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
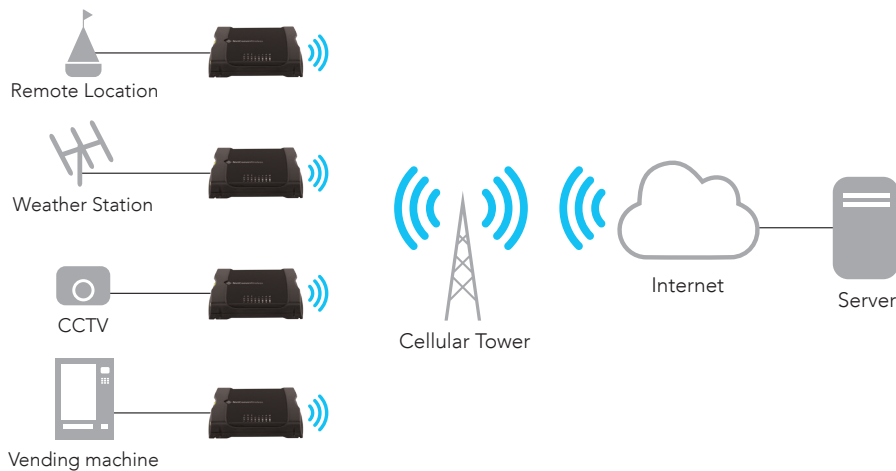
KEY FEATURES

- Powerful and flexible industrial cellular router platform supporting LTE with fallback to 3G/UMTS and GSM/GPRS/EDGE (Fallback only applies to certain models)
- 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 with 2x2 MIMO antenna technology
- Integrated GPS support
- TR-069 device management (optional)
- 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 Class 5M2 and MIL-STD-810F Method 516.5

NetCommWireless

NTC-140W

4G WiFi M2M Router

Remote Location

Weather Station

CCTV

Vending machine

Cellular Tower

Internet

Server

The robust and intelligent NetComm LTE M2M WiFi Router NTC-140W is designed to provide real-time M2M data connectivity even in harsh environments. The NTC-140W creates reliable point-to-point or point-to-multi-point wide area network (WAN) connections for a variety of mission critical applications such as primary broadband, video surveillance, retail, payments, in-vehicle wireless hotspot and business continuity.

SPECIFICATIONS

PROCESSOR & STORAGE
- Powerful 720Mhz ARM8 processor with 64MByte DDR2 RAM
- 256MByte Flash memory storage (~120MB available on board space for user storage)

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

PEAK DATA SPEED
- LTE data rates:
  o 20 MHz bandwidth: DL: 100Mbps UL: 50Mbps
  o 10 MHz bandwidth: DL 50Mbps UL: 25Mbps
- HSDPA/HSUPA data rates: DL: 7.2 / 14.4 Mbps, UL: 2.0 / 5.76 Mbps (Concurrent data rate: DL: 7.2 Mbps, UL: 5.76 Mbps)
- UMTS data rates: DL: max. 384 kbps, UL: max. 384 kbps
- EDGE class 12: DL: max. 237 kbps, UL: max. 237 kbps
- GPRS class 12: DL: max. 85.6 kbps, UL: max. 85.6 kbps
- CSD data transmission 14.4 kbps, V.110

CELLULAR BANDS
- LTE: 800/900/1800/2100/2600 MHz
- UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 800/850/900/1900/2100 MHz
- GSM/GPRS/EDGE: 850/900/1800/1900 MHz
- GNSS: GPS 1575.42MHz, GLONASS 1602 MHz

CONNECTIVITY
- 2 x 10/100/1000 Base-T Ethernet RJ45 ports with Auto MDIX
- Mini 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
- Bi-colour (Red/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 downsatream 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 :
  o Address reservation by MAC address
  o Custom DNS server definitions
  o DHCP Relay
  o DHCP list display in Web-UI
  o Advanced DHCP Option configuration (Option 42 NTP, Option 66 TFTP, Option 150, Option 160)
- PPP Dial-in and Dial-out Connections with PAP / CHAP Authorization

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
  o Query status information – such as Signal Strength, WAN IP, Uptime, and many more
  o Configure device remotely via SMS – such as APN, authentication settings, and many more
  o Execute commands via SMS – such as reboot, reset to defaults, go offline, and many more
  o Secure SMS management using sender whitelisting and password management
  o 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: -30°C to +70°C
- Storage Temperature Range: -40°C ~ +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) / 220g
- 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)

MOUNTING OPTIONS
- Wall Mount

CERTIFICATIONS
- CE, GCF, RCM
- ISO7637

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