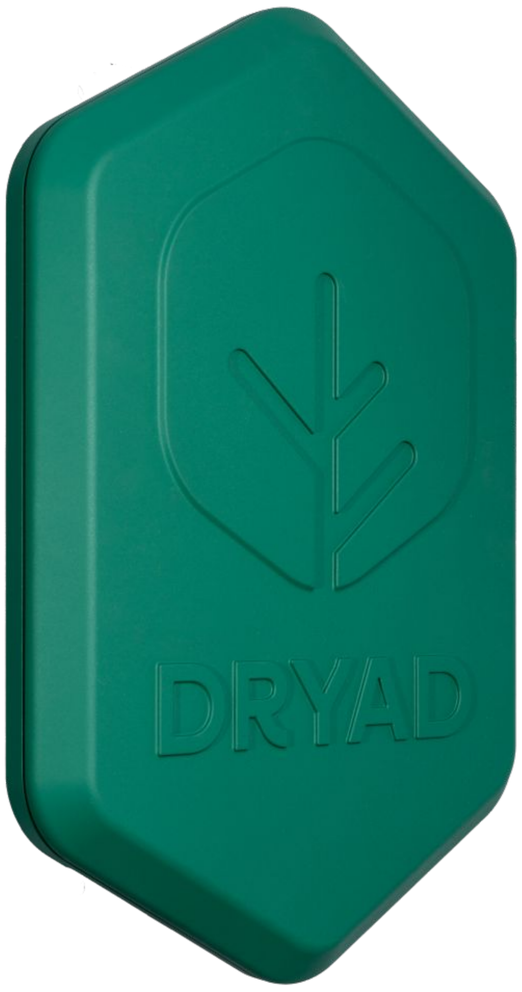
Silvanet Border Gateway

Model: SBG-3

Distributed LoRaWAN® Gateway Connecting the Silvanet Cloud Platform

The Silvanet Border Gateway connects the Mesh Gateways and relays messages from Wildfire Sensors to the Silvanet Cloud Platform.



It is installed at the edge of the forest area, typically in a forest house or near a village. Connectivity options include built-in 4G (LTE-M/NB-IOT), 2G (GPRS) and Ethernet (PoE).

Using Mesh Gateways, the network can be seamlessly extended to cover vast areas, enabling reliable communication across even the most remote forest regions. The Border Gateway can be mains powered (via PoE) or use the included solar cells.

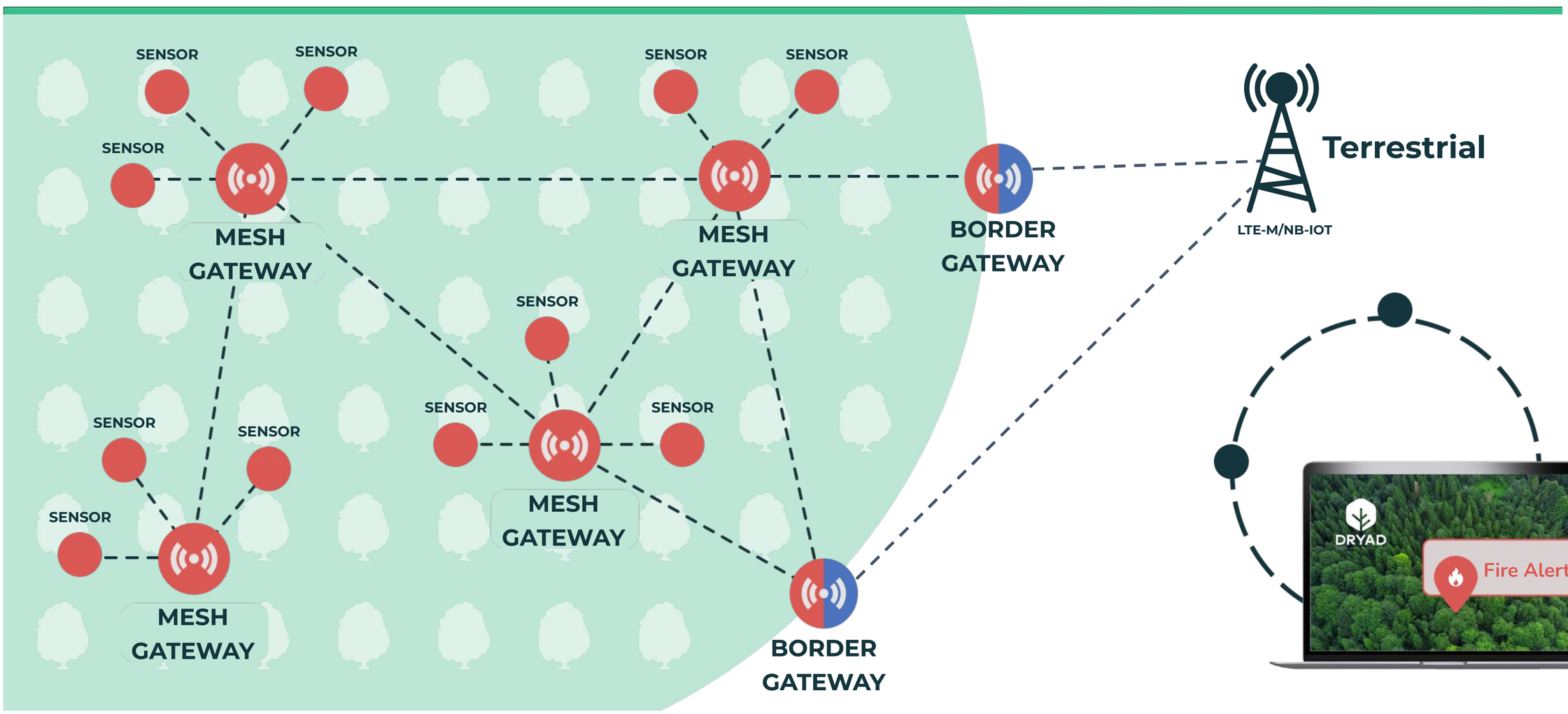
DIFFERENTIATORS

- **Solar- or mains- powered**
- **Supercapacitors instead of batteries**
- **Extendable to large areas with Mesh Gateway**

FEATURES

- **Ethernet (PoE), 4G (LTE-M/NB-IOT), 2G (GPRS)**
- **LoRaWAN-compliant**
- **Firmware Updates Over-the-Air (FUOTA)**

SILVANET MESH NETWORK ARCHITECTURE



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DRYAD

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Mechanical Specifications

Size	51 x 34 x 10 cm
Weight	4 kg
Solar Panel	2 external 40W, 67 x 36 cm
Operational Temperature	-40℃ to +85℃
Operational Humidity	0% to 100% Condensing
Ingress Protection	IP67
Material	Plastic (Weather, UV-proof)

Regulatory Compliance

USA (FCC, PTCRB)	Europe (CE RED)
Canada (IC)	CB Scheme

General Characteristics

Maintenance	Maintenance-free (10-15 years)
Mesh Gateway to Border Gateway (ratio)	Typically 20 Mesh Gateways per 1 Border Gateway
Power source	Mains powered (PoE) or solar panel
Energy storage	Supercapacitors, battery-free
Installation	Tree- or pole-mounted
Provisioning	NFC for local debugging and configuration

Connectivity

Wired connection	Ethernet
Wireless connection	4G/LTE-M/NB-IOT, 2G/GPRS

LoRa Radio Parameters

ISM Bands	NA902-928, AU915
ISM Bands	EU868, AS923
Tx Power	<27dBm (As per local regulations required)
Receive Channels	5
Transmit Channels	1

Dimensions