



Gateways

Munisense gateways provide the communication with our meters, controllers and sensors based on ZigBee or LoRa communication, and our INSIGHTNOW™ cloud platform.

The gateways are the center of our Smart City solutions for managing noise, water levels, air quality, lighting, traffic and indoor climates. There are two versions, one for indoor use and a robust outdoor version. Software for our gateways can be updated remotely.

Our smallest gateway, **ZGD** model is suitable for ZigBee communication indoors, with a limited amount of messages (about once per second). The ZGD connects the ZigBee network to Ethernet and via this LAN port to the INSIGHTNOW™ platform. The measurement data and configuration data is directly accessible via the open web interfaces through the LAN.

The **ZGI**, a powerful gateway for indoor use, can store measurement data and has links to LAN and optional WiFi, Bluetooth low energy, 3G or 4G communications and LoRa. This gateway is suited for large networks (hundreds of sensors) with a lot of communication. The gateway detects remote power failure and has a comprehensive Web interface for configuring the gateway.

The **ZGO** is suitable for prolonged outdoor use. In addition to the communication capabilities of the ZGI, the ZGO is equipped with a Li-Ion battery to bridge a period of approx. 20 to 24 hours. With the optional battery pack the run-time is further extended by a factor of 5. The ZGO also has a connection for solar panels and a built-in Li-Ion charger with maximum power point tracking.

Full remote management

ZigBee and LoRa

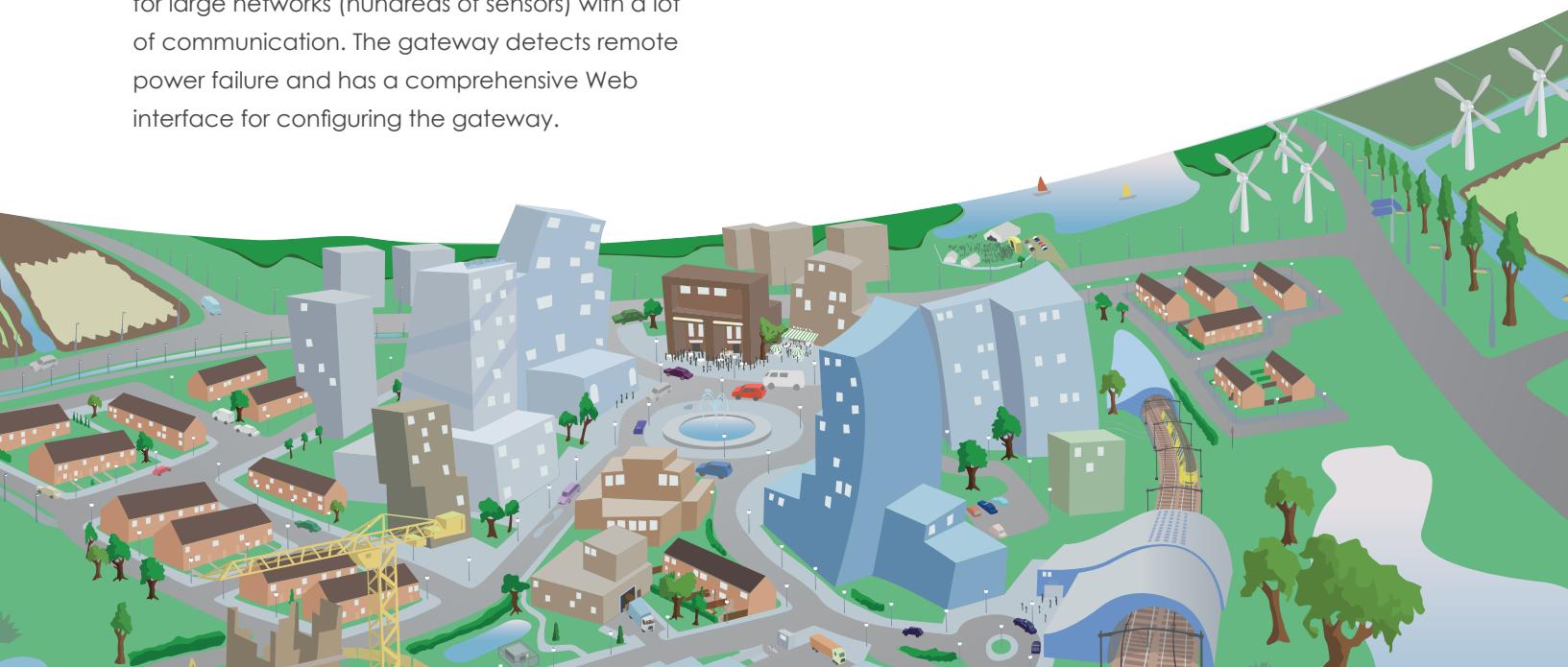
WiFi, Bluetooth and GPS

3G or 4G LTE support worldwide

Multiple security

Internal battery for extended use

Solar option for stand-alone use



INSIGHTNOW Gateways	ZGD	ZGI	ZGO
Functional			
Storage ZigBee messages	-	> 1000	> 1000
AutoSwitchover Ethernet - Mobile	-	yes	yes
3G/4G auto recovery	-	yes	yes
Over the air Upgrade	yes	yes	yes
Configuration page			
Environment			
Temperature	0..50 °C	-10..60 °C	-20..70 °C
Humidity	20..95%	20..99%	20..99%
Ingress protection		IP44	IP66
Energy			
Consumption	0,5W	2..4 W	2..4W
Connection adapter	5V	5V	12-30V
Powerfail detection	-	yes	yes
Solar:			
Supports solar panels	-	-	yes
MPPT solar energy	-	-	yes
Battery:			
Capacity	-	-	74 Wh
Operating time (days)	-	-	1
Network			
Ethernet	10/100	10/100	10/100
ZigBee type	coordinator	coordinator	coordinator
Number of nodes	< 50	<250	< 250
Speed (messages/sec)	<10	<100	<100
Clusters (basic, power, device-temp, commissioning, group)	yes	yes	yes
Wifi	-	optional	optional
Mobile			
3G	400 meters	400 meters	400 meters
4G	optional	optional	optional
Via Gateway	yes	yes	yes
GPS, integrated	-	-	optionnel
CE/FCC			
ZigBee			
Module	EN357LRS	EN357LRS	EN357LRS
FCC Rules parts	15C	15C	15C
FCC ID	S4GEM35XB	S4GEM35XB	S4GEM35XB
FCC Issue date	jan/31/2011	jan/31/2011	jan/31/2011
Frequency (GHz)	2400..2483,5	2400..2483,5	2400..2483,5
3G			
HSPA dual band (MHz)	-	900/2100	900/2100
GSM Quad band (MHz)	-	850/900/1800/1900	like ZGI
CE certificate	-	G110086E	G110086E
4G (model MSZGxA-4G)			
Five-Band FDD-LTE	-	B1/B3/B7/B8/B20	like ZGI
Dual band TDD-LTE	-	B38/B40	B38/B40
Dual band UMTS-HSDPA	-	B1/B8	B1/B8
Dual band GSM-GPRS	-	900/1800 MHz	900/1800 MHz
CE certificate	-	G110459F	G110459F
Dimensions and weight			
Dimensions (L x W x D in mm)	50x50x20	104x72x36	160x80x70
Weight, incl. battery (gram)	150	350	800
Mounting			
Pole mount (20.. 80 mm)	-	-	yes
Pole (27 mm)	-	-	optional
Suspending means	-	-	yes
Ordering no. (without options)	MSZGDA	MSZGIA	MSZGOA

LoRa: welke specs hiervoor opnemen en waar?

Optional: battery pack



ZGD



ZGO



ZGI

About Munisense

Munisense develops, sells and manages highly innovative real-time and online measurement and control solutions for business and government. Solutions that provide immediate insight in noise, vibrations, water levels, energy use, lighting, water and air quality and that allows effective control over lighting levels, ventilation, and pump activity. Our INSIGHTNOW™ meters are connected to our INSIGHTNOW™ cloud platform where the data is stored in real-time for analysis, visualisation and reporting. The information from the platform can be viewed in a range of specific visualisations any time, any where through a web browser or using our phone or tablet apps. Our applications are developed in close cooperation with universities, governments, partners and customers.

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