

Nextriv Hub Outdoor

Outdoor IP67 radio gateway

NX-GW-OUT

Nextriv Hub

A fully outdoor IP67-rated radio gateway with a GNSS receiver — the foundation of a Nextriv network in open terrain: agriculture, industry, infrastructure. The polycarbonate and die-cast aluminium housing operates at $-40...+70\text{ }^{\circ}\text{C}$, and eight radio channels handle approx. 2,000 sensors within a radius of up to approx. 15 km in open terrain. Triple internet backhaul — Gigabit Ethernet (PoE), Wi-Fi and 4G LTE — switches over automatically (failover), and a supercapacitor lets the gateway send a power-loss alarm. Configuration and gateway-fleet supervision are handled remotely from the Nextriv platform.



IP67

ingress protection

~15 km

open-terrain range

~2,000

supported sensors

$-40...+70\text{ }^{\circ}\text{C}$

operating temperature

Key features

- Full outdoor build: IP67 housing of polycarbonate (UL94 V0) and die-cast aluminium, operation at $-40...+70\text{ }^{\circ}\text{C}$
- Eight half/full-duplex radio channels, sensitivity down to -140 dBm and up to 27 dBm Tx power — approx. 2,000 sensors on a single gateway
- Two external $50\text{ }\Omega$ N-Female antenna connectors, two 60 cm antennas included — range up to approx. 15 km in open terrain
- Triple internet backhaul with automatic failover: Gigabit Ethernet (PoE), 2.4 GHz Wi-Fi and 4G LTE (SIM slot under a cover)
- A supercapacitor sustains operation after power loss — the gateway has time to send a power-loss alarm [3]
- GNSS receiver (GPS/GLONASS/QZSS/SBAS) with 2.5 m CEP accuracy — automatic geolocation and inventory of distributed gateways
- Built-in network server: sensor codec library, multicast, over-the-air sensor updates (FUOTA), gateway-fleet mode; MQTT(s), HTTP(s), BACnet and Modbus integrations
- Edge logic on the gateway: quad-core 1.5 GHz (64-bit) processor, Python SDK and Node-RED; radio noise analyser and listen-before-talk

Technical specification

Radio — sensor side	
Technology	long-range, low-power radio (LPWAN)
Radio band	EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864
Channels	8 (half/full-duplex)
Receiver sensitivity	down to -140 dBm (at 292 bps)
Tx power	27 dBm max
Capacity	approx. 2,000 sensors (at a 10-min reporting interval)
Sensor-gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Antennas	2× external 50 Ω N-Female connector; 2× 60 cm antenna included
Listen-before-talk	yes — channel-occupancy check before transmitting [1]
Communication	two-way — readings to the platform, remote configuration via downlink

Internet uplink (backhaul)	
Ethernet	1× RJ45 WAN, 10/100/1000 Base-T (IEEE 802.3), auto MDI/MDIX, PoE powered (PD); 1.5 kV RMS isolation
Wi-Fi	IEEE 802.11 b/g/n, 2.4 GHz, internal antenna; AP or client mode; up to 18 dBm Tx power
Cellular	4G LTE, power class 3 (23 dBm ±2 dB), internal antenna, 1× mini SIM slot (2FF) under a cover
Reliability	automatic WAN failover between links
Security	VPN tunnels: OpenVPN, IPsec, WireGuard, DMVPN, GRE, L2TP, PPTP; firewall (access control, DMZ, port mapping, IP/domain filtering)

Geolocation (GNSS)	
Constellations	GPS, GLONASS, QZSS, SBAS
Position accuracy	2.5 m CEP (open air)
Sensitivity	-161 dBm (tracking), -149 dBm (acquisition)
Antenna	internal

Interfaces	
USB	1× Type-C (service console)
Power connector	1× M12 (A-coded)
Indicators	3× LED: system, radio, LTE
Button	1× reset
Grounding	grounding stud on the housing
Built-in	watchdog, RTC, timer

Device features	
Processor and memory	quad-core 1.5 GHz, 64-bit; 512 MB DDR4 RAM; 8 GB eMMC storage
Built-in network server	Nextriv sensor codec library + custom codecs; multicast (group downlink); over-the-air sensor updates (FUOTA); gateway-fleet mode
Integrations	MQTT(s), HTTP(s), BACnet/IP, BACnet/SC, Modbus TCP, Modbus RTU over TCP
Radio hygiene	radio noise analyser (channel selection); packet filter (white/black lists)
Data retransmission	packets re-sent after the network link recovers [2]
Management	web UI, CLI (SSH/Telnet), SMS commands, SNMP v1/v2c/v3, HTTP/MQTT API, Nextriv platform; event alarms (power on/off, link up/down, VPN up/down)
Diagnostics	ping, traceroute, network traffic captures, log server
Edge logic	Python SDK, Node-RED environment

Power	
Power supply	802.3af PoE or 6–12 V DC via the M12 connector
Power consumption	typical 3.6 W, max 4.8 W
Power backup	supercapacitor — the gateway sends a power-loss alarm before shutting down [3]

Enclosure and operating environment

Ingress protection	IP67
Housing	polycarbonate (UL94 V0) + ADC-12 die-cast aluminium, white
Dimensions	240 × 164 × 90.9 mm (9.45 × 6.46 × 3.58 in)
Weight	1,463 g
Mounting	wall or mast/pole (mounting bracket included)
Operating temperature	-40...+70 °C (reduced cellular performance above 60 °C)
Storage temperature	-40...+85 °C
Ambient humidity	0...95 % RH, non-condensing (at 25 °C)

Compliance and approvals

Approvals	CE, CE (RED), FCC, TELEC
Environmental	RoHS

Ordering information

Product code (SKU)	NX-GW-OUT
Variants	radio-band variant per installation region (EU868 as standard) — specify the variant when ordering
Included	PoE injector, mounting bracket, 4× wall-mounting kit, 1 m antenna coaxial cable, 30 cm M12 DC power cable, 2× 60 cm antenna, short mounting backboard kit
Optional accessories	130 cm antenna with 8 dBi gain; PoE surge protector; antenna lightning arrester
Works with	Nextriv Sense / Probe / Weather sensors

[1] Listen-before-talk (LBT) is not available in the US915 and AU915 band variants.

[2] Data retransmission availability depends on the configured packet-forwarding mode.

[3] The supercapacitor backup lasts approx. 1 minute — an indicative value; it serves to send the power-loss alarm, not to keep the gateway running.

Specifications are subject to change without notice. The latest document versions are available in the download centre: nextriv.com/files. Questions: nextriv.com/contact.