4G LTE Cat 6

Industrial IoT Router with Dual Band WiFi

Model # **NTC-400 Series**

The **NetComm 4G LTE Cat 6 Industrial IoT Router with Dual Band WiFi (NTC-400)** creates high speed and reliable data connectivity where fixed line connections are either unavailable or not suitable for the application. The NTC-400 creates high speed dual band WiFi hotspots in public transport, streams HD video from multiple surveillance cameras simultaneously, tracks vehicles using GPS, and supports countless other bandwidth-intensive IIoT applications in real time.

KEY BENEFITS

IMPROVED CONNECTIVITY

The NTC-400 supports 4G LTE Cat 6 to deliver the highest speed possible. External antennas with high gain reception make the device ideal for installation at the fringe of the network. The high-speed dual band WiFi and integrated hotspot functionality allow the NTC-400 to provide public Internet access when necessary.

CONFIGURABLE POWER MANAGEMENT SCHEME

Ignition sensing interface and timer-based activation are ideal for vehicular and power constrained environments, allowing the NTC-400 to wake up only when needed, complete the required process and return to low power sleep mode.

REMOTE MANAGEMENT

Supporting industry leading protocols, the NTC-400 is easy to integrate into the existing remote management platform. A built-in event notification, remote configuration and troubleshooting via SMS makes it faster and easier to manage a large fleet of devices.

ENHANCED RELIABILITY

To endure harsh industrial and automotive environments, the NTC-400 features a robust enclosure made from steel and extruded aluminium. Electrical components have been carefully selected to allow the device to operate at extreme temperatures for many years without fail.

APPLICATIONS

- Surveillance cameras
- WiFi in a bus
- Smart fleet tracking
- Digital signs
- Network fringe installation
- Business continuity for point of sales systems
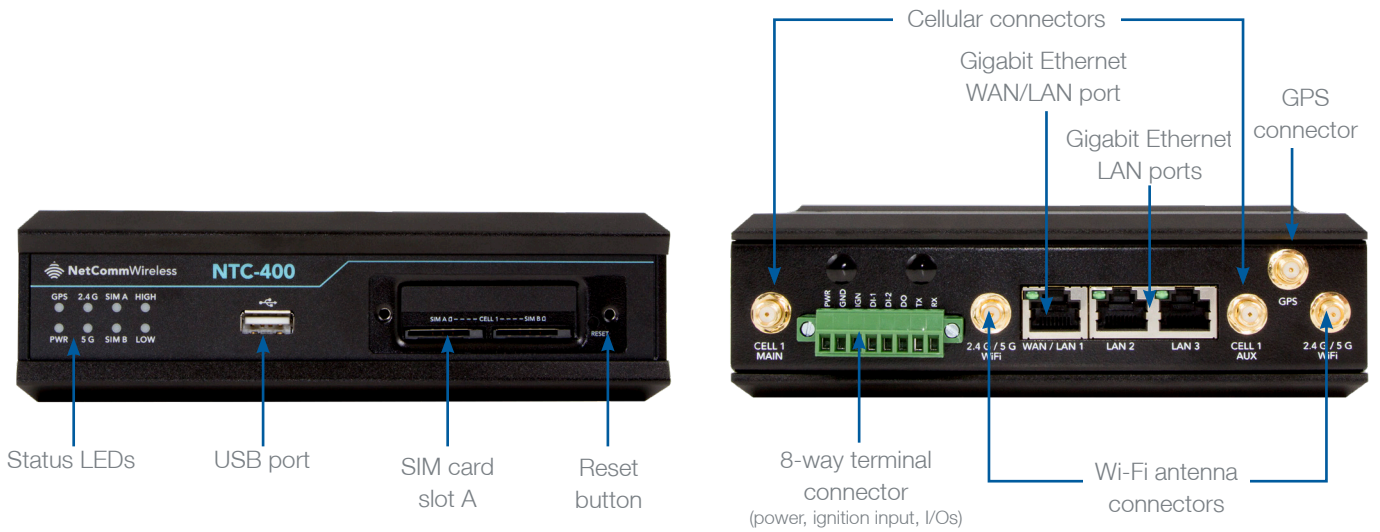- Temporary offices

KEY FEATURES

- Cat 6 4G LTE (300 Mbps) and dual band Wi-Fi for high speed applications
- Dual SIM functionality for network redundancy
- Three Gigabit Ethernet ports, a serial port, and a USB port for network flexibility
- Integrated GPS compatible with all global systems for reliable tracking applications
- I/O ports to read sensors or remotely control equipment such as lights, fans or pumps
- Rugged industrial design with a metal housing and a wide temperature rating for harsh environments
- Ignition sense capability and a wide input voltage range for vehicular application

Device Features

NTC-400 Series

Cellular connectors

Gigabit Ethernet
WAN/LAN port

Gigabit Ethernet
LAN ports

GPS
connector

Status LEDs USB port SIM card slot A Reset button

8-way terminal connector
(power, ignition input, I/Os)

Wi-Fi antenna connectors

WHAT'S IN THE BOX

2 x Wi-Fi antennas

2 x Cellular antennas

1 x 8-way terminal connector

2 x Wall mounting brackets

4 x Wall mounting bracket screws

1 x Quick start guide

1 x NetComm Wireless NTC-400 Series Router

OPTIONAL ACCESSORIES

GPS Active Patch Antenna

ANT-0038

SPECIFICATIONS

- Frequency range: 1575.42 MHz
- Gain: 28 dBi (GPS)
- VSWR: 1.92:1 MAX
- Polarization: R.H.C.P.
- Cable: RG174
- Cable length: 3 m
- Impedance: 50 Ω
- Voltage: 3.3-5.5 V
- Connector: SMA male
- Radome colour: Black
- Radome material: ABS

12V DC Power Supply

PSU-0060

SPECIFICATIONS

- International Efficiency Level VI Power supply
- No-Load Power Consumption: 0.1 W (115 VAC 60 Hz)
- Average Efficiency in Active Mode: 85% (115VAC 60Hz)
- Maximum input voltage range: 90 - 264 V AC (100 - 240 V AC Normal)
- Maximum input frequency range: 47 - 63 Hz (50/60 Hz Normal)
- Output voltage range: 11.4 - 12.6 V DC (Typical 12 V DC)
- Maximum output current: 1.5 A
- Maximum ripple and noise: 150 mV peak to peak
- Maximum output overshoot: 10%
- Protection against Over-Voltage, Over-Current and Short-Circuit
- Temperature range: 0°C - 40°C (Operating), -30°C - 70°C (Storage)
- Relative humidity range: 10% - 90%
- Altitude range: Sea level to 2,000 m
- Suitable regions: US/UK/EU/AU/SA/TW/CH/JP
- Safety certifications: UL60950-1, CSA C22.2 NO.60950-1, EN60950-1, AS/NZS 60950, GB4943, J60950, IEC 60950-1
- Lead length: 1.5 m

Technical Specifications

NTC-400 Series

CELLULAR BANDS

- LTE Bands:
    - Band 1 (2100 MHz)
    - Band 3 (1800 MHz)
    - Band 5 (850 MHz)
    - Band 7 (2600 MHz)
    - Band 8 (900 MHz)
    - Band 18 (850 MHz)
    - Band 19 (850 MHz)
    - Band 21 (1500 MHz)
    - Band 28 (700 MHz)
    - Band 38 (2600 MHz)
    - Band 39 (1900 MHz)
    - Band 40 (2300 MHz)
    - Band 41 (2500 MHz)
- WCDMA Bands:
    - Band 1 (2100 MHz)
    - Band 5 (850 MHz)
    - Band 6 (800 MHz)
    - Band 8 (900 MHz)
    - Band 9 (1700 MHz)
    - Band 19 (800 MHz)
- TD-SCDMA Bands:
    - Band 39 (1900 MHz)

CARRIER AGGREGATION COMBINATIONS

- Band 1 + 8/18/19/21
- Band 3 + 5/7/19/28
- Band 5 + 3/7
- Band 7 + 3/5/7/28
- Band 8 + 1
- Band 18 + 1
- Band 19 + 1/3/21
- Band 21 + 1/19
- Band 28 + 3/7
- Band 38 + 38
- Band 39 + 39
- Band 40 + 40
- Band 41 + 41

PEAK DATA SPEED

- 300 Mbps downlink
- 50 Mbps uplink
- LTE Category 6

ANTENNA CONNECTORS

- 2 x SMA connectors for 3G/4G antennas
- 1 x SMA connector for active GPS antenna
- 2 x Reverse SMA connectors for Wi-Fi antennas

ANTENNAS

- 2 x Dual band Wi-Fi antennas
    - 3 dBi gain @ 2.4 GHz
    - 5 dBi gain @ 5 GHz

INTERFACES

- 3 x 1000 Base-T Ethernet RJ45 port
    - 1 x LAN/WAN port
    - 2 x LAN ports
- Concurrent Dual Band Wi-Fi with 802.11n 2T2R (2.4 GHz) and 802.11ac 2T2R (5 GHz)
- I/O terminal block providing:
    - 1 x RS-232 Serial (TX and RX only) interface via I/O terminal block
    - 2 x Digital input
    - 1 x Digital output
    - 1 x Ignition sense
- 1 x USB port

GPS

- GPS
- GLONASS

SIM CARD READER

- 1 x SIM card slot (NTC-402-01)
- 2 x SIM card slots (NTC-402-02)

WI-FI FUNCTIONS

- Wi-Fi Operation
    - AP Router
    - WDS
    - WDS Hybrid Modes
- Wi-Fi Security
    - WEP
    - WPA
    - WPA2
    - WPA-PSK
    - WPA2-PSK
    - 802.1x

WAN FUNCTIONS

- 3G/4G WAN
- 3G/LTE IPv4, IP Passthrough
- Wi-Fi WAN

Technical Specifications

NTC-400 Series

NETWORK & ROUTING

- Routing
  - Static & Dynamic routing
  - RIP (v1/v2)
  - OSPF
  - BGP
- Port forwarding
  - Virtual server/computer
  - DMZ Host
  - Special AP & ALG
  - PPTP/L2TP/IPSec Passthrough
- QoS
  - Policy-based Bandwidth Control
  - Packet Flow Prioritization
- VLAN
  - Port-based
  - Tag-based

SECURITY

- VPN Tunnelling
  - PPTP
  - L2TP
  - GRE
  - IPSec tunnel termination (for up to 8 tunnels)
  - OpenVPN
- VPN Scenario (dependent on VPN Tunnel type)
  - Site to Site
  - Site to Host
  - Host to Site
  - Host to Host
  - Hub and Spoke
  - Dynamic VPN
  - Tunnelling with Full Tunnel
  - Tunnel Failover
- Firewall
  - SPI Firewall with stealth mode, IPS
  - Access Control
  - MAC Address Control
  - URL Blocking
  - Packet / Content Application Filters
- Authentication
  - Captive Portal
  - MAC Authentication
- Virtual COM
  - RFC 2217
  - TCP Client
  - TCP Server
  - UDP Server
  - UDP Client

SERVICE

- Cellular toolkit
  - SMS
  - Data Usage
  - SIM PIN
  - USSD
  - Network Scan
- Event notification / triggering
- Location tracking
  - GPS
  - Track Viewer
- Power control
  - Ignition sense
  - Low voltage sense

ADMINISTRATION

- Configuration and Management
  - Web interface
  - Telnet CLI
  - SSH CLI
  - Command script
  - TR-069
  - SNMP (v1/v2/v3)
- System Operation
  - MMI
  - System Information
  - System Time
  - System Log
  - Backup and Restore
  - Reboot and Reset
- FTP
  - FTP Server/SFTP
  - User Account
- Diagnostic
  - Packet Analyzer
  - Diagnostic Tools

STORAGE AND LOGGING

- 1 x USB port
- 1 x Embedded 8GB storage

POWER

- Power input range
  - DC 9 V – 36 V

DIMENSIONS

- Without mounting kit
  - 160 mm (L) x 125 mm (W) x 47 mm (H)
- With mounting kit
  - 200 mm (L) x 125 mm x (W) x 50 mm (H)

ENVIRONMENTAL

- Operating temperature range
    - -30 °C – 70 °C
- Storage temperature range
    - -40 °C – 85 °C
- Humidity
    - 10% – 95% (non-condensing)

CARRIER APPROVALS

- Telstra
- Spark

REGULATORY CERTIFICATIONS

- RCM (Australia / New Zealand)
- Wi-Fi Alliance
- RoHS
- E-Mark