



MSGD4 - GeluidDuider ^{*)}

Flexible insight for a healthy and safe living environment

The GeluidDuider, a smart noise localizer, makes noise and nuisance visible. Simple, affordable and reliable. With real-time insight into what is happening in the environment, the GeluidDuider helps municipalities, companies and organizations to improve the quality of life, safety and well-being in public spaces.

Smart and accessible expandable noise monitoring

The MSGD4 combines simplicity, precision, and flexibility. Its compact, energy-efficient design is specifically designed for public spaces and operates completely autonomously.

The MSGD4 communicates via 4G/5G, Ethernet, or Wi-Fi, bridges power outages, and requires no specialized knowledge for installation or maintenance. The system is expandable with weather stations, (ANPR) cameras, radar, and external interfaces to further enhance noise monitoring.

Measure, recognize, localize and soundscape

The MSGD4 recognizes, locates, and classifies sounds and sound sources with five sensitive, weatherproof microphones and powerful built-in AI technology that can be updated remotely.

The system identifies a variety of sources, such as traffic, aircraft, construction activities, industry, voices, music, sirens, and fireworks.

The system complies with IEC 60651/60804/61672 Class 1. All measurements are processed in real time on the INSIGHTNOW™ platform. The MSGD4 optionally supports soundscape monitoring for experience-oriented sound research.

Communication and (Smart City) Integration

The MSGD4 uses the latest 4G/5G IoT standard for real-time communication with the ISO27001-certified INSIGHTNOW™ platform.

Data is available via open interfaces for connection to other systems.

In short, a strong basis for data-driven policy on liveability, safety and sustainability.

Compact, flexible and unobtrusive design

IEC 60651/60804/61672/20906

Sound recognition, localization and soundscapes

Expandable with video and object detection



*) GeluidDuider - AI driven noise monitoring station that detects, localizes and classifies noise events

Munisense GeluidDuider	MSGD4
Standard	
IEC 60851/60804/61672	Class 1
Measured values	
Supported noise levels 1 sec.	$LAF_{MIN\ MAX}$, $LAS_{MIN\ MAX}$, LAI_{MIN} , LA_{EQ} , $LCF_{MIN\ MAX}$, $LCS_{MIN\ MAX}$, LC_{PEAK} , LC_{EQ}
Supported noise levels 125 msec.	LAF , LAS , LCF , LCS
Advancing L_{EQ}	$T = 1, 2, 3, 5, 15, 30, 60$ min.
Percentiles (LAS and LAF 125 ms)	0.5, L01, L02, L05, L10, L25, L50, L75, L90, L95, L99, L99.5
Long term per 24 hrs	L_{day} , $L_{evening}$, L_{night} , L_{den}
Noise recognition detection (conform ISO 20906)	absolute, relative level and delta
Frequency weightings	dB(A), dB(C), dB(Z)
Time weighting	Fast, Slow, Impulse, Peak
Measurement range total	20 - 140 dB(A)
Resolution	0.01 dB
Accuracy	1 dB
Noise floor of the MSGD	20 dB(A)
Spectra, 1/3 Octa	10 Hz - 20 kHz
Audio (configurable quality)	WAV, OggOpus quality (20 kHz)
Soundscapes	Optional
Microphone	
Type	4x MEMS (Omni), 1x 1/4 inch
Sound direction Azimuth accuracy	-180° - +180°, 5°
Sound direction elevation accuracy	0 - 90°, 10°
Camera	
12 MP, 102 degrees	Optional
Sound recognition	
Sound recognition ML modelling	Vehicles, screaming, horns, sirenes, fireworks, music etc.
Remotely adaptable and expandable	Yes
Internal storage	
Period measurement storage	1 day
Audio WAV	1-14 days
Optional video	1-14 days
Network and connections	
WAN	LTE-M
LAN	Ethernet, WiFi
Serial	RS485, RS244, USB
Authentication (server and client)	TLS v1.2
Other	0-10 V, DALI
Connector	20 pins
Energy	
Consumption / battery capacity	4 W / 24 hrs.
Connecting adapter	12 - 30 V
Supports solar energy (MPPT)	Yes
External power supply device	12 V, 1 Ampère
Environmental conditions	
Long term outdoor measurements	Yes, IP65
Temperature	-20 - 60 °C
Temperature charging Li-Ion accu	-5 - 45 °C
Humidity	10 - 99 %
Other characteristics	
Accuracy timestamp	GPS 1 µSec, NTP 100 mSec
Real time clock	Yes
GPS locator	GPS, GLONASS, GALILEO, BEIDOU/COMPASS, QZSS
Statusinformation	Display
Dimensions and weight	
Dimensions (diameter x H)	
ZHAGA module	80x90 mm
Incl. weather protection	110x110 mm
Weight	400 gram

Recycling e-waste

Of course you can deliver or send us your old Munisense devices. We then ensure that they are included in our recycling process.

The power of simplicity and flexibility

With the MSGD4, noise monitoring finally becomes affordable, practical, scalable and future-proof.

One compact flexible sensor with endless possibilities, for a living environment in which people feel comfortable, safe and heard.



About Munisense

Munisense develops, produces, supplies and manages innovative measurement solutions for businesses and governments. Solutions that give stakeholders direct online insight into noise, water quality, water levels and air quality. The information is online available at any time for visualization, analysis or periodic reports. This way managers and policymakers can measure in real time; remotely, reliable and smarter.

Munisense BV
Touwbaan 38 - A0.08
2352 CZ LEIDERDORP
The Netherlands
info@munisense.com
T +31 (0)71-711 4623
www.munisense.com

munisense
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