

RF-Gateway SIMC ETH E

RF Communication Unit

Art. no. 96628013

Application

The RF-Gateway is the network interface which synchronizes between the RF-Controller and a web-based UrbaSens management software. It has an in-built radio module for wireless network configuration, commissioning and maintenance via CMS. It can reliably communicate with a large number of devices spread across large distances. Integrated monitoring tools deliver information of lamp and network status. Several internet connectivity options offer flexibility in commissioning and programming. The Gateway is designed for outdoor lighting applications. So it is possible to mount it directly on the pole or to fix it on a wall.

Design notes

The device has to be installed securely on the pole and the connected cable should be routed to the connection box of the luminaire through a hole in the pole. The antennas are integrated so there is no additional one necessary. The placement of the device should be decided with awareness of a good RF connectivity. To insert a SIM card it is necessary to open the device. Start up is done by THORN (remotely). The default settings can be changed using a CMS connected to the Gateway.



Functional description

The Gateway collects the data from the UrbaSens RF-Controllers and communicates with the web based CMS via Ethernet, WLAN or SIM card. The device has been developed with open standards. Remote update and debugging possibility over-the-air for Gateway & RF-Controllers (software & firmware). Regular logging of the system operation (selectable time interval). The large local data storage avoids data losses in case of communication link failures.

Technical data

Nominal input voltage	230VAC 50/60Hz
Permitted input voltage	207 - 253VAC 50/60Hz
Power consumption	<8W
Protection class	Class II electrical
Ambient temperature	-20°C to +70°C
Humidity	20% to 90% Rh non-condensing
Mounting	Pole or wall mounting
Ingress protection	IP65, Fireproof (UL94V0) housing
Dimensions	230 x 130 x 90mm
Processor	ARM Cortex-A9 CPU, 1GHz
Real time clock	Battery backed
Electrical protection	Overload, short-circuit and over-temperature protection
Integrated antennas	2 x 2.4GHz wireless mesh, WiFi 1 x 2G/3G modem
Power	3 core cable, length 5m
Ethernet	1 x RJ45, 100BASE-TX/10BASE-T
USB	1 x USB 2.0
SD card	1 x micro-SD memory card slot (max. 32Gb)
SIM card	1x push insert standard SIM card bay (25 x 15mm)
Wireless mesh network	2,4GHz IEEE 802.15.4 self-forming (and user configurable) self-healing wireless network +10 dBm max. transmit power. Up to 1km open field range
Proposed max distance between 2 RF devices	200m
RF controller to gateway ratio	200:1
Server communication	2G GSM/GPRS/EDGE quad band, 3G six band UMTS/HSPA
Network security	128 AES, WebSocket (with SSL) and VPN multilayer security with end to end encryption. Dual protection for messages between devices and gateway. Certificate based secure WebSocket and VPN connection
Compliance	RoHS, CE, EN301489-1/3, EN61547, EN55015, EN300328, EN60950. RF Transceiver compliant with US (FCC), Canadian (IC), European (ETSI) and Japanese (Telec) standards