

Silvanet Border Gateway

Distributed LoRaWAN® Gateway for Large-Scale Outdoor Networks and connection with Silvanet Cloud

The Silvanet Border Gateway is placed at the border of the target forest area, typically in a forest house or near a village. The Border Gateway communicates with the Silvanet Cloud Platform, relaying messages from Wildfire Sensors (directly or indirectly via Mesh Gateways). Connectivity is provided wirelessly using the built-in LTE radio (using 4G/LTE-M with 2G/GPRS fallback) or using the built-in Ethernet adapter via a wired Internet connection. For remote deployments where there is no mobile network coverage and no access to mains power, the Silvanet Border Gateway has built-in support for satellite uplink using the SWARM satellite network. It can be operated on mains power or powered by a solar cell.

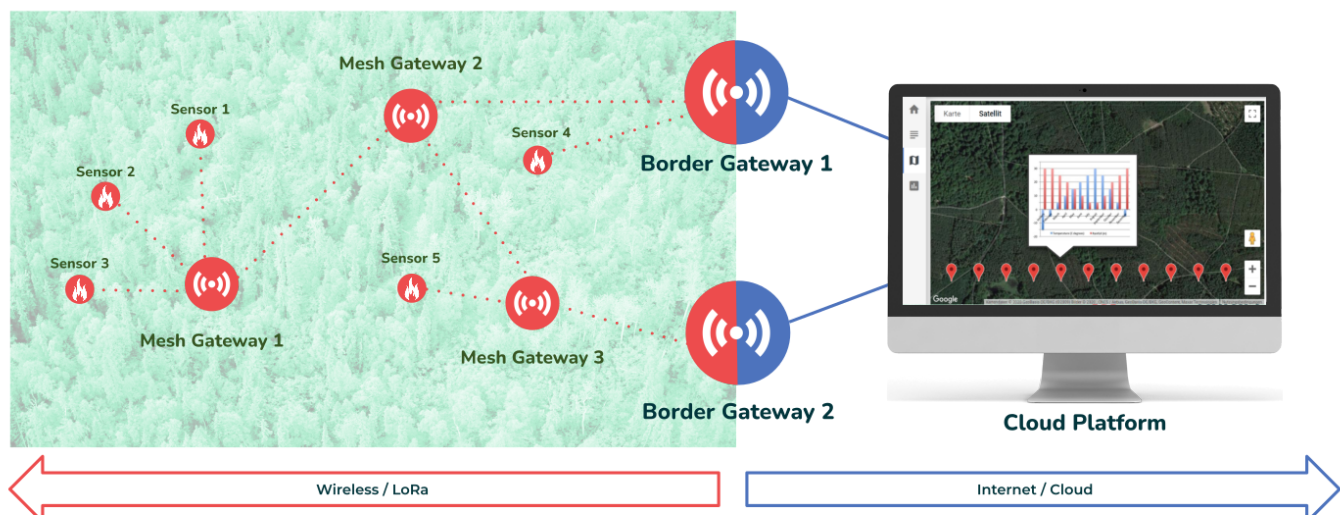


Differentiators

- Solar- or mains powered
- Built-in satellite communications (SWARM)
- Extendable to large areas with Mesh Gateway

Features

- Ethernet, 4G/LTE-M with 2G/GPRS fallback
- LoRaWAN compliant
- Firmware Update Over-the-Air (FUOTA)



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Mechanical Specification

Size	63 x 46 x 4,5cm
Weight	1,3kg
Solar Panel	Optional, external, 67 x 36cm
Operational Temperature	-40°C to +85°C
Operational Humidity	0% to 100% Condensing
Ingress Protection	IP64
Material	Plastic (Weather, UV-proof)

Regulatory Compliance

Regulatory (US)	FCC Part 15.247, 109, 209,
Environmental	ETSI EN 300 019
EMC	ETSI EN 55024
	ETSI EN 300 489

General Characteristics

Maintenance	Maintenance-free (10-15 yr)
Mesh Gateway to Border Gateway (ratio)	Typically 20 Mesh Gateways per 1 Border Gateway
Power source	Mains powered (PoE) or Solar panel (optional), battery-free
Energy storage	Supercapacitors
Installation	Mounted on pole or attached to a tree

Built-in Connectivity

Wired connection	Ethernet
Wireless connection	4G/LTE-M, 2G/GPRS fallback
Satellite	SWARM up- and downlink

External Connectivity

Starlink	Space X / Starlink service
Other satellite internet	VSat iFast Ku or C-Band

LoRa Radio Parameters

ISM Bands	NA902-928, AU915
ISM Bands	EU868, AS923
Tx Power	22 dBm

Receive Channels	4
Transmit Channels	1
Antenna connection	N-Type

