

Nextriv Hub Pro

Rugged IP65 radio gateway

NX-GW-PRO

Nextriv Hub

A semi-industrial radio gateway with IP65 ingress protection and a -40...+70 °C operating range — for indoor and sheltered outdoor spots such as canopies or arcades. It serves approx. 2,000 sensors over 8 half/full-duplex radio channels and reaches the internet via Gigabit Ethernet with PoE, Wi-Fi and optional 4G with automatic failover. A quad-core 1.5 GHz processor, 512 MB DDR4 and 8 GB of storage leave headroom for the built-in network server, BACnet/Modbus integrations and local data processing. The N-Female connector lets you run the signal out to an external antenna and cover the grounds around the site.



~2,000

sensors per gateway

IP65

ingress protection

-40...+70 °C

operating temperature range

~15 km

open-terrain range

Key features

- IP65 ingress protection and operation from -40 to +70 °C — mounting in semi-outdoor spots: canopies, arcades, unheated halls
- PoE power (802.3af) — single-network-cable installation; alternatively 9–24 V DC or USB-C
- 8 half/full-duplex radio channels and sensitivity down to -140 dBm — approx. 2,000 sensors on a single gateway
- A strong platform: quad-core 1.5 GHz 64-bit processor, 512 MB DDR4 and 8 GB eMMC — headroom for local processing and data buffering
- 50 Ω N-Female connector for an external antenna — optional 60 cm fibreglass antenna kit for the building and the grounds
- Built-in network server: codec library, multicast, over-the-air sensor firmware updates, gateway fleet mode
- Triple backhaul — Gigabit Ethernet, 2.4 GHz Wi-Fi and optional 4G LTE — with automatic WAN failover
- Seven VPN types (incl. WireGuard), a firewall, multi-level permissions and a radio noise analyser for deployment planning

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	up to 27 dBm
Antennas	2× internal + 1× 50 Ω N-Female connector for an external antenna
Network 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
Communication	two-way — readings to the platform, remote configuration via downlink

Internet uplink (backhaul)

Ethernet	1× RJ45 WAN, 10/100/1000Base-T (Gigabit, auto MDI/MDIX), PoE PD powered, 1.5 kV RMS isolation
Wi-Fi	IEEE 802.11 b/g/n, 2.4 GHz, internal antenna; access point (AP) or client mode
Wi-Fi security	AP: WPA-PSK/WPA2-PSK; client: WPA-PSK/WPA2-PSK/WPA-Enterprise/WPA2-Enterprise; WEP/TKIP/AES encryption
Cellular modem (optional)	4G LTE, power class 3 (23 dBm ±2 dB), internal antenna, 1× mini SIM slot (2FF)
Link reliability	automatic WAN failover between links (Ethernet / Wi-Fi / 4G)

Interfaces

USB	1× USB-C — power supply and service console
Power connector	1× DC jack connector (2.1 × 5.5 mm)
Button	1× reset
Indicators	6× status LED: power, system, radio, Wi-Fi, LTE, Ethernet
Built-in	watchdog, real-time clock (RTC), timer

Hardware platform

Processor	quad-core, 1.5 GHz, 64-bit ARM architecture
RAM	512 MB DDR4
Flash storage	8 GB eMMC

Device features	
Network server	built-in — Nextriv device codec library plus custom codec support
Multicast	group downlink commands to many sensors at once
Sensor updates	over-the-air sensor firmware updates
Gateway fleet mode	the gateway can act as the network server for other Nextriv gateways on site
Data retransmission	data packets re-transmitted after network recovery [1]
Spectrum analysis	radio noise analyser for channel selection; packet filter (white/black lists)
Integrations	MQTT(s), HTTP(s), BACnet/IP, BACnet/SC, Modbus TCP, Modbus RTU over TCP
VPN	7 types: OpenVPN, IPsec, PPTP, L2TP, GRE, DMVPN, WireGuard
Firewall	access control, DMZ, port mapping (DNAT), MAC binding, IP & domain filtering
Management	web UI, CLI (SSH/Telnet), SNMP, HTTP API, MQTT API, the Nextriv platform; multi-level user permissions
Diagnostics	ping, traceroute, tcpdump, log server; event alarms (power, network, VPN)
Extensibility	Python SDK and the Node-RED environment for custom on-gateway applications

Power	
Power input	9–24 V DC (jack connector); 802.3af PoE; 5 V/1 A USB-C
Power consumption	typ. 2.9 W, max 4.2 W

Enclosure and operating environment	
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)
Ingress protection	IP65
Housing	PC + ABS (UL94 V0), white & black
Weight	548 g
Dimensions	180 × 110 × 55.5 mm (7.09 × 4.33 × 2.19 in)
Mounting	desktop, wall or pole mounting — bracket included

Compliance and approvals	
Approvals	CE, CE (RED), Telec, JATE, RCM
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-GW-PRO
Variants	with or without a 4G LTE modem; radio band per region — specify the variant when ordering
In the box	DC power adapter, mounting bracket with screws, wall-mounting kit, 18 cm radio antenna
Optional accessories	60 cm fibreglass external antenna kit (N-N connectors)
Works with	Nextriv Sense / Probe / Weather sensors

[1] Data retransmission is available in selected packet-forwarder operating modes.

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