



2017





WIRELESS MODULES




SECURITY ALARM SYSTEM
TUBULAR MOTOR CONTROL
COOKING HOODS
HEATING SYSTEM CONTROL
GATE/GARAGE OPENER
AUTOMATIC DRIVER RECOGNITION SYSTEM
STREET LIGHTING
TARPAULIN SYSTEMS

RECEIVERS




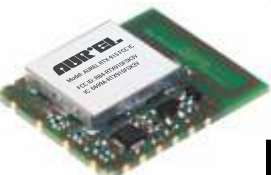
	AC-RX2/CS	RX-4M30RR01SF	RX-4MM5/F	RX-4MM5++/F
			 Available RX-4MM3/F	 Available RX-4MM3++/F
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Supply	5V	3V	5V	5V
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	433.92 MHz
Sensitivity	-106 dBm	-100 dBm	-113 dBm	-114 dBm
Consumption	2.5 mA	0.07 mA	7.5 mA	7.5 mA
Dimension	38.1 x 12.3 x 3 mm	40.1 x 17.5 x 5.5 mm	36.5 x 14.5 x 4 mm	36.5 x 14.5 x 4 mm
	RX-MID 3V	RX-FM4SF	RX-8ML5/F	RX CLASS1 869
			 Available RX-8ML5++/F	
Modulation	ASK (AM)	FSK (FM)	ASK (AM)	FSK (FM)
Supply	3V	5V	5V	3 ÷ 5.5V
Frequency	433.92 MHz	433.92 MHz	868.30 MHz	869.2125 MHz / 869.2375 MHz
Sensitivity	-113 dBm	-105 dBm	-112 dBm	-115 dBm
Consumption	6 mA	5.6 mA	10 mA	40 mA
Dimension	25.4 x 12.4 x 4 mm	37.4 x 17.5 x 4 mm	36.5 x 16 x 4 mm	45.7 x 20 x 3.5 mm





TRANSMITTERS

	TX-SAW MID 3V/CS	TX-FM-MID	TX-AM-868-MID	TX-SAW-434-L NEW
				
	Available TX-SAW MID 5V/CS		Available TX-FM-868-MID	Available TX-SAW-434-L-3V
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-SMD-AI NEW
			
Modulation	ASK (AM)	ASK (AM)	ASK (AM)
Supply	3V	3V	3V
Frequency	433.92 MHz	868.30 MHz	433.92 MHz
Consumption	25 mA	25 mA	11 mA
ERP Power	10 mW	25 mW	2 mW
Dimension	56 x 18.5 x 8 mm	56 x 18.5 x 5 mm	22.9 x 12.7 x 2.5 mm

TRANSCEIVERS

	RTX-4M3V-ASK NEW	RTX-8L3V-ASK NEW	RTX-868 FSK	RTX-915 FSK FCC-IC NEW
	 Available RTX-4M3V-FSK	 Available RTX-8L3V-FSK		 FCC
Modulation	ASK (AM)	ASK (AM)	2FSK	2FSK
Supply	3V	3V	3V	3V
Frequency	433.92 MHz	868.30 MHz	868.30 MHz - 869.85 MHz	915 MHz - 916.5 MHz
Sensitivity	-113 dBm	-107 dBm	-108 dBm	-105 dBm
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)	23 mA (TX) - 6 mA (RX) - 1 µA (standby)
Out power	7 mW	5 mW	4 mW ERP	0.3 mW ERP
Channels	1	1	2	2
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	25.4 x 22 x 3.7 mm





	XTR VF 2.4 LP	XTR VF 2.4 HP/V	RF4CE SMD	RTX LONG RANGE 869
				
Modulation	GFSK	GFSK	FSK	GFSK
Supply	3V	3V	3V	3V
Frequency	2.4 GHz	2.4 GHz	2.4 GHz	869.4-869.65 MHz
Sensitivity	-97 dBm	-104 dBm	-97 dBm	-118 dBm
Consumption	34 mA (TX) - 21 mA (RX) - < 1 µA (standby)	185 mA (TX) - 31 mA (RX) - 2 µA (standby)	39 mA (TX) - 25 mA (RX) - 1 µA (standby)	550 mA (TX) - 32 mA (RX) - 8 µA (standby)
Out power	2 mW ERP	100 mW ERP	2 mW ERP	500 mW
Channels	82	76	3	7
Dimension	35 x 25 x 5 mm	35 x 25 x 5 mm	20 x 15 x 2 mm	33 x 23 x 8 mm

KEYFOBS

	HCS-TX-3	TX-6M-HCS	TX4-RP-HCS 433 N	NEW	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		
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	NEW	TX 4M µP-LP
					
		Available 1/2 channels			Compatible only with RX-4M µP/LP
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	HCS DEC 4F	RX-4M μ P/LP	SIR 2008 HCS/HT12E
		 Available 1/2/4 relays	 Compatible only with TX-4M μ P/LP	
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Supply	5V	12 VDC - 24 VAC	3V	3V (2 x AAA Alkaline)
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	433.92 MHz
Sensitivity	-106 dBm	-100 dBm	-114 dBm	1 mW (Power ERP)
Consumption	3 mA	8 mA (DC) - 20 mA (AC)	0.07 mA	9 mA (TX) - 13 μ A (standby)
Dimension	41 x 18 x 6 mm	65 x 45 x 18 mm	41 x 20 x 3.1 mm	120 x 60 x 45 mm





MAG HCS/Z







Modulation	ASK (AM)
Supply	3V (CR2 Lithium)
Frequency	433.92 MHz
Power ERP	3 mW
Consumption	32 mA (TX) - 5 μ A (standby)
Dimension	98 x 38 x 24 mm

LoRa™ MODULES







	XTR-8LR100	XTR-8LR10	XTR-8LR-USB	NEW	XTR-8LR-4ZN	NEW
					 Compatible only with XTR-8LR-DEC	
Modulation	LoRa™	LoRa™	LoRa™		LoRa™	
Supply	3V	3V	5V by USB		3V (CR2032 Lithium)	
Frequency	869.4 ÷ 869.6 MHz	868 ÷ 870 MHz	869.4 ÷ 869.6 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)		35 mA	
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	XTR-8LR-DEC	NEW	XTR-8LR-DEMO	NEW	XTR-8LRWAN	NEW
	 Compatible only with XTR-8LR-DEC		 Compatible only with TX-SAW 434 L & XTR-8LR-ENC		 8LR100 - 8LR10			
Modulation	LoRa™		LoRa™		LoRa™		LoRa™	
Supply	3V		3V		6V (4 x 1.5V) AA Alkaline or Ext. DC supply		3V	
Frequency	868.30 MHz		868.30 MHz		868 ÷ 870 MHz		863 ÷ 870 MHz	
Sensitivity	-122 dBm		-126 dBm		-115 to -145 dBm		-120 to -137 dBm	
RF output power	20 mW ERP		20 mW		100 mW ERP (XTR-8LR100) - 25 mW ERP (XTR-8LR10)		100 mW (MAX)	
Consumption	35 mA (TX) - < 1µA (PVDN)		< 1 mA (RX IDLE) - 16 mA (RX) - 35 mA (TX)		24 mA (RX) - 125 mA (TX)		11 mA (RX) - 120 mA MAX (TX)	
Dimension	35.5 x 18 x 2.3 mm		38.5 x 16 x 3.8 mm		90 x 70 x 33 mm		37 x 18 x 2.4 mm	

RFTIDE™ MESH NETWORK MODULES



	RFT-868-3V/V2	NEW	RFT-868-SML	RFT-868-USB-V/V2	NEW	RFT 868 4CH
						
	Available RFT 868 5V/V2					
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 - RFT-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



Connector + Cable (BNC + 2.5 mt RG58)

ANT AS 868



Connector + Cable (BNC + 2.5 mt RG58)

ANT GP 433



Connector
Cable
(BNC Plug + 2.5 mt RG58)

ANT GP 868



Connector
Cable
(BNC + 2.5 mt RG58)

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



Cable (10 cm RG174)
(T) model - (T-A) model

ANT T8/T8A



Cable (10 cm RG174)
(T8) model - 650200608 model

ANT 868 SMA



Connector (SMA Plug)

NEW

ANT RP SMA 2.4



Connector (RP-SMA)

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 demoboard: one is a base station and the other is mobile connected to laptop.

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

Data packet length is 8 bytes.

CASE STUDY: RFTIDE MESH NETWORK FOR ENERGY SAVING



Concentration unit (PC or embedded board) gets wireless real time data about light, temperature and presence and switches/dims lamps in the warehouse.

This allows to cut down costs of energy.



PIR SENSOR



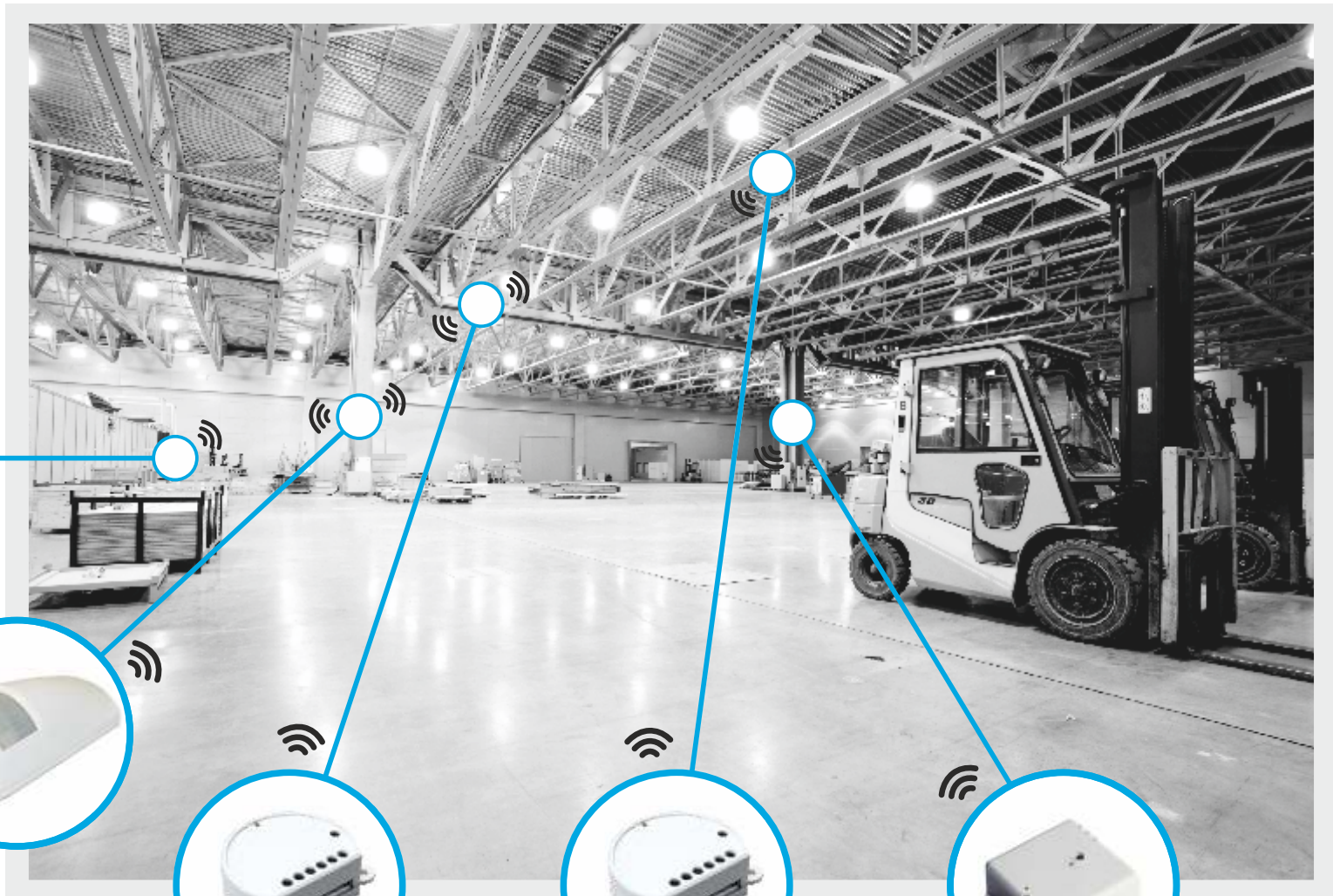
SWITCH



DIMMER



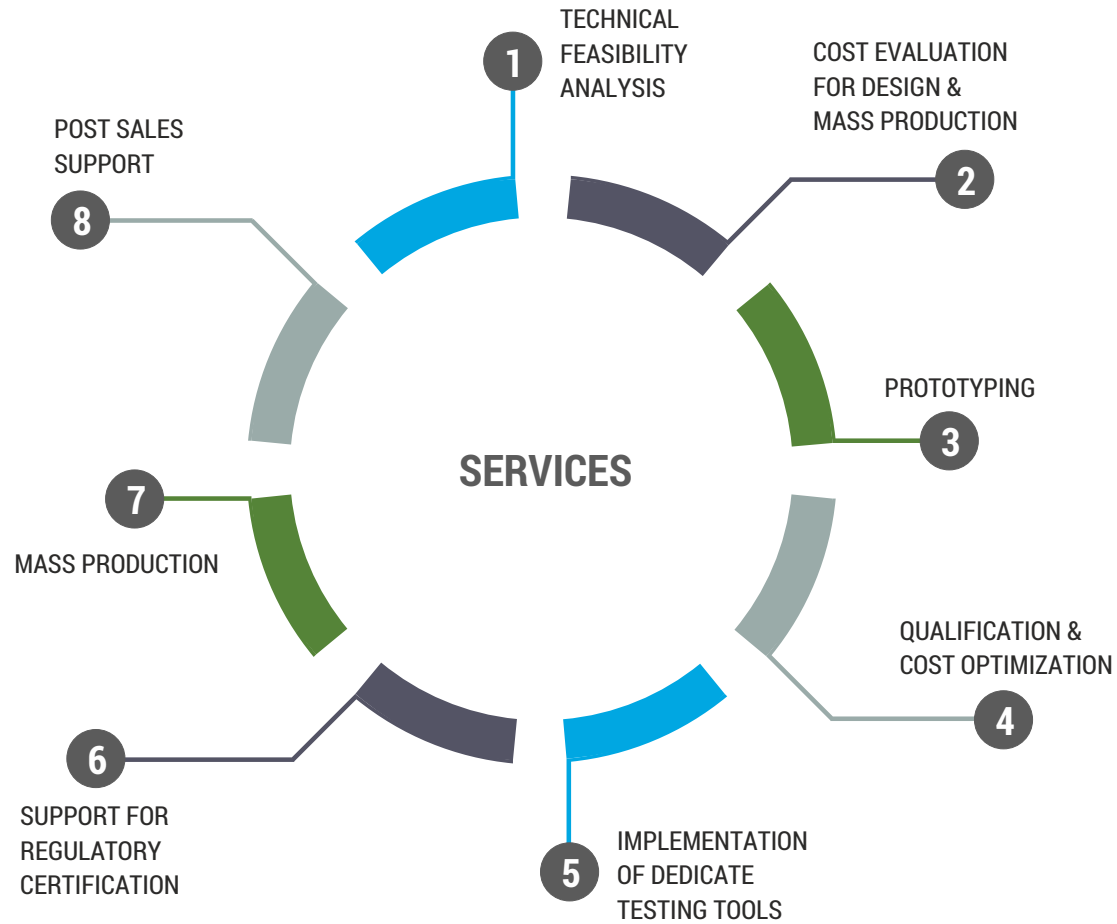
LIGHT / TEMPERATURE SENSOR



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**



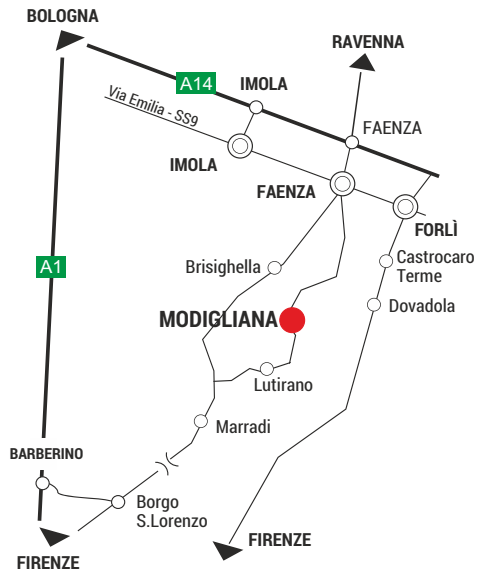
STREET LIGHTING



TARPAULIN SYSTEMS

ABOUT US

Established	1970
Employees	71
Engineers	15
Turnover (2015)	10.3 Million of euro
Dimensions	4.600 mq (3.500 covered)
Certification	ISO 9001



AUREL

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