensions



FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

FCC ID: **2AD66-4463H1**

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures. Referring to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without C2P.
- 3) For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of

FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains FCC ID: **2AD66-4463H1** ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.