

Nextriv Hub Solar

Solar-powered 4G radio gateway

NX-GW-SLR

Nextriv Hub

An autonomous radio gateway powered by a solar panel, transmitting data over the 4G cellular network — a fully fledged Nextriv access point where there is no mains power or Ethernet. Typical power draw is just approx. 0.8 W, and the replaceable 25 Ah battery pack delivers up to 4 days of operation without sun. The die-cast aluminium IP67 housing operates from -30 to +70 °C, and the built-in GPS lets you remotely locate and manage distributed gateways. No radio compromises either: 8 channels, -140 dBm sensitivity and around 2,000 supported devices.



~0.8 W

typical power draw

up to 4 days

of operation without sun

~2,000

devices per gateway

IP67

outdoor aluminium housing

Key features

- Energy from the sun, transmission over 4G LTE Cat 1 / GSM (nano SIM) — deployment with no mains power and no cabling
- Typical power draw of approx. 0.8 W — the entire design optimised for solar power
- Replaceable 3.6 V / 25 Ah battery pack — up to 4 days of operation without sun (100 sensors, 10-min interval)
- Full-size radio: 8 channels, -140 dBm sensitivity, up to 27 dBm output, around 2,000 devices per network
- Built-in GPS — remote location and management of a distributed gateway fleet
- Built-in network server (up to 100 devices) with MQTT integration — a small autonomous network with no intermediary infrastructure
- Packet filter and data retransmission — less unnecessary traffic and cellular data, a gap-free measurement history
- Die-cast aluminium IP67 housing with a grounding stud and vent plug, operation from -30 to +70 °C; pole or wall mounting with the hardware included

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-duplex)
Receiver sensitivity	down to -140 dBm (at 292 bps)
Tx power	max. 27 dBm
Antenna	external, 50 Ω N-female connector — 60 cm antenna and 1 m coaxial cable included
Sensor-gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Network capacity	around 2,000 devices in packet-forwarding mode (depending on uplink/downlink frequencies)
Advanced features	packet filter, listen before talk (LBT) [1], data retransmission
Communication	two-way — readings to the platform, remote configuration via downlink

Internet link (backhaul)	
Cellular network	4G LTE (Cat 1) / GSM
Tx power	LTE: Class 3 (23 dBm $\pm$ 2 dB)
Cellular bands — global variant	LTE-FDD: B1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/66; LTE-TDD: B34/38/39/40/41; GSM: B2/3/5/8
Cellular bands — North America variant	LTE-FDD: B2/4/5/12/13/66
SIM card	1x nano SIM (4FF); ejector tool included
Cellular antenna	1x external (shared with GPS)
Ethernet port	none — fully wireless link

Interfaces	
Wi-Fi (configuration)	IEEE 802.11 b/g/n, 2.4 GHz; access-point mode — device configuration only; WPA-PSK security; external antenna
Positioning (GNSS)	GPS; antenna shared with the cellular antenna
LED indicators	3x — system, cellular link, Wi-Fi
Button	1x reset / Wi-Fi
USB	1x USB 2.0 (Type-C) — power supply and service console
Power connector	1x M12 (A-coded)

Device features	
Built-in network server	up to 100 devices; MQTT integration
Network protocols	HTTP, HTTPS, MQTT
VPN	OpenVPN client
Configuration	web interface (over Wi-Fi), MQTT API, remotely from the Nextriv platform
Updates	web interface, Nextriv platform
Diagnostics	ping
Supervision	built-in watchdog and timer
Processor and memory	dual-core 240 MHz (32-bit); 8 MB RAM; 16 MB flash

Power	
Power sources	solar panel or 12–24 V DC (M12 connector); 5 V / 2 A via USB Type-C as a fallback
Battery	replaceable 3.6 V / 25,000 mAh pack (18650-format cells)
Battery charging	via the M12 power connector only (solar panel / DC)
Runtime without sun	up to 4 days — 100 sensors, 10-min reporting interval [2]
Power consumption	typically 0.8 W

Solar panel	
Maximum power	30 W $\pm 5\%$ (standard) / 45 W $\pm 5\%$ (optional)
Open-circuit voltage	17 V ± 0.3 V
Rated voltage	15 V ± 0.3 V
Rated current	2 A $\pm 5\%$ (30 W panel) / 3 A $\pm 5\%$ (45 W panel)
Cell type	monocrystalline silicon
Panel operating temperature	-20...80 °C
Dimensions and weight	533 × 303 × 17 mm, 1.645 kg (30 W) / 570 × 380 × 17 mm, 2.305 kg (45 W)
Cable	M12 power cable, 50 cm — included with the panel

Enclosure and operating environment

Ingress protection	IP67
Housing	die-cast aluminium, white; grounding stud and vent plug
Dimensions	250 × 157.5 × 46 mm (9.84 × 6.20 × 1.81 in)
Weight	1.275 kg without batteries / 1.755 kg with batteries
Mounting	pole or wall mounting — brackets, hose clamps (Ø 67–127 mm) and the panel mounting kit included
Operating temperature	-30...+70 °C (-22...+158 °F)
Battery charging temperature	-20...+50 °C (-4...+122 °F)
Storage temperature	-40...+85 °C (-40...+185 °F)
Ambient humidity	0...95 % RH, non-condensing (at 25 °C)

Compliance and approvals

Approvals	CE, FCC
Environmental	RoHS

Ordering information

Product code (SKU)	NX-GW-SLR
Variants	30 W solar panel (standard) or 45 W (optional); radio and cellular band variant: global or North America — specify when ordering
Included in the box	battery pack, solar panel with a 50 cm M12 cable and bracket, 60 cm radio antenna, 1 m coaxial cable, mounting kits (pole/wall), Ø 67–127 mm hose clamps, SIM ejector tool
Works with	Nextriv Sense / Probe / Weather sensors

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

[2] Runtime without sun determined under laboratory conditions — indicative value; the actual time depends on the number of devices, the reporting interval and radio conditions.

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