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RF MODULES | 2020

We Deliver Customer Outcomes

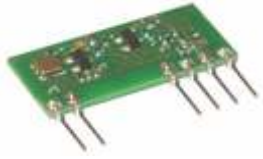



RECEIVERS





	AC-RX2++	NEW model	RX-4M30RR01SF	RX-FM4SF	RX-8MR50++	NEW model
Part Number	650201528G		650200590G	650201096G	650201508G	
Modulation	ASK (AM)		ASK (AM)	FSK (FM)	ASK (AM)	
Supply	5V		3V	5V	5V	
Frequency	433.92 MHz		433.92 MHz	433.92 MHz	868.32 MHz	
Sensitivity	-105 dBm		-100 dBm	-105 dBm	-112 dBm	
Consumption	2.75 mA		0.07 mA	5.6 mA	6.3 mA	
Dimension	38.1 x 12.3 x 3 mm		40.1 x 17.5 x 5.5 mm	37.4 x 17.5 x 4 mm	36 x 12 x 4 mm	

	RX-4MR50-MID	RX-4MR50	RX-4MR50++	RX-4MR50-SMD
				SMD
	Tiny size		SAW filtered	Available in Tape & Reel
Part Number	650201472G	650201461G	650201471G	650201464G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Supply	5V	5V	5V	5V
Frequency	433.92 MHz *	433.92 MHz *	433.92 MHz *	433.92 MHz *
Sensitivity	-109 dBm	-112 dBm	-109 dBm	-112 dBm
Consumption	4.3 mA	4.3 mA	4.3 mA	4.4 mA
Dimension	25.4 x 12.4 x 3 mm	36.5 x 12 x 4 mm	36.5 x 12 x 4 mm	22.8 x 12.7 x 2 mm

* On demand 433.42 MHz available

TRANSMITTERS

	TX-SAW MID 3V/CS	TX-FM-MID	TX-AM-868-MID	TX-SAW-434-L
				
	Available TX-SAW MID 5V/CS (650201132G)		Available TX-FM-868-MID (650201130G)	Available TX-SAW-434-L-3V (650201410G)
Part Number	650201131G	650200926G	650201182G	650201409G
Modulation	ASK (AM)	FSK (FM) PLL	ASK (AM) PLL	ASK (AM)
Supply	3V	3V	3V	3÷12V
Frequency	433.92 MHz	433.92 MHz	868.30 MHz	433.92 MHz
Consumption	6 mA	14 mA	16 mA	7.5 mA
Out RF Power	10 mW	10 mW	10 mW	10 mW
Dimension	25.4 x 12.5 x 2.5 mm	25.4 x 12.4 x 2.5 mm	25.4 x 13.5 x 2.5 mm	38.1 x 11 x 3 mm

	TX-4M10HA	TX-8L25IA	TX-434-SMALL	TX-434-SMALL-IA
				
			Available FSK version (650201478G)	Available FSK version (650201479G)
Part Number	650200819G	650200846G	650201459G	650201460G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Supply	3V	3V	3V	3V
Frequency	433.92 MHz	868.30 MHz	433.92 MHz *	433.92 MHz *
Consumption	25 mA	25 mA	16 mA	16 mA
ERP Power	10 mW	25 mW	20 mW	2 mW
Dimension	56 x 18.5 x 8 mm	56 x 18.5 x 5 mm	22.9 x 12.7 x 2 mm	22.9 x 12.7 x 2.5 mm

NEW
model





SMD





NEW
model

SMD

* On demand 433.42 MHz available

TRANSCEIVERS

	RTX-4M3V-ASK	RTX-8L3V-ASK	RTX-868 FSK	RTX-868-NB
			 SMD	 SMD
	Available RTX-4M3V-FSK (650201427G)	Available RTX-8L3V-FSK (650201425G)	Available also in 915 MHz version (650201418G)	
Part Number	650201420G	650201424G	650201343G	650201473G
Modulation	ASK (AM)	ASK (AM)	2FSK	ASK - FSK - GFSK
Supply	3V	3V	3V	3V
Frequency	433.92 MHz	868.30 MHz	868.30 MHz - 869.85 MHz	868 - 870 MHz
Sensitivity	-113 dBm	-107 dBm	-108 dBm	-124 dBm (BW 10 KHz) / -114 dBm (BW 50 KHz)
Consumption	12 mA (TX) - 9.2 mA (RX) - < 1 µA (standby)	12 mA (TX) - 11.2 mA (RX) - < 1 µA (standby)	31 mA (TX) - 6 mA (RX) - 1 µA (standby)	0.5 µA (PWRN) - 45 mA (TX @14dBm) - 9.5 mA (RX)
Out power	7 mW	5 mW	4 mW ERP	40 mW ERP
Channels	1	1	2	1 - 7
Dimension	25.4 x 12.4 x 3 mm	25.4 x 12.4 x 3 mm	25.4 x 22 x 2.5 mm	20 x 20 x 5 mm




	RTX LONG RANGE 869	RTX-24EM-AI/V	RTX-24EM-HP	XTR-BLE-5.0
			 NEW model	 SMD NEW model
		Available UFL RF output version	Available SMD version (650201529G)	
Part Number	650201347G	650201476G	650201516G	650201530G
Modulation	GFSK	FSK	FSK	GFSK
Supply	3V	3V	3V	3V
Frequency	869.4÷869.65 MHz	2.400 - 2.484 GHz	2.4 - 2.484 GHz	2.4 - 2.48 GHz
Sensitivity	-118 dBm	-115 dBm (1.5 Kbps) / -97 dBm (72 Kbps)	-119 dBm (1.5 Kbps) / -101 dBm (72 Kbps)	-96 dBm
Consumption	550 mA (TX) - 32 mA (RX) - 8 µA (standby)	1µA (PWRN) - 36 mA (TX +8.5 dBm) - 8 mA (RX)	2 µA (PWRN) - 100 mA (TX +18 dBm) - 16 mA (RX)	7.5 mA (TX) - 5.5 mA (RX) - 2 µA (standby)
Out power	500 mW	7 mW ERP	70 mW ERP	2 mW ERP
Channels	7	20	20	40
Dimension	33 x 23 x 8 mm	27 x 16 x 5.5 mm	30 x 18 x 7 mm	17 x 24 x 4.5 mm

KEYFOBS

	HCS-TX-3	TX-6M-HCS	TX4-RP-HCS 433 N	TX-12CH-EVO
				
	Available 1/2/3 channels Available 868 MHz version	Available 2/4/6 channels Available 868 MHz version	Available 1/2/4 channels	
Part Number	650200684G	650200828G	650201421G	650201226G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Battery supply	3V (CR2032 Lithium)	12V (23A Alkaline)	3V (CR2032 Lithium)	3V (CR2032 Lithium)
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	433.92 MHz
Consumption	10 mA	15 mA	10 mA	10 mA
ERP Power	0.5 mW	1 mW	1 mW	1 mW
Dimension	55 x 44 x 15 mm	73 x 40 x 16 mm	72 x 39 x 11 mm	85 x 54 x 10 mm
	TX-KEY-15	TX-12E-2TK	TX4-RP-CP 433 N	TX 4M µP-LP
				
		Available 1/2 channels	Cloner of fixed code keyfobs	Compatible only with RX-4M µP/LP (650201168G)
Part Number	650201297G	650201001G	650201422G	650201166G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Battery supply	3V (2x1.5V AA Alkaline)	12V (23A Alkaline)	3V (CR2032 Lithium)	3V (CR2032 Lithium)
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	433.92 MHz
Consumption	40 mA	10 mA	12 mA	10 mA (TX)
ERP Power	10 mW	1 mW	0.5 mW	0.5 mW
Dimension	170 x 75 x 32 mm	65 x 37 x 15 mm	72 x 39 x 11 mm	73 x 40 x 16 mm

NOTE: above Part Number refer to keyfobs programmed with AUREL manufacturer code.





DECODER & SENSOR





	RX-4MHCS	RX-4M μ P/LP	HCS DEC 4F
			
	Compatible only with AUREL HCS remote control	Compatible only with TX-4M μ P/LP (650201166G)	Available 1/2/4 relays Compatible only with AUREL HCS remote control
Part Number	650200997G	650201168G	650201042G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)
Supply	5V	5V	12 VDC - 24 VAC
Frequency	433.92 MHz	433.92 MHz	433.92 MHz
Sensitivity	-106 dBm	-114 dBm	-100 dBm
Consumption	3 mA	0.07 mA	8 mA (DC) - 20 mA (AC)
Dimension	41 x 18 x 6 mm	41 x 20 x 3.1 mm	65 x 45 x 18 mm

	MAG HCS/Z	SIR 2008 HCS/HT12E	CAPACITIVE RAIN SENSOR
			
Part Number	650201257G	650201090G	650201442G
Modulation	ASK (AM)	ASK (AM)	-
Supply	3V (CR2 Lithium)	3V (2 x AAA Alkaline)	12V
Frequency	433.92 MHz	433.92 MHz	-
Power ERP	3 mW	1 mW (Power ERP)	-
Consumption	32 mA (TX) - 5 μ A (standby)	9 mA (TX) - 13 μ A (standby)	0.25 mA
Dimension	98 x 38 x 24 mm	120 x 60 x 45 mm	30.5 x 35.5 x 2 mm





LoRa™ MODULES



	XTR-8LR100	XTR-8LR10	XTR-8LR-USB	XTR-8LR-4ZN
	 SMD			 Compatible only with 650201431G
Part Number	650201364G	650201415G	650201428G	650201429G
Modulation	LoRa™	LoRa™	LoRa™	LoRa™
Supply	3V	3V	5V by USB	3V (CR2032 Lithium)
Frequency	869.4 ÷ 869.6 MHz	868 ÷ 870 MHz	868 ÷ 870 MHz	868.30 MHz
Sensitivity	-118 to -145 dBm	-115 to -137 dBm	-118 to -145 dBm	-122 dBm
RF output power	100 mW (max)	25 mW	100 mW ERP	10 mW ERP
Consumption	17 mA (RX) - 110 mA (TX)	17 mA (RX) - 30 mA (TX)	20 mA (RX) - 135 mA (TX)	< 2 µA (PWRN) - 16 mA (RX) - 45 mA (TX)
Dimension	37 x 18 x 2.4 mm	33.5 x 15.4 x 2.4 mm	69 x 25 x 13 mm	72 x 39 x 11 mm

	XTR-8LR-ENC NEW model	XTR-8LR-DEC NEW model	XTR-8LR-REP NEW model	XTR-8LR-SOS NEW model
	 SMD Compatible only with 650201431G	 Compatible only with 650201429G & 650201430G	 REPEATER	
Part Number	650201430G	650201431G	650201474G	650201475G
Modulation	LoRa™	LoRa™	LoRa™	LoRa™
Supply	3V	3V	220 Vac	3 V (CR2450 Lithium)
Frequency	868.30 MHz	868.30 MHz	868.30 MHz	868.30 MHz
Sensitivity	-122 dBm	-126 dBm	-126 dBm	-122 dBm
RF output power	10 mW ERP	20 mW	20 mW	5 mW
Consumption	< 1µA (PWRN) - 16 mA (RX) - 45 mA (TX)	< 1 mA (RX IDLE) - 16 mA (RX) - 45 mA (TX)	< 1 W	0.04 mA (Stand-by) - 16 mA (RX) - 45 mA (TX)
Dimension	35.5 x 18 x 2.3 mm	38.5 x 16 x 3.8 mm	105 x 105 x 55 mm	72 x 39 x 11 mm

LoRa™ MODULES

	ENC-8LR	DEC-8LR-4	XTR-8LR100-DEMO	XTR-8LR10-DEMO
				
	Compatible with DEC-8LR-4	Compatible with ENC-8LR-4 & XTR-8LR-4ZN		
Part Number	650201455G	650201454G	650201374G (8LR100)	650201392G (8LR10)
Modulation	LoRa™	LoRa™	LoRa™	LoRa™
Supply	12 Vdc - 24 Vac	12 Vdc - 24 Vac	6V (4 x 1.5V) AA Alkaline or Ext. DC supply	6V (4 x 1.5V) AA Alkaline or Ext. DC supply
Frequency	868.30 MHz	868.30 MHz	868 ÷ 870 MHz	868 ÷ 870 MHz
Sensitivity	-126 dBm	-126 dBm	-118 to -145 dBm	-115 to -137 dBm
RF output power	10 mW	20 mW	100 mW ERP (XTR-8LR100)	25 mW ERP (XTR-8LR10)
Consumption	16 µA (RX PWDN) - 14 mA (RX) - 36 mA (TX) @12Vdc	3.4 mA (RX IDLE) - 11 mA (RX) - 26 mA (TX) @12Vdc	24 mA (RX) - 125 mA (TX)	24 mA (RX) - 30 mA (TX)
Dimension	72 x 68 x 14 mm	72 x 68 x 17.5 mm	90 x 70 x 33 mm	90 x 70 x 33 mm

Moduli RFTide™



RFT-868-3V/V2	RFT-868-SML	RFT-868-USB-V/V2	RFT 868 4CH
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Available RFT 868 5V/V2 (650201382G)



SMD



Part Number	650201380G	650201375G	650201378G	650201377G
Modulation	FSK	FSK	FSK	FSK
Supply	3.3V	3.3V	5V by USB connector	3V (1 x CR2032 Lithium)
Frequency	868.30 MHz	868.30 MHz	868.30 MHz	868.30 MHz
Sensitivity	-100 dBm	-100 dBm	-100 dBm	-100 dBm
Out RF Power	5 mW	5 mW	5 mW ERP	2 mW ERP
Consumption	10 mA (RX) - 33 mA (TX)	10 mA (RX) - 33 mA (TX)	20 mA (RX) - 43 mA (TX)	33 mA (< 1 µA standby)
Dimension	38.6 x 18.2 x 2 mm	28 x 15 x 2 mm	72 x 10 x 24 mm	72 x 39 x 11 mm

RFT-868-EVKIT/V2











RFTide Evaluation Kit - P.N. 650201371G

- n. 1 - RFT 868 USB-V/V2
- n. 4 - RTF-868-DEMO
- n. 5 - RFT 868 3V/V2
- n. 8 - AA 1.5 V BATTERIES

* PC Software downloadable from www.rftide.com



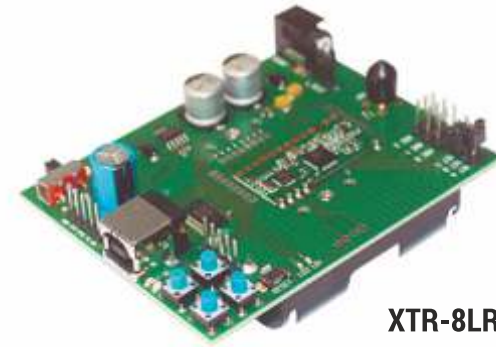
ANTENNAS

	ANT AS 433	ANT AS 868	ANT GP 433	ANT GP 868
				
	Connector + Cable (BNC + 2.5 mt RG58)	Connector + Cable (BNC + 2.5 mt RG58)	Connector Cable (BNC Plug + 2.5 mt RG58)	Connector Cable (BNC + 2.5 mt RG58)
Part Number	650200596G	650200597G	650200313G	650200599G
Type	Stylus	Stylus	Ground plane	Ground plane
Frequency	433.92 MHz	868 ÷ 880 MHz	433.92 MHz	868 ÷ 880 MHz
Impedence	50 Ohm	50 Ohm	50 Ohm	50 Ohm
Gain	2.1 dBi	2.1 dBi	2.1 dBi	2.1 dBi
Dimension	34 x 170 mm	34 x 90 mm	190 x 460 mm	110 x 255 mm
	ANT T/TA	ANT T8/T8A	ANT 868 SMA	ANT RP SMA 2.4
				
	Cable (10 cm RG174)	Cable (10 cm RG174)	Connector (SMA Plug)	Connector (RP-SMA)
Part Number	650200442G (T) - 650200448 (T-A)	650200607G (T8) - 650200608 (T8A)	650201433G	650201098G
Type	Stylus	Stylus	Stylus	Stylus
Frequency	433.92 MHz	868 ÷ 880 MHz	820 ÷ 960 MHz, 1700 ÷ 2100 MHz	2400 ÷ 2500 MHz
Impedence	50 Ohm	50 Ohm	50 Ohm	50 Ohm
Gain	2.1 dBi	2.1 dBi	1 dBi	2 dBi
Dimension	90 x 6 mm	90 x 6 mm	41 x 9.5 mm	108 x 10 mm

LoRa™ XTR-8LR100 TEST REPORT



Radio communications between devices located in adjacent cities



XTR-8LR-DEMO

D1 = 18 Km	BW 125 KHz	BW 65,2 KHz	BW 20,8 KHz
SF = 7	100%	/	100%
SF = 8	100%	100%	100%
SF = 10	100%	100%	100%
SF = 12	100%	100%	100%

D2 = 29 Km	BW 125 KHz	BW 65,2 KHz	BW 20,8 KHz
SF = 7	/	89%	94%
SF = 8	52%	91%	94%
SF = 10	82%	94%	96%
SF = 12	85%	97%	99%

Test has been conducted with two demoboards: one is a base station and the other is mobile connected to laptop.

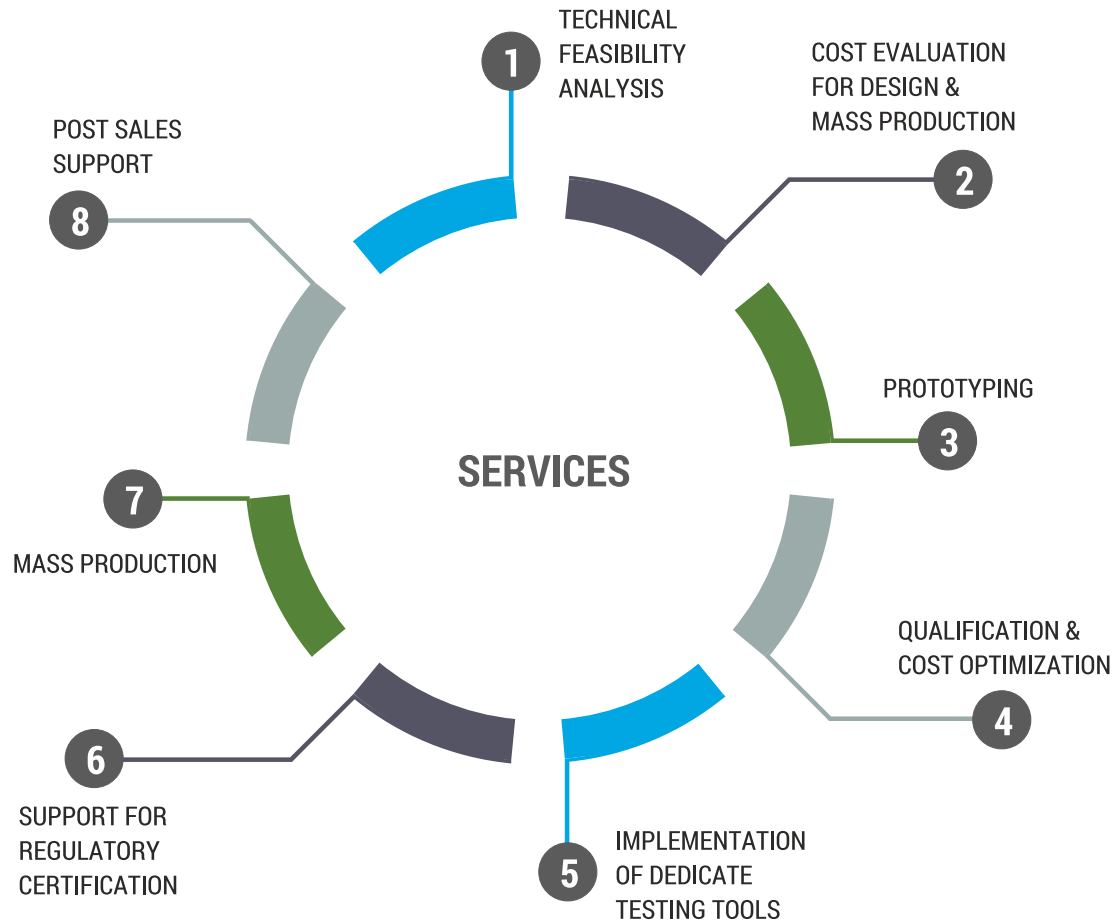
For every combination of parameters (bandwidth **BW** and spreading factor **SF**) percentage of correct packets is reported.

Data packet length is 8 bytes.

CUSTOM PROJECTS



AUREL is delighted to evaluate customer proposal for tailored made products requiring our skill in RF design. Keeping in mind the importance of providing reliable and cost effective products, we can offer following services:



APPLICATIONS



SECURITY ALARM SYSTEM



TUBULAR MOTOR CONTROL



COOKING HOODS



HEATING SYSTEM CONTROL



GATE/GARAGE OPENER



**AUTOMATIC DRIVER
RECOGNITION SYSTEM**

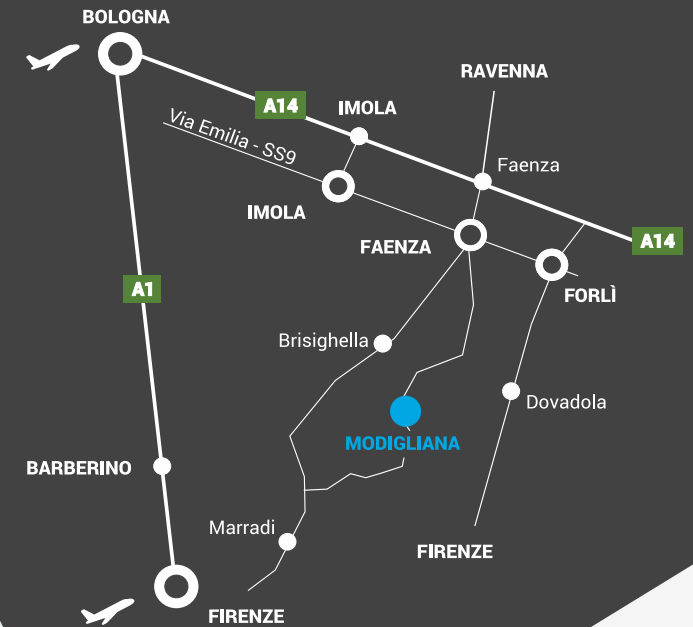


STREET LIGHTING



TARPAULIN SYSTEMS

How to reach us



ABOUT US

Established	1970
Employees	71
Engineers	15
Turnover (2019)	16 Million of euro
Dimensions	4.600 mq (3.500 covered)
Certification	ISO 9001

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