

# Radiocontrolli®

Wireless Modules

Rev. 3.1

IOT MODULES

WIFI MODULES

LORA MODULES

BLUETOOTH MODULES

TRANSCEIVER MODULES

ASK/FSK RADIO MODULES



WIRELESS SENSOR NETWORK

INDUSTRIAL AUTOMATION

HOME AUTOMATION

SECURITY SYSTEM

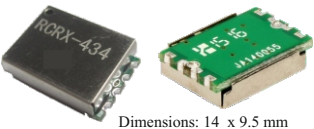
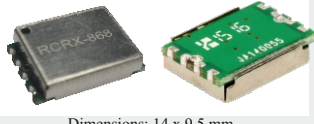
TELEMETRY

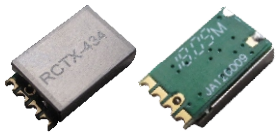
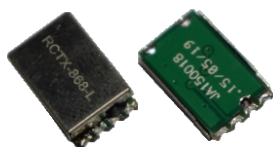





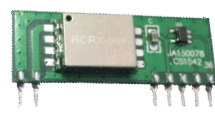
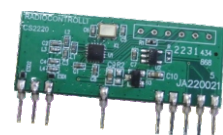
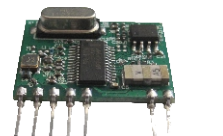
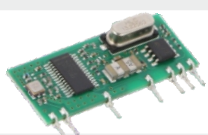
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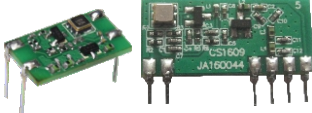


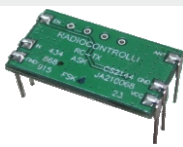
RECEIVER - ASK SUPERHET - Miniaturized Version							
MODEL	DESCRIPTION	Vdc Ic	Sensitivity	Frequency (XXX)	-3dB BW	Data Rate	PICTURE
<b>RCRX-434</b> <b>RCRX-434-L</b>	Very small ASK/OOK Superhet data receiver with PLL. Low Cost. High Performance. Metal Shield .	3 V / 5 V 5.5mA	-108 dBm	433.92 MHz	600 KHz	10 Kbit/s	 Dimensions: 14 x 9.5 mm
<b>RCRX-868</b> <b>RCRX-868-L</b>	Very small ASK/OOK Superhet data receiver with PLL. Low Cost. High Performance. Metal Shield .	3 V / 5 V 5.5mA	-110 dBm	868.35 MHz	360 KHz	10 Kbit/s	 Dimensions: 14 x 9.5 mm

ASK/OOK TRANSMITTER - Miniaturized Version							
MODEL	DESCRIPTION	Vdc	Current	Frequency	RF Power	Data Rate	PICTURE
<b>RCTX-434</b> <b>RCTX-434-L</b>	Very small ASK/OOK transmitter module with crystal oscillator at 433.92MHz. Metal shield. SMD mounting. 5Volt version and 3Volt version <b>315MHz version available</b>	4 - 12 V 2.2-3.6 V	21mA 15mA	433.92 MHz	+11 dBm	50 Kbit/s	 Dimensions: 12 x 6.8 mm
<b>RCTX-868-L</b>	Very small ASK/OOK transmitter module with crystal oscillator at 868.35MHz. Metal shield. SMD mounting. 3Volt version. <b>915MHz version available</b>	2.2-3.6 V	15mA	868.35 MHz	+9 dBm	50 Kbit/s	 Dimensions: 12 x 6.8 mm


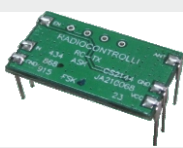
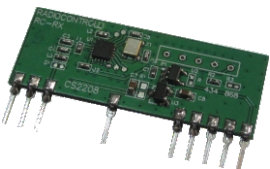
RECEIVER LOW COST - ASK SUPERHET							
MODEL	DESCRIPTION	Vdc Ic	Sensitivity	Frequency	-3dB BW	Data Rate	PICTURE
<b>RCRX1-434</b>  <b>Very Low Cost</b>	ASK/OOK Superhet data receiver. Standard pin out version. <b>Coated version available</b>	2.0 ÷ 5.5V 4.2mA	-110 dBm	433.92 MHz	±350 KHz	10 Kbit/s	 Dimensions: 38 x 12 mm
<b>RCBRX-434</b> <b>RCBRX-434-L</b>	ASK/OOK Superhet data receiver with PLL. Metal Shield. Standard pin out version. 5Volt version and 3Volt version <b>434.5 MHz version available</b>	3V / 5V 5.5mA	-108 dBm	433.92 MHz	600 KHz	10 Kbit/s	 Dimensions: 38 x 14 mm
<b>RCBRX-868-M</b>	ASK/OOK Superhet data receiver with PLL. Metal Shield. Standard pin out version. 5 Volt Version. <b>868.95 MHz version available</b>	5V 5.5mA	-110 dBm	868.35 MHz	360 KHz	10 Kbit/s	 Dimensions: 35.5 x 12.5 mm
<b>RC-RXASK-XXX</b> RC-RXASK-433 = 433.92MHz RC-RXASK-433.42 = 433.42MHz RC-RXASK-434.15 = 434.15MHz RC-RXASK-434.50 = 434.50MHz RC-RXASK-868 = 868.35MHz RC-RXASK-868.95 = 868.95MHz RC-RXASK-869.50 = 869.50MHz	ASK Superhet data receiver with PLL synthesizer crystal oscillator. Standard pin out version. We can customize the Frequency range: <b>from 433.00MHz to 435.00MHz</b> <b>from 867.00MHz to 870.00MHz</b>	5V 6mA	-110 dBm	433.00 ÷ 435.00 867.00 ÷ 870.00 MHz	150 KHz	4.8 Kbit/s	 Dimensions: 38 x 14.5mm
<b>RCASK3-434-CH</b>	AM Superhet data receiver with SAW Front End filter and output noise filter to obtain high immunity to electromagnetic interference. <b>Ideal for application that needs high immunity.</b>	5V 7.5mA	-113 dBm	433.92 MHz	150 KHz	4.8 Kbit/s	 Dimensions: 25.4 x 19.5 mm
<b>RCASK4-434-CH</b>	AM Superhet data receiver with SAW Front End filter and output noise filter to obtain high immunity to electromagnetic interference. <b>Ideal for application that needs high immunity.</b>	5V 7.5mA	-113 dBm	433.92 MHz	150 KHz	4.8 Kbit/s	 Dimensions: 38 x 14.5 mm






## ASK/OOK TRANSMITTER

MODEL	DESCRIPTION	Vdc	Current	Frequency	RF Power	Data Rate	PICTURE
<b>RC-TX1-434</b>	433.92MHz ASK transmitter module with SAW oscillator and power amplifier. RC-TX1-434 Dimensions: 17.9 x 10.1 mm RC-TX2-434 Dimensions: 25.3 x 11.4 mm	2 - 12	8	433.92	10	9.6	 <b>RC-TX1-434</b> <b>RC-TX2-434</b>
<b>RC-TX2-434</b>		Volt	mA	MHz	dBm	Kbit/s	
<b>RCQT4-XXX</b> RCQT4-434 = 433.92MHz Version RCQT4-868 = 868.35MHz Version	Very small ASK/OOK transmitter module with crystal oscillator at 433.92 MHz. Metal shield.	4 - 12 V 2.2 - 3.6V	21mA 15mA	433.92 868.35 MHz	+11 +9 dBm	50 Kbit/s	 Dimensions: 25.3 x 11.4 mm
<b>RCBTX-434</b>	ASK/OOK transmitter module with crystal oscillator at 433.92MHz. Metal shield. Standard Pin Out. 5Volt version and 3Volt version	4 - 12 V 2.2 - 3.6V	21mA 15mA	433.92 MHz	+11 dBm	50 Kbit/s	 Dimensions: 38 x 12 mm
<b>RC-TXASK-XXX</b> RC-TXASK-433 = 433.92MHz RC-TXASK-433.42 = 433.42MHz RC-TXASK-434.15 = 434.15MHz RC-TXASK-434.50 = 434.50MHz RC-TXASK-868 = 868.35MHz RC-TXASK-868.95 = 868.95MHz RC-TXASK-869.50 = 869.50MHz	OOK/ASK Radio transmitter module with crystal oscillator ,dual line package operating at 3.3Volt. Output Power 10dBm. We can customize the Frequency range: from 433.00MHz to 435.00MHz from 867.00MHz to 870.00MHz	2.2 ÷ 3.6 Volt	21mA	433.00 ÷ 435.00 867.00 ÷ 870.00 MHz	+10 dBm	50 Kbit/s	 Dimensions: 20.32 x 11.43 mm

## FSK MODULES

MODEL	DESCRIPTION	Vdc/Ic	Sleep Current	Frequency	Power Sensitivity	Data Rate	PICTURE
<b>RC-TFSK4-434N</b>	FSK Radio transmitter module with crystal oscillator ,dual line package operating at 3.3Volt. RF Power 10dBm.	2.2 ÷ 3.6 Volt	21mA	433.92 MHz	+10 dBm	40 Kbit/s	 Dimensions: 30.5 x 10.6 mm
<b>RC-TXFSK-XXX</b> RC-TXFSK-433 = 433.92MHz RC-TXFSK-433.42 = 433.42MHz RC-TXFSK-434.15 = 434.15MHz RC-TXFSK-434.50 = 434.50MHz RC-TXFSK-868 = 868.35MHz RC-TXFSK-868.95 = 868.95MHz RC-TXFSK-869.50 = 869.50MHz	FSK Radio transmitter module with crystal oscillator ,dual line package operating at 3.3Volt. RF Power 10dBm. We can customize the Frequency range: from 433.00MHz to 435.00MHz from 867.00MHz to 870.00MHz	2.2 ÷ 3.6 Volt	21mA	433.00 ÷ 435.00 867.00 ÷ 870.00 MHz	+10 dBm	50 Kbit/s	 Dimensions: 20.3 x 11.4 mm
<b>RC-RFSK1-XXXN</b> RC-RFSK1-433N = 433.92MHz RC-RFSK1-433.42N = 433.42MHz RC-RFSK1-434.15N = 434.15MHz RC-RFSK1-434.50N = 434.50MHz RC-RFSK1-868N = 868.35MHz RC-RFSK1-868.95N = 868.95MHz RC-RFSK1-869.50N = 869.50MHz	FSK Superhet data receiver with PLL synthesizer crystal oscillator. Standard pin out version. We can customize the Frequency range: from 433.00MHz to 435.00MHz from 867.00MHz to 870.00MHz Coated version available	5V 8 mA	100 nA	433.00 ÷ 435.00 867.00 ÷ 870.00 MHz	-115 dBm	4.8 Kbit/s	 Dimensions: 38.1 x 14.4 mm


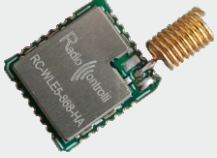


## LORA MODULES - SEMTECH BASED

MODEL	DESCRIPTION	Vdc	Current	Frequency	Power Sensitivity	PICTURE
<b>RC-SM1276-XXX (LORA)</b>	The <b>RC-SM1276-XXX</b> module is based on SX1276 from Semtech. Programmable with external microcontroller via SPI interface.	1.8 ÷ 3.6V	12mA (RX) 120mA (TX)	868 MHz 915 MHz	-139 dBm +19 dBm	 Dimensions: 23.5 x 15 mm
<b>RC-SM1278-433 (LORA)</b>	The <b>RC-SM1278-433</b> module is based on SX1278 from Semtech. Programmable with external microcontroller via SPI interface.	1.8 ÷ 3.6V	12mA (RX) 120mA (TX)	433 MHz	-139 dBm +18 dBm	 Dimensions: 23.5 x 15 mm
<b>RC-LLCC68-868 (LORA)</b>	LoRa Smart Home (based on LLCC68) is a sub-GHz LoRa® RF Transceiver . SPI interface. The LLCC68 can transmit up to +22 dBm with highly efficient integrated power amplifiers.	1.8 ÷ 3.7V 1.8 ÷ 3.7V	4.90mA (RX) 120mA (TX)	868 MHz	-148 dBm +20dBm	 Dimensions: 19.0 x 13 mm

# IOT MODULES - TEXAS INSTRUMENTS BASED

MODEL	DESCRIPTION	Vdc	Current	Frequency	Sensibility Power	PICTURE
<b>RC-CC1310-XXX</b> <b>Sub 1GHz</b>	<p>The <b>RC-CC1310-XXX</b> module is based on Texas Instruments CC1310F128 component. Very low power transceiver with a powerful 48MHz Cortex M3 microcontroller in a platform supporting multiple physical layers and RF standard.</p> <p><b>RC-CC1310-434</b> = 433MHz Version  <b>RC-CC1310-868</b> = 868MHz Version  <b>RC-CC1310-915</b> = 915MHz Version</p>	1.8 ÷ 3.6V	5.5mA (RX) 23mA (TX)	434 MHz 868 MHz 915 MHz	-124 dBm +14 dBm	 Dimensions: 22 x 15mm
<b>RC-CC1312R-XXX</b> <b>Sub 1GHz</b>	<p>The <b>RC-CC1312R-XXX</b> is based on Texas Instruments CC1312R1F3RGZ component. Very low power transceiver with a powerful 48MHz ARM Cortex M4F CPU in a platform supporting multiple physical layer and RF standard.</p> <p><b>RC-CC1312R-868</b> = 868MHz Version  <b>RC-CC1312R-915</b> = 915MHz Version</p>	1.8 ÷ 3.6V	5.5mA (RX) 23mA (TX)	868 MHz 915 MHz	-121 dBm +14 dBm	 Dimensions: 22 x 15mm
<b>RC-CC1352-XXX</b> <b>Sub 1GHz &amp; 2.4GHz</b>	<p>The <b>RC-CC1352-XXX</b> module is based on Texas Instruments CC1352R component. The CC1352R device is a multiprotocol Sub-1 GHz and 2.4-GHz.</p> <p><b>RC-CC1352R-868</b> = 868MHz Version  <b>RC-CC1352R-915</b> = 915MHz Version</p>	1.8 ÷ 3.6V	8.1mA (RX) 24mA (TX)	433 MHz 868 MHz 915 MHz 2.4 GHz	-122 dBm +14 dBm +5 dBm	 Dimensions: 29.86 x 19.98mm
<b>RC-CC1352P-XXX</b> <b>Sub 1GHz &amp; 2.4GHz</b>	<p>The <b>RC-CC1352P-XXX</b> module is based on Texas Instruments CC1352P component. The CC1352P device is a multiprotocol Sub-1 GHz and 2.4-GHz.</p> <p><b>RC-CC1352P-868</b> = 868MHz Version  <b>RC-CC1352P-915</b> = 915MHz Version</p>	1.8 ÷ 3.6V	8.1mA (RX) 24mA (TX)	433 MHz 868 MHz 915 MHz 2.4 GHz	-122 dBm +18 dBm +3 dBm	 Dimensions: 29.86 x 19.98mm
<b>RC-CC1310F-XXX</b> <b>Sub 1GHz</b>	<p>The <b>RC-CC1310F-XXX</b> is based on Texas Instruments CC1310F128 component more a 16M-bit of serial flash memory. The «F» version has onboard 16 M-bite serial flash memory type GD25Q16CEIG.</p> <p><b>RC-CC1310F-868</b> = 868MHz Version  <b>RC-CC1310F-915</b> = 915MHz Version</p>	1.8 ÷ 3.6V	5.5mA (RX) 23mA (TX)	868 MHz 915 MHz	-124 dBm +14 dBm	 Dimensions: 22 x 15mm
<b>RC-CC3200</b> <b>Wi-Fi</b>	<p>Wi-Fi Module is based on CC3200 Texas Instrument chip. The <b>RC-CC3200</b> module is the second-generation series of modules in the SimpleLink family and consists of an applications microcontroller unit (MCU), Wi-Fi network processor, and a power-management subsystem.</p>	2.3 ÷ 3.6V	59mA (RX) 229mA (TX)	2.4 GHz	-94.7 dBm +17 dBm	 Dimensions: 18 x 15 mm
<b>RC-CC2640-B</b> <b>Bluetooth</b> <b>RC-CC2640-A</b> <b>Bluetooth Miniaturized</b>	<p><b>RC-CC2640-X</b> is based on CC2640R2F128 Bluetooth Smart (BLE4.2) System-on-Chip, fully supports the single mode Bluetooth Low Energy operation. ARM Cortex M3 inside.</p>	1.8 ÷ 3.8V	5.9mA (RX) 6.1mA (TX)	2.4 GHz	-94 dBm +5 dBm	 12 x 15 mm 8 x 8.35 mm
<b>RC-CC2652PA</b> <b>Multiprotocol</b>	<p>The <b>RC-CC2652PA</b> module is designed based on CC2652R and CC2592 of Texas Instruments. The <b>RC-CC2652PA</b> module is designed based on CC2652R and CC2592 of Texas Instruments. The CC2652R device is a multiprotocol wireless 2.4GHz MCU targeting Thread, Zigbee, Bluetooth 5low energy.</p>	2.0 ÷ 3.6V	15.0mA (RX) 180mA (TX)	2.4 GHz	103dBm +19 dBm	 Dimensions: 27.5 x 16 mm

# IOT MODULES - STMICROELECTRONICS BASED

MODEL	DESCRIPTION	Vdc	Current	Frequency	Sensibility Power	PICTURE
<b>RC-WLE5-868</b> LORAWAN	<b>RC-WLE5-868</b> is an ultra low power long range device designed by RadioControlli. The module is based on STM32WLE5JC device from STMicroelectronics. Multiprotocol LPWAN 32bit Arm®Cortex® M4 MCUs, LoRa®, (G)FSK, (G)MSK, BPSK .	2.5 ÷ 3.7V	5.0mA (RX) 120mA (TX)	868MHz	+18.5 dBm	 Dimensions: 22 x 15mm
<b>RC-WLE5-868-HA</b> LORAWAN	<b>RC-WLE5-868-HA</b> is an ultra low power long range device designed by RadioControlli. The module is based on STM32WLE5JC device from STMicroelectronics. Multiprotocol LPWAN 32bit Arm®Cortex® M4 MCUs, LoRa®, (G)FSK, (G)MSK, BPSK . With Helical Antenna.	2.5 ÷ 3.7V	5.0mA (RX) 120mA (TX)	868MHz	+18.5 dBm	 Dimensions: 22 x 15mm
<b>RC-SPIRIT2-XXX</b> Sub 1GHz	The <b>RC-SPIRIT2-XXX</b> module is based on STMicroelectronics S2-LP transceiver. Pin to pin compatible with the SPSGRF family modules, manufactured from STM.  <b>RC-SPIRIT2-434</b> = 433 MHz Version <b>RC-SPIRIT2-868</b> = 868 MHz Version	1.8 ÷ 3.6V	7.2mA (RX) 20mA (TX)	433 MHz 868 MHz	-128 dBm +16 dBm	 13.5 x 11.5mm
<b>RC-S2LP-XXX</b> Sub 1GHz	The <b>RC-S2LP-XXX</b> module is based on STMicroelectronics S2-LP transceiver. SMD mounting. Metal Shield <b>RC-S2LP-434</b> = 433MHz Version <b>RC-S2LP-868</b> = 868MHz Version <b>RC-S2LP-915</b> = 915MHz Version	1.8 ÷ 3.6V	7.2mA (RX) 20mA (TX)	433 MHz 868 MHz 915 MHz	-128 dBm +16 dBm	 Dimensions: 22 x 15mm
<b>RC-S2LP-XXX-HA</b> Sub 1GHz	The <b>RC-S2LP-868-HA</b> module is based on STMicroelectronics S2-LP transceiver. SMD mounting (15x 22mm) - Metal shield. With helical Antenna. <b>RC-S2LP-868-HA</b> = 868MHz Version <b>RC-S2LP-915-HA</b> = 915MHz Version	1.8 ÷ 3.6V	7.2mA (RX) 20mA (TX)	868 MHz 915 MHz	-128 dBm +16 dBm	 Dimensions: 22 x 15mm



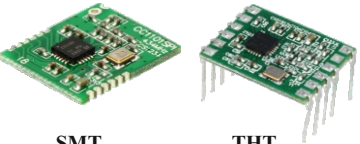
Adapter for NUCLEO1/Arduino

This Evaluation board can be used with the modules :  
- RC-SPIRIT2-XXX  
- RC-S2LP-XXX  
With this board it is possible to use all the SW resources provided for the development activity.



**RC-S2LP-XXX-EK**



**RC-SPIRIT2-XXX-EK**

MODEL	DESCRIPTION	Vdc	Current	Frequency	Sensibility Power	
<b>RC-CC1101-XXX</b>	Low-cost sub 1GHz multichannels radio transceiver based in CC1101 Texas Instruments device. Programmable via SPI interface. <b>RC-CC1101-SPI-XXX</b> = THT Version <b>RC-CC1101-SPI-SMT-XXX</b> SMT Version	1.8 ÷ 3.6V	15mA (RX) 29mA (TX)	433 MHz 868 MHz 915 MHz	-110 dBm +10 dBm	 SMT Dimensions: 18 x 15 mm THT Dimensions: 21.5 x 15.6 mm

## IOT MODULES - RADIOCONTROLLI APPLICATIONS

MODEL	DESCRIPTION	Vdc	Current	Frequency	Sensibility / Power	PICTURE
<b>RCQ3-XXX</b> (Wireless Switch)	<b>Wireless switch Long Range</b> It's an 4 channels wireless switch module with pairing function, it provides maximum 4 channel signal input and maximum 4 channel control output (bistable and monostable mode). Distance: 1000meters in open field.  RCQ3-434= 433MHz Version RCQ3-868= 868MHz Version RCQ3-915= 915MHz Version	1.8 ÷ 3.6V	5.5mA (RX)  24mA (TX)	433 MHz  868 MHz  915MHz	+14 dBm  -110 dBm (50kbps)  -122 dBm (2.5kbps)	 Dimensions: 22 x 15 mm
<b>RC-WuTRX-XXX</b> (Wake Up Transceiver)	<b>Wake Up Transceiver</b> It is a transceiver module that uses «wake up receiver technique» to be used in very low consumption applications. The WakeUp-Receiver continuously monitors the wireless channel (without the use of a microcontroller) and recognizes if there are any radio signals addressed to him, in this case it returns the data received on the serial interface.  RC-WuTRx-434= 433MHz Version RC-WuTRx-868= 868MHz Version RC-WuTRx-915= 915MHz Version	1.8 ÷ 3.6V	120.0 µA (RX)  24mA (TX)	433 MHz  868 MHz  915MHz	+14 dBm  -110 dBm (50kbps)	 Dimensions: 22 x 15 mm

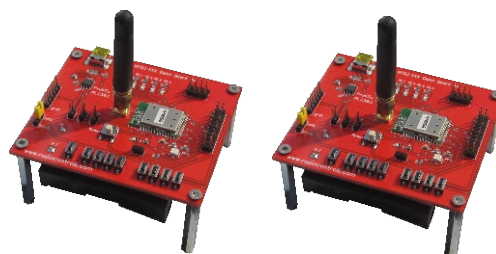
### Wake Up Transceiver

Evaluation Kits

These Evaluation board can be used with the modules :



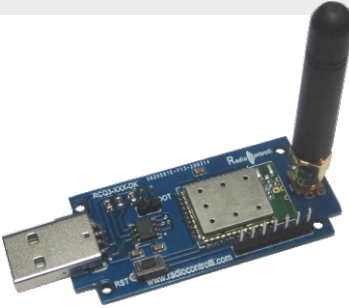
- RC-RCQ3-XXX
- RC-WuTRx-XXX

With this board it is possible to verify all the functionality of the Wireless Switch (RCQ3) and of the Wake Up Transceiver.

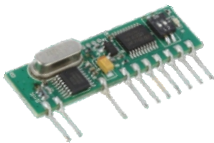



Wireless Switch



## MULTICHANNELS RADIO MODEM 433/868/915

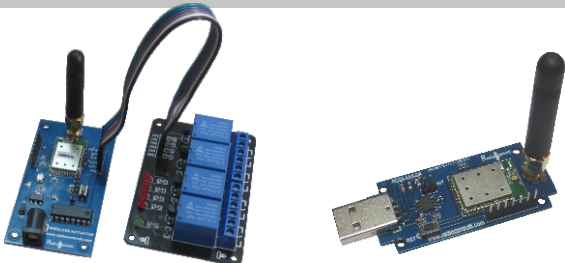
MODEL	DESCRIPTION	Vdc	Current	Frequency	Power RF Sensibility	PICTURE
<b>RCQ2-XXX</b> (SMT & THT version)	The RCQ2 is a high performance wireless modem providing a reliable low cost serial data communication. This RF modem is very simple to use and provides a wireless Rs232 link with a RF data rate up to 100 kbps.	3.0 ÷ 3.6V	20mA (RX) 34mA (TX)	433 MHz 868 MHz	+20 dBm -112 dBm	 Dimensions :23.5 x 15 mm Dimensions: 26 x 24 mm
<b>RCQ3-XXX-RM</b> (SMT version)	Multichannels Radio Modem operates in the band <b>433/868/915MHz</b> . The Radio modem is very simple to use and provides a wireless RS232 link with a RF data rate up to 50kbps. Can be work in Long Range Mode (LRM) that is particularly encoding technique that trades data rate for sensibility gains.  RCQ3-434-RM = 433.92MHz Version RCQ3-868-RM = 868.35MHz Version RCQ3-915-RM = 915.00MHz Version	1.8 ÷ 3.6V	5.5mA (RX)  24mA (TX)	433 MHz 868 MHz 915MHz	+14 dBm -110 dBm (50kbps) -122 dBm (2.5kbps)	 Dimensions: 22 x 15 mm
<b>RCQ3-XXX-DK</b>	Evaluation Board Multichannels Radio Modem in the band <b>433/868/915MHz</b> .  The pourpose of this evaluation kits is to verify all the features and technical characteristics about the Radio Modem RCQ3-XXX-RM.  RCQ3-434-DK = 433.92MHz Version RCQ3-868-DK = 868.35MHz Version RCQ3-915-DK = 915.00MHz Version	1.8 ÷ 3.6V	5.5mA (RX)  24mA (TX)	433 MHz 868 MHz 915MHz	+14 dBm -110 dBm (50kbps) -122 dBm (2.5kbps)	 Dimensions: 76 x 27.5 mm Antenna height : 56mm

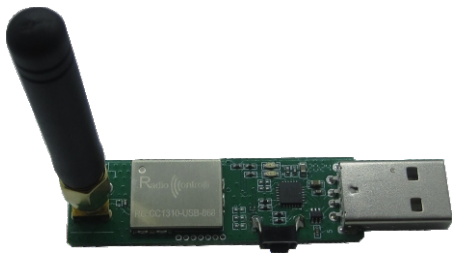


RX UNIT WITH DECODING						
MODEL	DESCRIPTION	Vdc	Current	Frequency	Sensibility	PICTURE
<b>RC-RHCS-4CH</b>	<b>RC-RHCS-4CH</b> is a 433.92MHz ASK Radio Receiver Module with integrated HCS and «Learning Code» decoding and 4 output channels (open collector output).	4.5 ÷ 5.5V	6.8mA	433.92MHz	-108 dBm	 Dimension: 38.1 x 11 mm

KEYFOB						
MODEL	DESCRIPTION	Vdc	Keys	Frequency	Encoder	PICTURE
<b>RCTV-01</b>	<b>RCTV-01</b> is a 4 channels keyfob transmitter with SAW oscillator and learning Code Ev1527. EV1527 is an OTP encoder with 20bit can storage 1048576 combinations. Color: Gold Dimension : 5.8 /3.8/1.25cm	12Volt battery	4 keys	433.92MHz	EV1527	 RCTV-02 RCTV-01
<b>RCTV-02</b>	<b>RCTV-02</b> is a 2 channels keyfob transmitter with SAW oscillator and HCS 301 rolling code encoder. Manufacturing code = RadioControlli Color : black Dimension : 5.2 /3.1/1.2cm	3 Volt CR2032 battery	2 keys	433.92MHz	HCS 301	

BIDIRECTIONAL REMOTE CONTROL		
MODEL	DESCRIPTION	PICTURE
<b>TBLO-869</b>	<b>Long Range Bidirectional Remote Control</b> 869MHz Bidirectional wireless system for home automation, composed by a bidirectional remote control and a receiver unit with the possibility to switch up to N.8 relays. TBLO-869-4 = 4 channels TBLO-869-8 = 8 channels 1000meters in open field  On request, we can supply 433MHz / 915MHz versions	

WIRELESS ACTUATOR THROUGH SERIAL INTERFACE		
MODEL	DESCRIPTION	PICTURE
<b>RCQ3-XXX-ACT</b>	<b>Wireless actuator for home automation</b> is composed by a Gateway unit, controllable via RS232 serial interface, and by one or more ACTUATOR units, with the possibility to switch from a minimum of 4 up to a maximum of 256 devices (relays). With simple Rs232 command you control «n» Remote Unit. 1000meters in open field. RCQ3-868-ACT = 868MHz Version RCQ3-434-ACT = 433MHz Version RCQ3-915-ACT = 915MHz Version	

CC1310 USB DONGLE		
MODEL	DESCRIPTION	PICTURE
<b>RC-CC1310-USB-XXX</b>	Ultra Low Power sub 1GHz Multichannels Radio Transceiver with USB interface. <b>RC-CC1310-USB-XXX</b> module is based on the Texas Instruments CC1310F128 component. This device combines a flexible very low power RF transceiver with a powerful 48MHz Cortex M3 microcontroller in a platform supporting multiple physical layers and RF standard. In addition the transceiver is connected to a single chip Cp2102 (Silicon Labs), to allow the USB to UART data transfer. Available at 868MHz and 915MHz for the US market. RC-CC1310-USB-868 = 868.00MHz RC-CC1310-USB-915 = 915.00MHz	

## Capacitive Thick Film Technology - Rain Sensor

RC-SPC1K and RC-SPC1KA are thick film technology rain sensors. This device is realized in Alumina (Al<sub>2</sub>O<sub>3</sub>) substrate, this material is endowed a big reliability from an electrical thermal point of view.

The sensor consists of three parts :

- 1) Capacitive sensor (Face A)
- 2) Heater generator
- 3) Temperature Sensor.

The Face A is the sensitivity area (capacitive sensor); this area is exposed to natural agents (rain). In dry condition the value of the capacitor is nominal 100pF; In presence of rain the capacitance goes to high value respect the dry condition.

The difference between the two versions lies in the different sensitivity of the area : with the same amount of water falling on the surface, the variation of the capacity is different between the two versions.

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