

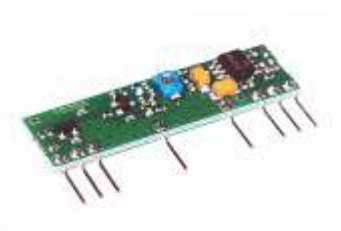









WIRELESS MODULES

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

2017

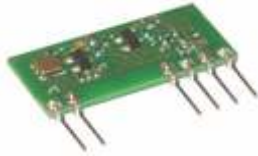
RECEIVERS

	AC-RX2/CS	RX-4M30RR01SF	RX-4MM5/F	RX-4MM5++/F
			 Available RX-4MM3/F (650201139G)	 Available RX-4MM3++/F (650201138G)
Part Number	650201133G	650200590G	650201110G	650201140G
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 (650201208G)	
Part Number	650201034G	650201096G	650201220G	650201247G
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



Available TX-SAW MID 5V/CS (650201132G)

TX-FM-MID



TX-AM-868-MID



Available TX-FM-868-MID (650201130G)

TX-SAW-434-L



Available TX-SAW-434-L-3V (650201410G)

NEW

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-SMD-AI



NEW

Part Number	650200819G	650200846G	650201426G
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



Available RTX-4M3V-FSK (650201427G)

RTX-8L3V-ASK

NEW



Available RTX-8L3V-FSK (650201425G)

RTX-868 FSK



RTX-915 FSK FCC-IC

NEW



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 μ A (standby)	12 mA (TX) - 11.2 mA (RX) - < 1 μ A (standby)	31 mA (TX) - 6 mA (RX) - 1 μ A (standby)	23 mA (TX) - 6 mA (RX) - 1 μ A (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







Part Number	650201025G	650201340G	650201314G	650201347G
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 μ A (standby)	185 mA (TX) - 31 mA (RX) - 2 μ A (standby)	39 mA (TX) - 25 mA (RX) - 1 μ A (standby)	550 mA (TX) - 32 mA (RX) - 8 μ A (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		
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	NEW	TX 4M μ P-LP
					
		Available 1/2 channels			Compatible only with RX-4M μ P/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	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 (650201166G)	
Part Number	650200997G	650201042G	650201168G	650201090G
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







Part Number	650201257G
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 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	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 650201431G		 Compatible only with 650201429G & 650201430G					
Part Number	650201430G		650201431G		650201374G (8LR100) - 650201392G (8LR10)		650201432G	
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 (650201382G)					
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

NEW

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



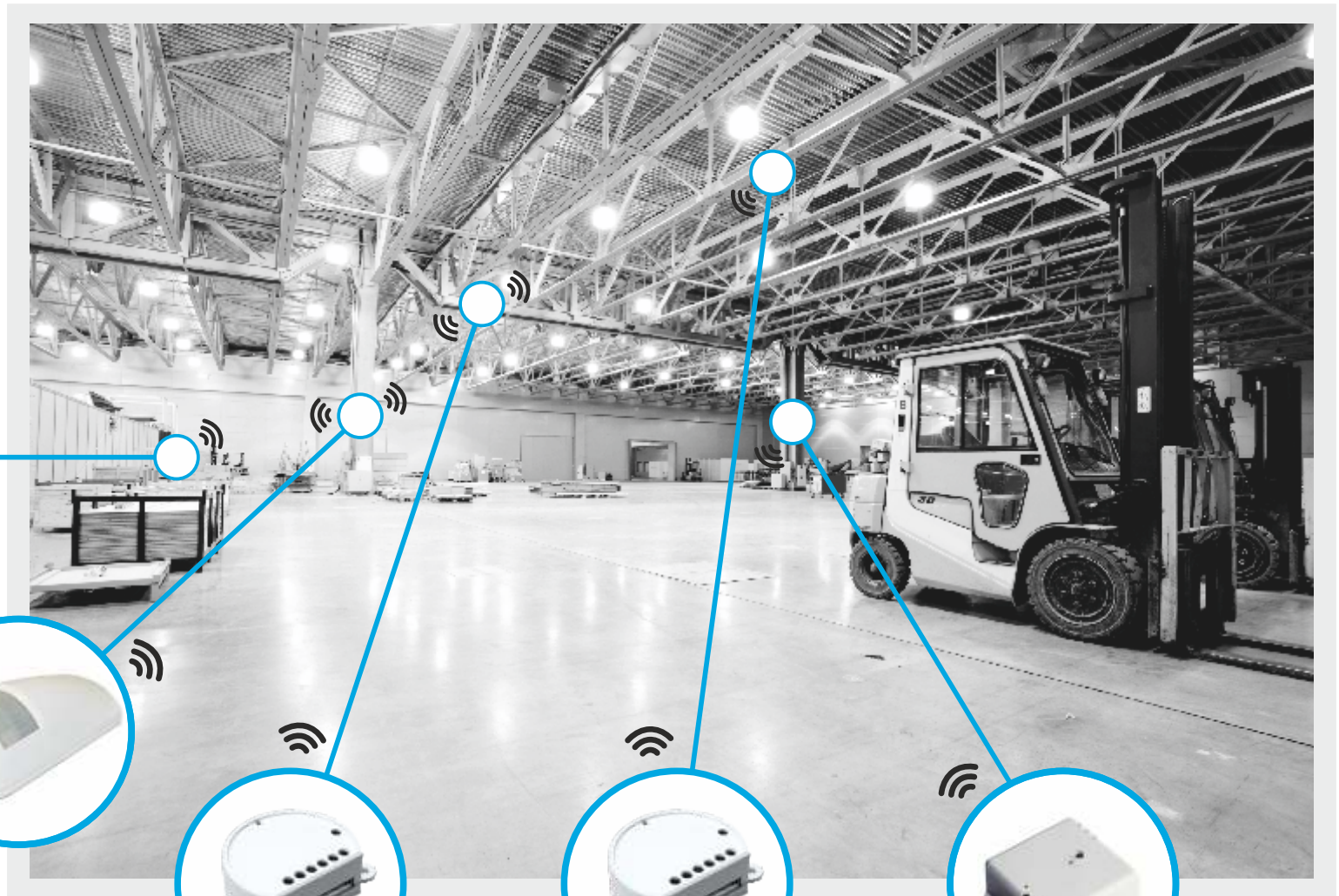
SWITCH



DIMMER



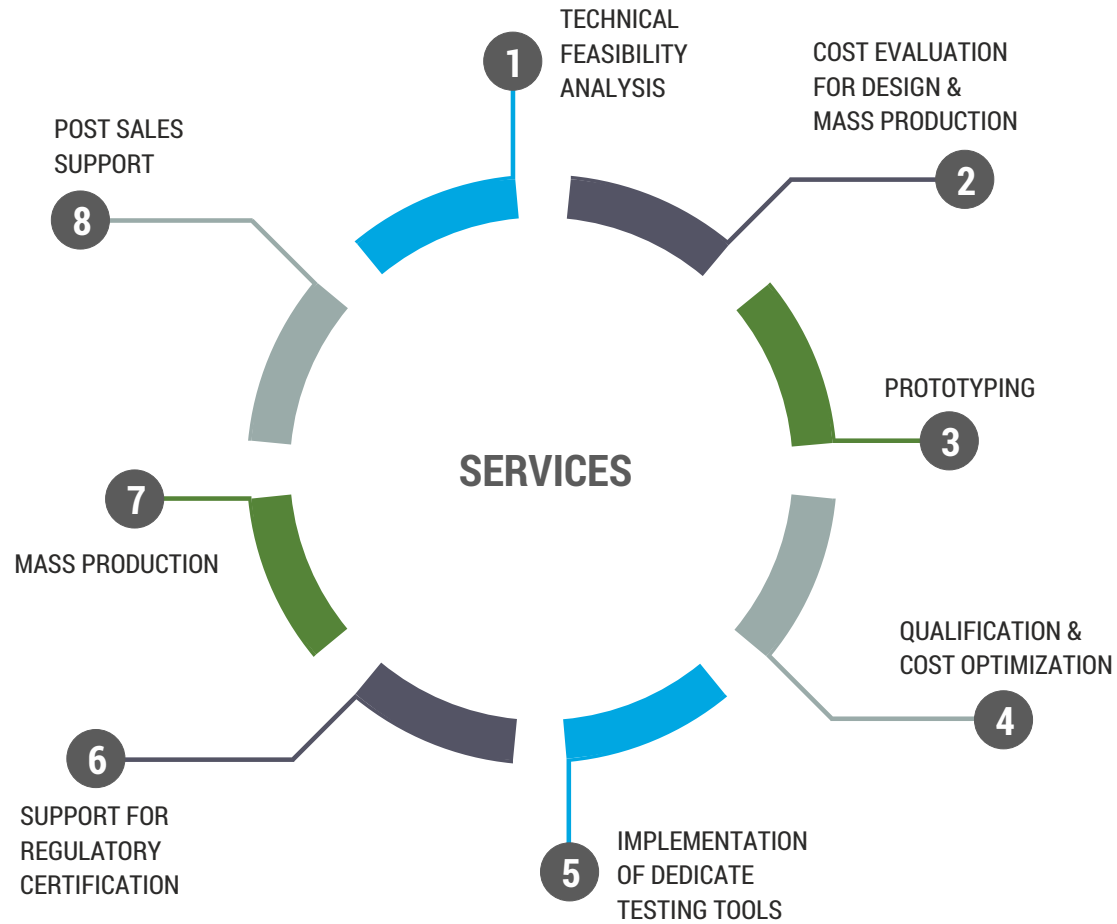
LIGHT / TEMPERATURE SENSOR



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**



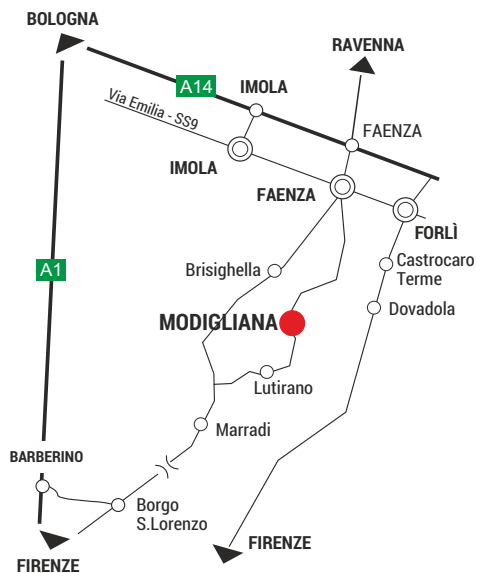
STREET LIGHTING



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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