

NB1810-NWac4Ep-G

Industrie-Router mit 5G + WLAN-ac + GbE + SFP + 4x GbE-PoE + GNSS

Leistungsstarker und modularer Mobilfunk-Router mit SFP-Port sowie Gigabit Ethernet mit PoE für den Einsatz im industriellen Umfeld.



Hauptmerkmale

Mobilfunk	1x 5G-NR, LTE-A Pro, UMTS
SIM	2x Micro SIM
WiFi / WLAN	1x Dual-band IEEE 802.11a/b/g/n/ac (Wi-Fi 5), 100 Clients im Access Point Mode
Ethernet	4x Gigabit Ethernet mit PoE (4-Port Switch), 1x SFP/Gigabit Ethernet Combo, 1x Gigabit Ethernet
Erweiterter Speicher	1x SD Card
Serielle / Feldbus	1x RS-232/485
Ortung	Multi-GNSS
Betriebstemperatur	-40 °C bis +65 °C (@15 W PoE)
Software	Routing, Network Services, VPN, Firewall, Link Management, Supervisor, SDK, freie Updates
Konformität	CE (RED)
Modularität	Erweiterungen auf Anfrage

Produktbeschreibung

Der NB1810 ist ein leistungsstarker und robuster Mobilfunk-Router, der für den Einsatz im industriellen Umfeld konzipiert ist.

Anwendungen

- Industrielle Sicherheit
- Point of Sale
- Öffentliches WLAN
- Smart Grid
- Öl & Gas
- Erneuerbare Energien
- Fabrikautomation
- Mining
- Videoüberwachung
- Intelligenter Verkehr

Spezifikation

Mobile / Cellular

Standard

1x Multimode 5G-NR, LTE-A Pro, UMTS

5G - NR n1, n2, n3, n5, n7, n8, n12*, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79

2014/53/EU (RED): n1, n3, n7, n8, n20, n28, n38, n40, n77, n78

4G - LTE-A Pro B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29DL, B30, B32, B34, B38, B39, B40, B41, B42, B43*, B46(LAA), B48(CRS), B66, B71

2014/53/EU (RED): B1, B3, B7, B8, B20, B28, B38, B40

3G - DC-HSPA+/UMTS B1, B2, B3, B4, B5, B6, B8, B9, B19

2014/53/EU (RED): B1 (2100), B3 (1800), B8 (900)

5G - NR Modes Sub-6 FDD and TDD

LTE Category Cat. 20 up to 7CA

MIMO 4x4 MIMO in 5G-NR support on n1, n2 n3, n7, n25, n38, n40, n41, n48, n66, n77, n78, n79 and LTE B1, B2, B3, B4, B7, B25, B30, B38, B39, B40, B41, B42, B43, B46, B48, B66

Antenna ports 4

Power Class 23dBm (Power Class 3)

Data rate down / up (max) up to 5.5 Gbps DL / 2.7 Gbps UL

Operations Modes 5G Core SA and NSA operations

3GPP 4G/5G Rel. 15, 3G HSPA+ Rel. 8

FCC ID R17FN980

Voice -

Region Europe, Middle East and Africa (EMEA), North America (NA), Asia and Pacific (APAC)

* future module firmware release

Region

Europe, Middle East and Africa (EMEA)

Connectors

4x SMA female

SIM

2x Micro SIM - 3FF

WiFi / WLAN	Standard	1x WLAN 2.4/5 GHz a/b/g/n/ac (Wi-Fi 5) Wireless standard IEEE 802.11a/b/g/n/ac (Wi-Fi 5) Frequency 2.4/5 GHz Diversity 2x2 MIMO Data rate (max) 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz) Modes Client or access point (up to 100 clients) FCC ID TK4WLE600VX
	Connector	2x SMA female
Ethernet	Standard	1x Gigabit Ethernet Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps 1x Gigabit Ethernet / SFP combo (software switchable) Ethernet standard 1000BASE-T, Auto MDIX SFP standard Depending on module Speed 10/100/1000 Mbps Combo port SFP or GbE interface activated (software switchable) 4x Gigabit Ethernet PoE+ Ethernet standard 1000BASE-T, Auto MDIX Speed 10/100/1000 Mbps PoE standard IEEE802.3af, IEEE802.3at, including two event classification PoE output power max 30 W per port, 60 W in total
	Connector	2x RJ45, 1x SFP cage (mini GBIC), 4x RJ45
Positioning	Standard	1x Multi-GNSS Receiver BeiDou, Galileo, GLONASS, GPS gpsOne Gen 9 Antennas Active or passive Tracking Sensitivity Up to -158 dBm CEP (Circular Error Probability) < 2m (CEP 50), (Open sky conditions, Horizontal) Services Standalone
	Connector	1x SMA female
USB	Standard	1x USB 2.0 Host
	Connector	1x Type A
Serial, Fieldbus	Protocol	1x RS-232/485 combo (software switchable) Protocol EIA-232 Signals TX, RX Signal level High > 5 VDC, low < -5 VDC Bit rate Up to 115 200 Bit/s Protocol EIA-485 Signals A, B Signal level Differential output voltage, loaded 1.5 VDC - 3.6 VDC Bit rate Up to 115 200 Bit/s Termination 120 Ω for RS-485 configurable by software
	Connector	1x Terminal block header 3.5 mm (screw locking)
Extended Storage		SD Card Slot type microSD Speed (read / write) 600 kByte / s Application Store user and logging data of SDK or LXC applications SD card not included
System	Core	1.3 GHz dual core, 1 GB RAM, 4 GB flash
	Module Slots	2x miniPCIe (PCIe + USB), 2x Extension (USB)

Software	Features	<p>NetModule Router Software</p> <p>Package The standard software package includes an intuitive user interface, covering all modern routing protocols and enables efficient mass deployment.</p> <p>General Fail-safe update (FOTA), upgrade via USB, HTTP(S), (S)FTP or TFTP, remote CLI & WebGUI, RADIUS authentication, Simple Certificate Enrollment Protocol (SCEP), Hardware- und Software Watchdog</p> <p>Remote Management Manage and monitor devices with SNMP V1/V2/V3, Netmodule vendor MIB, telnet, SSH, or HTTP/HTTPS</p> <p>Cellular Networking Multi-SIM / eSIM support (optional license), multi-APN support, signal strength monitoring, dedicated bearers, CSFB/VoLTE calls (optional license)</p> <p>Wireless LAN Access Point, Client Mode, Mesh Point or Dual Modes (Mesh Access Point / Access Point - Client), WLAN Pseudo-Bridge Client Mode: Multiple Client SSID Profile, Encryption: Open, WEP, WPA1/2/3-Personal, WPA1/2/3-Enterprise. Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, Protected Management Frames (802.11w) AP Mode: Multi-SSIDs (up to 8) Encryption: Open WPA1/2/3-Personal, WPA1/2/3-Enterprise Fast Roaming: Fast BSS Transition (802.11r), PreAuthentication, DFS support Protected Management Frames (802.11w) Client Tracking, Band Steering, Hide SSID broadcasting, Isolate Clients, Accounting, Short guard Intervall Mesh Mode (802.11s): Encryption: None, SAE. Gateway announcements</p> <p>Link Management Link prioritization, link aggregation, load balancing, multipath-TCP, IP-passthrough, link supervision,</p> <p>Services DHCP Client/Server, DNS Caching Server, Email, SMS Service, NTP Client/Server, SNTP Server, DynDNS, SSH Server, SNMP Agent, HTTP/HTTPS/FTP Server, IPv6 for WAN, 802.1x over Ethernet, MQTT Broker Voice Gateway (SIP, Call Routing, Audio with optional license) Coovachilli Hotspot</p> <p>Routing Destination, policy, multipath, mobile-IP, OSPF, BGP, multicast, TCP-MSS clamping, bridging discovery protocols LLDAP, CDP, SONMP, EDP, FDP, IRDP, VRRP, STP/RSTP, VRRP, VLAN, PPPoE, VXLAN</p> <p>VPN OpenVPN, IPsec (IKEv1 and IKEv2), PPTP, GRE, L2TP, CSD dial-in, Certificate revocation service</p> <p>Firewall Stateful firewall, connection tracking, NAT, NAPT, masquerading, bridge filtering, Adress translation (based on SRC and DST ports)</p> <p>Encryption supporting password protected PKCS12 files, integrated random certificate key generator, "Let's encrypt" certificate, ECC (Certificates with Elliptic Cryptography)</p> <p>Quality of Service Diffserv, SFQ, HTB, Priority-based Queuing, Netflow (Softflow)</p> <p>Programmability SDK</p> <p>Troubleshooting Logging, Ping, Traceroute, Tcpdump, Speed-test</p>
	Licenses	<p>GNSS/GPS</p> <p>Services Server with JSON-, NMEA stream</p>
Power	Input Voltage	<p>48 VDC</p> <p>Nominal voltages 48 VDC (restricted input range for PoE switch)</p> <p>Absolute voltages 48 VDC (-10 % / +10 %)</p>
	Connector Consumption	<p>1x Terminal block header 3.5 mm (screw locking)</p> <p>82 W (average), 90 W (max with 60W PoE load)</p>
Mounting		DIN-Rail
Dimensions	W x H x D	Width 95 mm x height 128/140 mm x depth 121 mm
Weight		1100 g
Environment	Operating Temperature	-40°C to +50°C
	Ingress Protection Level	IP40
MTBF		180'000 h / 20.5 years, according SN29500 at environmental temperature 40 °C
Lieferumfang		Device, General safety instructions, Terminal block
Certifications	Compliance	CE according to 2014/53/EU (RED), 2011/65/EU (RoHS)
	Domain	Industrial
Order Code		NB1810-NWac4Ep-G