4G WiFi M2M Router

Perfect for

- Industrial deployments in harsh environments. Primary and backup Internet connectivity
- Controlling and monitoring of connected machines from remote locations
- Collection and analysis of data from connected machines
- Point-to-point or Point-to-multipoint Machine-to-Machine communications

KEY FEATURES

- Powerful and flexible industrial cellular router platform supporting Frequency Division Duplexing LTE, DC-HSPA+, HSDPA, HSUPA, WCDMA, GSM, GPRS, EDGE, CDMA and GNSS connectivity.
- Ideal for providing primary and backup wireless connectivity over LTE networks
- Industrial Features – rugged enclosure, wide operating temperature range, wall mount option and a flexible range of power options
- Embedded Linux operating system allowing for the installation of custom applications. Software Development Kit (SDK) is available
- Web interface for easy centralized configuration and management from any PC
- Two 10/100/1000 Base T ports for Ethernet connection
- VPN support for establishing a secure connection over public cellular network using OpenVPN
- Supports SNMP with cellular specific MIB, PPPoE, RIP, VRRP. DDNS, MAC /NET address filtering, Open VPN, DHCP/DHCP relay
- System monitoring, remote diagnostics and configuration over the air, diagnostic log viewer via browser
- 802.11n WiFi access point or client with 2x2 MIMO antenna technology
- Integrated GPS support
- TR-069 device management
- Ignition Sense capability for graceful shutdown and startup in vehicle applications
- Configurable power save mode with minimum current draw when not operational
- Tested for vehicular applications IEC Class 5M2 and MIL-STD-810F Method 516.5

NetCommWireless

NTC-140W-02

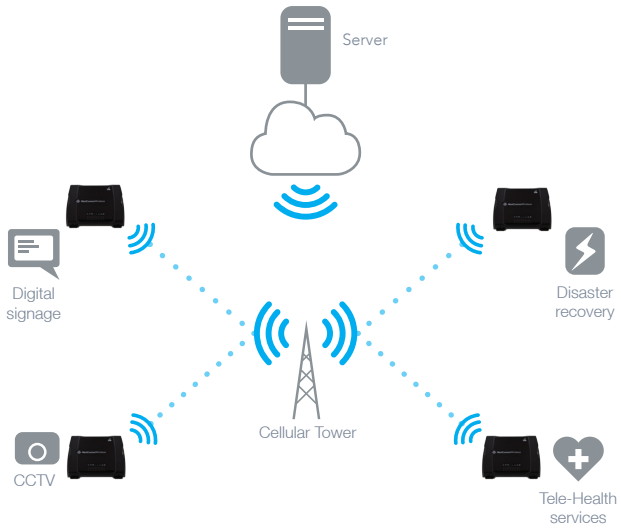
4G WiFi M2M Router

The NetComm Wireless 4G WiFi M2M Router utilises the speed and performance capabilities of a LTE/4G network to deliver seamless M2M connectivity for a broad range of M2M applications. The NTC-140W features two Gigabit Ethernet ports and high speed WiFi connectivity making it an ideal device for high speed networking. The device also features vehicle voltage support, GPS and Ignition input making it ideal for mobile assets and transportation applications.

The NTC-140W creates point-to-point and point-to-multi-point communication enabling the secure collection and analysis of data from remote and unmanned applications.

The NTC-140W's powerful processor delivers optimal performance and its embedded NetComm Linux OS and Software Development Kit (SDK) offers the end user the capability to install custom firmware to the on-board flash memory via the programming interface. Built in VPN clients also ensure a secure connection over a public mobile network.

Its polycarbonate and rubber enclosure is mountable, designed for rugged deployments and also features temperature tolerances making it ideal for remote and industrial environments. The device also features 1 x I/O and USB OTG.



SPECIFICATIONS

PROCESSOR & STORAGE
- Powerful 720Mhz ARM8 processor with 128MByte DDR2 RAM
- 256MByte Flash memory storage (~120MB available on board space for user storage)
- microSD card slot for expandable storage

OPERATING SYSTEM
- Embedded Linux & Software Development Kit (SDK)

PEAK DATA SPEED
LTE data rates:
Category 3
- Downlink:100 Mbps (20 MHz bandwidth)
  50 Mbps (10 MHz bandwidth)
- Uplink:50 Mbps (20 MHz bandwidth)
  25 Mbps (10 MHz bandwidth)
  UMTS (WCDMA)/HSDPA/HSUPA/HSPA+/DC-HSPA+
  HSPA+ rates
- Downlink: Up to 42 Mbps (category 24)
- Uplink: Up to 5.76 Mbps (category 6) GSM/GPRS/EDGE
- EDGE throughput up to 236 kbps

CELLULAR BANDS
- Multi-band FDD capable

LTE:
- Band 1 (2100 MHz)
- Band 3 (1800 MHz)
- Band 7 (2600 MHz)
- Band 8 (900 MHz)
- Band 20 (800 MHz)

UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+:
- Band 1 (2100 MHz)
- Band 2 (1900 MHz)
- Band 5 (850 MHz)
- Band 6 (800 MHz)
- Band 8 (900 MHz)

GSM/GPRS/EDGE:
- GSM 850 (850 MHz)
- EGSM 900 (900 MHz)
- DCS 1800 (1800 MHz)
- PCS 1900 (1900 MHz)

GNSS:
- GPS: 1575.42 MHz
- EGSM

CONNECTIVITY
- 2 x 10/100/1000 Base-T Ethernet RJ45 ports with Auto MDIX
- Micro USB 2.0 OTG interface with 0.5A supply capability
- 1 x multipurpose I/O pin

SIM CARD READER
- Lockable Tray Reader with Push-Button-to-Release

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

RESET BUTTON
- Reset button (recessed, requiring pen/paperclip) with three functions: Reboot, reboot into recovery mode, and reset unit to factory defaults

ANTENNA CONNECTORS
- 2x SMA connectors for 3G/4G (1x Main and 1x RX Diversity)
- 2x Reverse SMA connectors for Wireless LAN (MIMO)
- 1x SMA connector for GPS

LED INDICATORS
- Tri-colour (Red/Amber/Green) LEDs. Power, WLAN, Mobile Broadband, Service Type and Signal Strength indicators
- Easy and clear LED status display for connection status, connected network type, and connection errors

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

GPS
- Embedded GPS receiver (1575.42Mhz)
- SMA Connector for external passive or active GPS Antenna
- Active antenna voltage: 3.05V
- Maximum current: 50mA
- Tracking sensitivity under open sky: -161dBm
- Acquisition sensitivity under open sky: -145dBm
- Cold start sensitivity: -145dBm
- Time to first fix (TTFF): Cold 32s, Warm 29s, Hot 1s

WIFI/WLAN
- High throughput and extended range 802.11n 2T2R WiFi with transmission speeds up to 300Mbps

NETWORK & ROUTING
- Static Routing, RIP (v1/v2), Port Forwarding and DMZ
- Dynamic DNS
- VRRP 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, GPS, USB) and perform required translation or data processing by each virtual tunnel.
- Modbus Server TCP/IP Gateway and Client TCP/IP Agent with up to 247 slaves connected to the Serial TCP/IP Gateway.
- 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 Tunnelling
- OpenVPN (Client, Server and P2P)

ADMINISTRATION & CONFIGURATION
- Web-based User Interface (HTTP/HTTPS) for full device status and configuration
- Password protected configuration file backup and restore for quick device configuration and device cloning
- Telnet Command Line Interface for status monitoring, configuration and control
- SNMP v1/v2 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 Web-based User Interface (HTTP/HTTPS)
- Advanced Diagnostics and Control via SMS
  - Query status information – such as Signal Strength, WAN IP, Uptime, and many more
  - Configure device remotely via SMS – such as APN, authentication settings, and many more
  - Execute commands via SMS – such as reboot, reset to defaults, go offline, and many more
  - Secure SMS management using sender whitelisting and password management
  - SMS acknowledgement replies for queries and commands

FIRMWARE MANAGEMENT
- Firmware Upgrade locally via LAN or remotely Over-The-Air (HTTP/HTTPS, SNMP, TR-069)
- Multiple firmware image storage on device and dynamic install
- Triggered firmware upgrade via SMS (initiate download & install from HTTP/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 (Class A): -30ºC to +70ºC
- Operating Temperature Range (Class B)*: -40°C to +85°C

POWER SUPPLY
- Power input and I/O via 4 way Molex mini-fit connector
- DC Power (8 - 40V DC)
- 1x dedicated ignition input on 4 way connector
- Minimum power input rating of 6W via 4 way mini-fit connector. Recommended power input 12V 1.5A.
- Vehicle compatible protection on DC Input Jack. (ISO7637 standard)

DIMENSIONS & WEIGHT
- Device dimensions (excluding external antenna): 143mm (L) x 107mm (W) x 34mm (D) / ~235g

MOUNTING OPTIONS
- 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)

CERTIFICATIONS
- CE, RCM
- ISO7637

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