



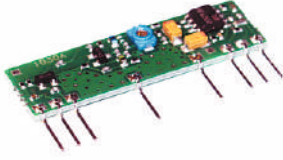
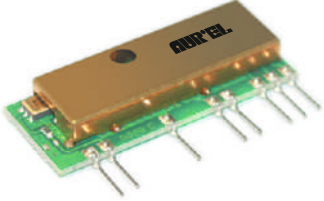
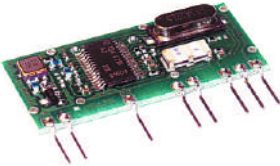
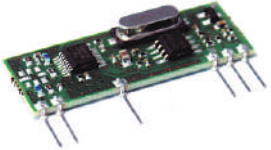
aurelwireless.com

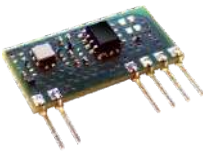
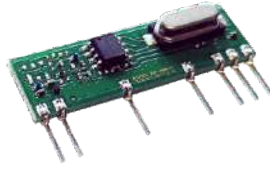
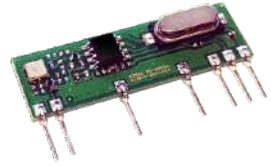
RF MODULES 2019



We Deliver Customer Outcomes

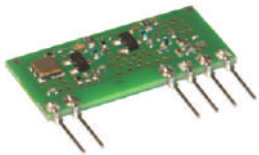
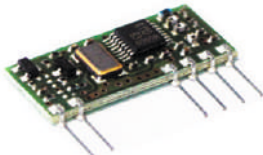
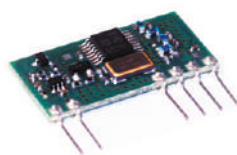
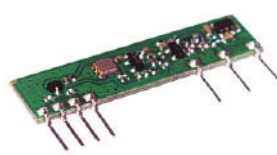
RECEIVERS

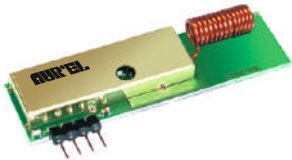
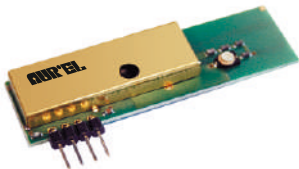
	AC-RX2/CS	RX-4M30RR01SF	RX-FM4SF	RX-8ML5/F
				 Available RX-8ML5++/F (650201208G)
Part Number	650201133G	650200590G	650201096G	650201220G
Modulation	ASK (AM)	ASK (AM)	FSK (FM)	ASK (AM)
Supply	5V	3V	5V	5V
Frequency	433.92 MHz	433.92 MHz	433.92 MHz	868.30 MHz
Sensitivity	-106 dBm	-100 dBm	-105 dBm	-112 dBm
Consumption	2.5 mA	0.07 mA	5.6 mA	10 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	36.5 x 16 x 4 mm

	RX-4MR50-MID	NEW model	RX-4MR50	NEW model	RX-4MR50++	NEW model	RX-4MR50-SMD	NEW model
								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

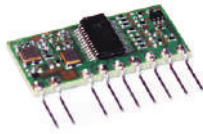
TX-SAW MID 3V/CS		TX-FM-MID		TX-AM-868-MID		TX-SAW-434-L	
							
Available TX-SAW MID 5V/CS (650201132G)				Available TX-FM-868-MID (650201130G)		Available TX-SAW-434-L-3V (650201410G)	
Part Number	650201131G	Part Number	650200926G	Part Number	650201182G	Part Number	650201409G
Modulation	ASK (AM)	Modulation	FSK (FM) PLL	Modulation	ASK (AM) PLL	Modulation	ASK (AM)
Supply	3V	Supply	3V	Supply	3V	Supply	3÷12V
Frequency	433.92 MHz	Frequency	433.92 MHz	Frequency	868.30 MHz	Frequency	433.92 MHz
Consumption	6 mA	Consumption	14 mA	Consumption	16 mA	Consumption	7.5 mA
Out RF Power	10 mW	Out RF Power	10 mW	Out RF Power	10 mW	Out RF Power	10 mW
Dimension	25.4 x 12.5 x 2.5 mm	Dimension	25.4 x 12.4 x 2.5 mm	Dimension	25.4 x 13.5 x 2.5 mm	Dimension	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	Part Number	650200846G	Part Number	650201459G	Part Number	650201460G
Modulation	ASK (AM)	Modulation	ASK (AM)	Modulation	ASK (AM)	Modulation	ASK (AM)
Supply	3V	Supply	3V	Supply	3V	Supply	3V
Frequency	433.92 MHz	Frequency	868.30 MHz	Frequency	433.92 MHz *	Frequency	433.92 MHz *
Consumption	25 mA	Consumption	25 mA	Consumption	16 mA	Consumption	16 mA
ERP Power	10 mW	ERP Power	25 mW	ERP Power	20 mW	ERP Power	2 mW
Dimension	56 x 18.5 x 8 mm	Dimension	56 x 18.5 x 5 mm	Dimension	22.9 x 12.7 x 2 mm	Dimension	22.9 x 12.7 x 2.5 mm

* On demand 433.42 MHz available

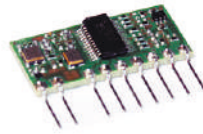
TRANSCEIVERS

RTX-4M3V-ASK



Available RTX-4M3V-FSK (650201427G)

RTX-8L3V-ASK



Available RTX-8L3V-FSK (650201425G)

RTX-868 FSK



SMD

RTX-915 FSK FCC-IC



SMD



Part Number	650201420G	650201424G	650201343G	650201418G
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

RTX-24EM-AI/V

NEW
model



Available UFL RF output version

RTX-868-NB

NEW
model



SMD

RTX LONG RANGE 869



Part Number	650201476G	650201473G	650201347G
Modulation	FSK	ASK - FSK - GFSK	GFSK
Supply	3V	3V	3V
Frequency	2.4 GHz	868 ÷ 870 MHz	869.4÷869.65 MHz
Sensitivity	-115 dBm (1.5 Kbps) / -96 dBm (72 Kbps)	-124 dBm (BW 10 KHz) / -114 dBm (BW 50 KHz)	-118 dBm
Consumption	0.5 µA (PWRN) - 36 mA (TX +10 dBm) - 8 mA (RX)	0.5 µA (PWRN) - 45 mA (TX @14dBm) - 9.5 mA (RX)	550 mA (TX) - 32 mA (RX) - 8 µA (standby)
Out power	10 mW ERP	40 mW ERP	500 mW
Channels	20	1 - 7	7
Dimension	27 x 16 x 5.5 mm	20 x 20 x 5 mm	33 x 23 x 8 mm

KEYFOBS



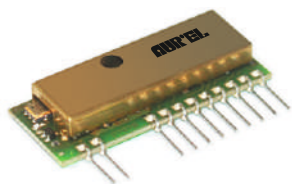
	HCS-TX-3	TX-6M-HCS	TX4-RP-HCS 433 N	TX-12CH-EVO
	 Available 1/2/3 channels Available 868 MHz version	 Available 2/4/6 channels Available 868 MHz version	 Available 1/2/4 channels	
Part Number	650200684G	650200828G	650201421G	650201226G
Modulation	ASK (AM)	ASK (AM)	ASK (AM)	ASK (AM)
Battery supply	3V (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.

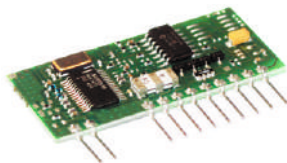
DECODER & SENSOR

RX-4MHCS



Compatible only with AUREL HCS remote control

RX-4M μ P/LP



Compatible only with TX-4M μ P/LP (650201166G)

HCS DEC 4F



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

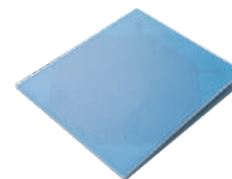
MAG HCS/Z



SIR 2008 HCS/HT12E



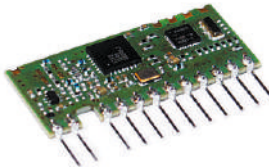
CAPACITIVE RAIN SENSOR

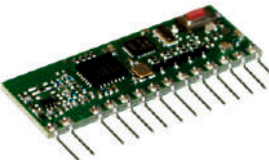


Part Number	650201257G	650201090G	650201442G
Modulation	ASK (AM)	ASK (AM)	-
Supply	3V (CR2 Lithium)	3V (2 x AAA Alkaline)	12V
Frequency	433.92 MHz	433.92 MHz	-
Power ERP	3 mW	1 mW (Power ERP)	-
Consumption	32 mA (TX) - 5 μ A (standby)	9 mA (TX) - 13 μ A (standby)	0.25 mA
Dimension	98 x 38 x 24 mm	120 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 (PVDN) - 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	XTR-8LR-DEC	XTR-8LR-REP	XTR-8LR-SOS
	 SMD		 REPEATER	
	Compatible only with 650201431G	Compatible only with 650201429G & 650201430G		
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 (PVDN) - 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

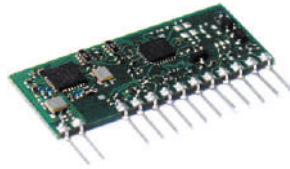


ENC-8LR		DEC-8LR-4		XTR-8LR100-DEMO		XTR-8LR10-DEMO	
							
Compatible with DEC-8LR-4		Compatible with ENC-8LR-4 & XTR-8LR-4ZN					
Part Number	650201455G	650201454G		650201374G (8LR100)		650201392G (8LR10)	
Modulation	LoRa™	LoRa™		LoRa™		LoRa™	
Supply	12 Vdc - 24 Vac	12 Vdc - 24 Vac		6V (4 x 1.5V) 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



Available RFT 868 5V/V2 (650201382G)

RFT-868-SML



SMD

RFT-868-USB-V/V2



RFT 868 4CH



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

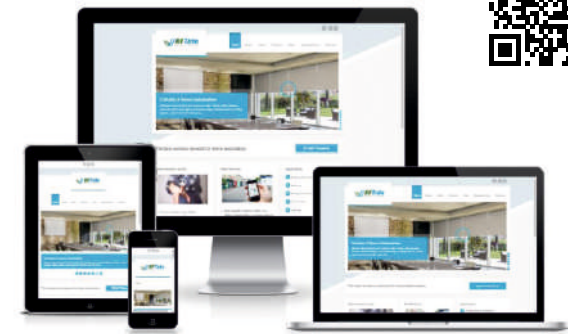
RFT-868-EVKIT/V2



RFTide Evaluation Kit - P.N. 650201371G

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

* PC Software downloadable from www.rftide.com



ANTENNAS

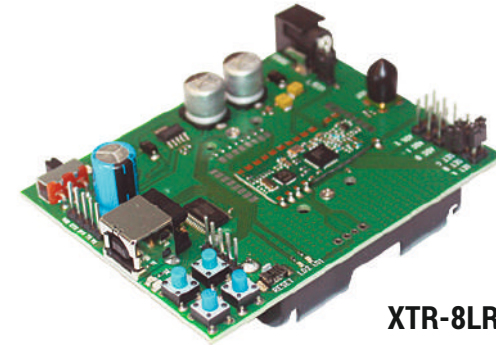
ANT AS 433		ANT AS 868		ANT GP 433		ANT GP 868	
 Connector + Cable (BNC + 2.5 mt RG58)		 Connector + Cable (BNC + 2.5 mt RG58)		 Connector Cable (BNC Plug + 2.5 mt RG58)		 Connector Cable (BNC + 2.5 mt RG58)	
Part Number	650200596G	650200597G	650200597G	650200313G	650200313G	650200599G	650200599G
Type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

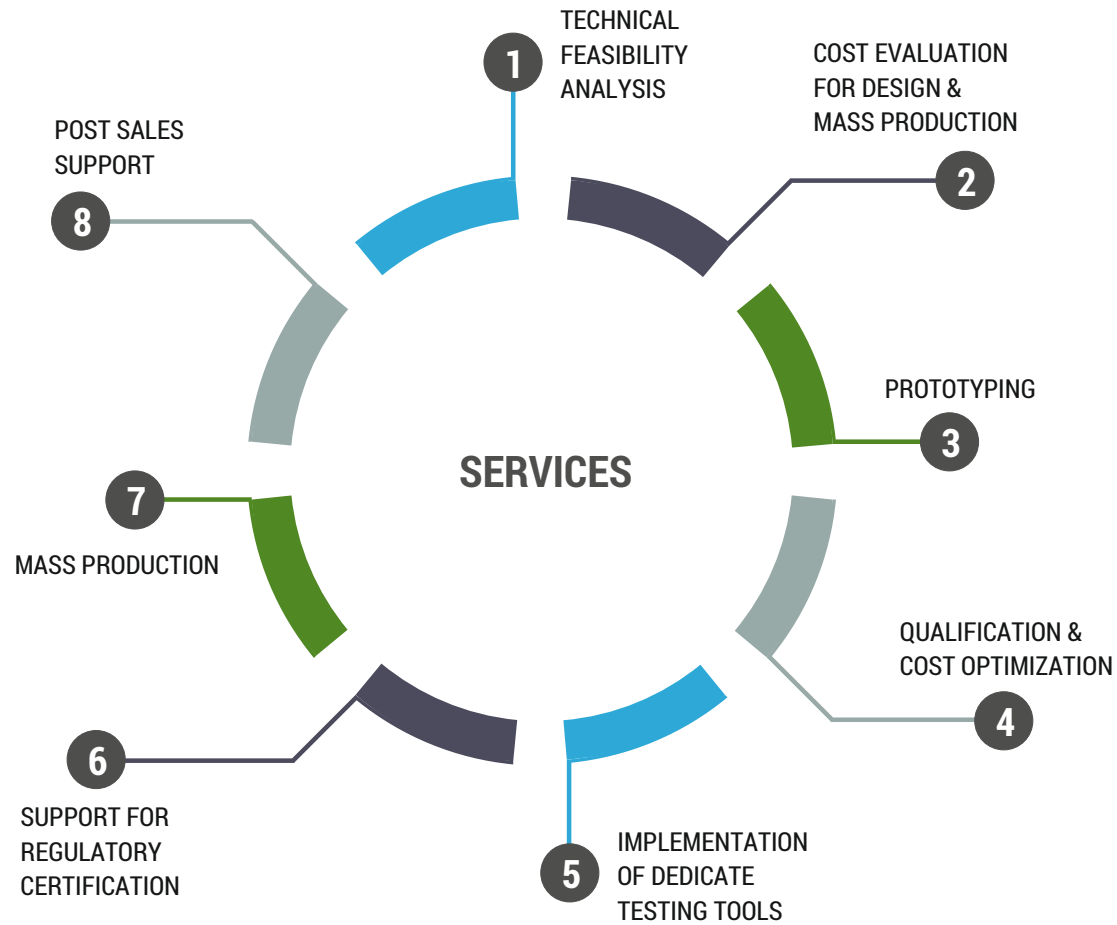
Test has been conducted with two demoboards: one is a base station and the other is mobile connected to laptop.

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**

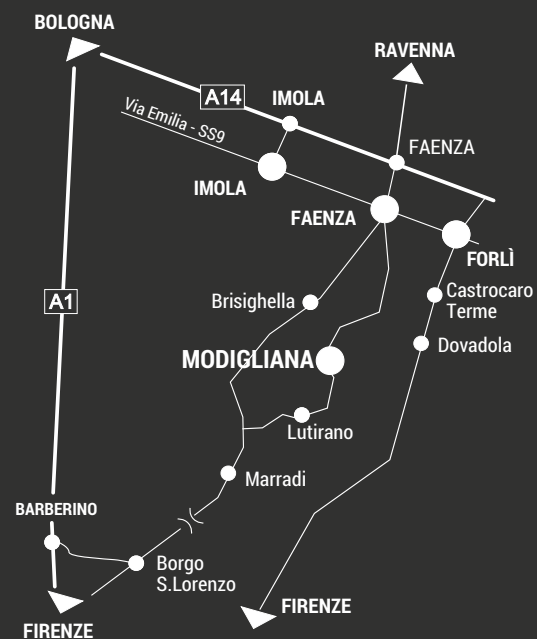


STREET LIGHTING



TARPAULIN SYSTEMS

How to reach us



ABOUT US

Established	1970
Employees	71
Engineers	15
Turnover (2017)	13.5 Million of euro
Dimensions	4.600 mq (3.500 covered)
Certification	ISO 9001

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AUREL

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