

# NTC-220

IoT Gateway



## 4G LTE CAT 1 INDUSTRIAL IOT ROUTER

The NTC-220 is a robust cost-effective device. Supporting 4G LTE Category 1, the NTC-220 is ideal for use-case scenarios requiring reliable, yet highly secure connectivity.



### RELIABLE CONNECTIVITY

The NTC-220 supports 4G LTE Category 1, which enables the next generation connectivity for a number of mission critical applications.

Supporting all major 4G bands, the NTC-220 is the perfect device choice for deployments across the globe.



### EXPANDING CAPABILITIES WITH CUSTOM SOFTWARE APPLICATIONS

The NTC-220 features the Linux based Lantronix OS, empowering solution architects and system integrators to create their own applications using Lantronix's Software Development Kit (SDK).



### RELIABLE ASSET TRACKING

Built-in high-performance GPS enables the NTC-220 to track and monitor vehicles, trucks, heavy construction machines and other mobile assets from any location.



### REMOTE MANAGEMENT

IoT deployments in isolated locations can be managed remotely in real time to reduce site visits and manual maintenance costs. Technicians can receive status alerts, extract and analyze data, upgrade firmware over the air, configure and update the NTC-220 from headquarters or any other location using a wide range of management protocols, including OMA LWM2M, TR-069, SNMP, HTTP/HTTPS, Telnet/CLI and SMS.

### Feature Highlights:

- 4G LTE Cat 1 (10 Mbps)
- Software development capability (SDK)
- Integrated GPS for reliable asset tracking
- An Ethernet port, a serial port and software configurable I/O ports for connection flexibility
- USB OTG port to connect a local storage device
- Ignition sense capability and a wide input voltage range for vehicular applications
- Rugged industrial design for harsh environments
- Easy and clear LED status display for connection status, connected network type, and connection errors
- Remote device configuration, management and firmware upgrade

### Markets:



Security



Smart City


Transport and  
Mobility


Enterprise

LANTRONIX

## Technical Specifications

### ANTENNA CONNECTORS

- 2 x SMA connectors for 4G/3G/2G (1 x Main and 1 x RX Diversity)
- 1 x SMA connector for GPS

### INTERFACES

- 1 x 100Base-T Ethernet RJ45 port
- 1 x RS232 Serial Port DB-9 female DCE supporting either
- 9 wire RS232 or RS485/RS422 (software selectable)
- Software controlled termination resistors for RS485
- 1 x Micro USB 2.0 OTG interface with 0.5A supply capability

### I/O terminal block providing:

- 3 x Multipurpose I/O pins
- NAMUR (EN 60947-5-6 / IEC 60947-5-6) compatible sensor input
- Analogue 0V to 30V input
- Digital input (through measurement of voltage above/ below threshold)
- Open collector output
- 1x Ignition digital input

### 1 x Recessed multifunctional reset button

- Reboot
- Reboot into recovery mode
- Reset to factory default settings

### LED INDICATORS

#### 8 x Tri-color LEDs

- Power, Network, a GPS/customizable LED and 5x Signal Strength indicators
- Easy and clear LED status display for connection status, connected network type, and connection errors

### GNSS

- GPS
- BeiDou
- Galileo
- QZSS

### SIM CARD READER

#### 1 x SIM card slot

- Supports Mini USIM/SIM Format (2FF)
- Optional soldered-down SIM (ETSI MFF2 DFN-8 USIM)

### PROCESSOR AND STORAGE

- 1 GHz ARM Cortex A8 processor with 256 MB RAM
- 512 MB flash memory storage

### CELLULAR

- Profile managed packet data connections
- NAT Disable for framed route configuration

- Transparent bridge mode using PPPoE to allow the router to transparently forward Public WAN IP address to a downstream device
- SIM Security Management (PIN configuration, enable and disable)
- Automatic and manual cellular band selection
- Automatic and manual operator selection
- Odometer reading available via Web-UI, CLI and SDK

### NETWORK & ROUTING

- Static Routing, RIP (v1/v2), Port Forwarding and DMZ
- Dynamic DNS
- VRPP for redundant router failover
- DHCP Server including address reservation by MAC address
- Custom DNS server definitions
- DHCP Relay
- DHCP list display in Web-UI
- Advanced DHCP Option configuration (Option 42 NTP, Option 66 TFTP, Option 150, Option 160)
- Data Stream Manager providing ability to create mappings between input and output ports (e.g. Serial Port, SMS, USB) and perform required translation or data processing by each virtual tunnel.
- Modbus Server TCP/IP Gateway and Client TCP/IP Agent.
- Modbus RTU/ASCII frames support.

### VPN

- PPTP Client for VPN connectivity to remote PPTP VPN Server
- IPSec tunnel termination (for up to 5 tunnels)
- GRE Tunneling
- OpenVPN (Client, Server and P2P)

### ADMINISTRATION & CONFIGURATION

- Secure web-based user interface (HTTPS) for full device status and configuration
- Password protected configuration file backup and restore for quick device configuration and device cloning
- SSH Command Line Interface for status monitoring, configuration and control
- SNMP v1/v2/v3 including cellular specific MIB, config and firmware download
- TR-069 Client for remote device configuration, configuration backup and restore, and firmware upgrade
- SMS Client (Send/Receive) including inbox, outbox
- Ping monitor watchdog (Reset connection on repeated ping failure)
- Diagnostic Log Viewer (remote and local)
- System Status and Security Logs
- NTP Server Support for network time sync of device's system clock
- Device User Guide stored on the device and accessible via the secure web-based user interface (HTTPS)

### Advanced Diagnostics and Control via SMS

- Advanced diagnostics via SMS
- Advanced control via SMS – configure device remotely and execute commands
- See NTC-220 manual for details.

### FIRMWARE MANAGEMENT

- Firmware Upgrade locally via LAN or remotely Over-The-Air (HTTPS, SNMP, TR-069, LWM2M)
- Multiple firmware image storage on device and dynamic install
- Triggered firmware upgrade via SMS (initiate download & install from HTTPS)

### SOFTWARE DEVELOPMENT KIT

- Develop and install custom software applications
- Open Linux standard development environment
- Develop applications/scripting in standard ANSI C/Shell script and LUA
- Package manager built into Web-UI for Application installation/removal
- API (C, LUA and Shell libraries) to the unit's internal Runtime Database to allow full status monitoring configuration and control of the device from custom applications

### TEMPERATURE

- Operating Temperature Range: -40°C to +70°C
- Storage Temperature Range: -40°C to +85°C
- Operating Humidity Range: 0% to 95%

### POWER SUPPLY

- DC Power (8-40V DC)
- Power consumption 6W, recommended DC supply via terminal block (12V 1.5A)
- Power input via 6-way termination block receptacle
- Field terminable via screw type terminal block included

### DIMENSIONS, WEIGHT & MOUNTING

- Device dimensions (excluding external antenna): 143 mm (L) x 107 mm (W) x 34 mm (D) / 221 g (254 g with bracket)
- Wall mount support in multiple orientations via embedded mounting holes
- DIN Rail mount support via plastic bracket included in box (Top hat section rail TH 35 IEC60715)

### ENCLOSURE

- IP41 rated

## Part Numbers

MODEL	NTC-221-01-01	NTC-222-01-01	NTC-224-01-01	NTC-225-01-01	NTC-227-0-01
Region / Carrier	> Australia > New Zealand	> Europe > Middle East > Africa	> USA - AT&T, T-Mobile > Canada	> USA - Verizon	> Global - All
Certifications	RCM, CE	CE, SIRM	FCC, IC, PTCRB	FCC	FCC, IC, PTCRB, CE
Cellular Bands	<b>LTE FDD:</b> B1, 2, 3, 4, 5, 7, 8, 28 <b>LTE TDD:</b> B40 <b>WCDMA:</b> B1, 2, 5, 8 <b>GSM:</b> B2, 3, 5, 8	<b>LTE FDD:</b> B1, 3, 5, 7, 8, 20 <b>WCDMA:</b> B1, 5, 8 <b>GSM:</b> B3, 8	<b>LTE FDD:</b> B2, 4, 12 <b>WCDMA:</b> B2, 4, 5	<b>LTE FDD:</b> B4, 13	<b>LTE FDD:</b> B1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 25, 26, 28 <b>LTE TDD:</b> B38, 39, 40, 41 <b>WCDMA:</b> B1, 2, 4, 5, 6, 8, 19 <b>GSM:</b> B2, 3, 5, 8
Optional Accessories (Sold Separately)					
Part Number	Description				
PSU-0079	12VDC 1.5A Standard Temperature PSU w7 Interchangeable Plugs without DC connector fitted (+/-2KV)				