4G M2M Router

The NetComm Wireless 4G M2M Router enables highly complex M2M and industrial IoT deployments and ensures always-on connectivity with 4G failover.
4G M2M Router
Overview

Wireless Machine-to-Machine (M2M) communications is used to connect and manage an ever increasing number of mission-critical business assets across the entire organisation. As the cost of downtime escalates, the need to maintain a fail-proof connection is essential. Whether used as a primary or complimentary solution, the industrial-grade 4G M2M Router (NTC-140) ensures a fast, powerful and constant connection.

QUICK FACTS
- Fast and reliable cellular connectivity supporting 4G (LTE) up to 100Mbps/50Mbps (downlink/uplink), 3G (DC-HSPA+) up to 42Mbps/5.76Mbps and 2G (EDGE)
- Flexible WAN setup (use any interface as WAN), ideal for business continuity applications
- Two Gigabit Ethernet ports for networking flexibility
- Powerful processor and flash memory storage
- Rugged enclosure, wide operating temperature range, wall mount options and a flexible range of input power options making it ideal for use in harsh industrial environments
- USB-OTG for additional interfaces or extra storage
- Integrated standalone GPS for precise and accurate asset tracking
- Configurable power save mode with minimum current draw when in sleep mode

The NetComm Wireless 4G M2M Router (NTC-140) provides uninterrupted real-time data connectivity for diverse mission-critical applications, and is an ideal business continuity device. The feature rich and user friendly NTC-140 creates reliable point-to-point or point-to-multi-point WAN connectivity and offers automatic failover to ensure reliable connectivity when outages occur.

DEPENDABLE AUTOMATIC-FAILOVER
Business continuity and continuous connectivity is assured with automatic failover to 3G when outside of 4G coverage areas, and instant fall-back to 4G when the Gigabit Ethernet ports are used as an alternate Internet connection.

CUSTOM PERFORMANCE
The NTC-140 is a complementary solution that integrates seamlessly with the existing network. The powerful processor delivers optimal performance and its embedded NetComm Linux OS and Software Development Kit (SDK) enables the installation of custom software applications to the on-board memory.

SIMPLE AND COST-EFFECTIVE
Designed for ease of use, the NTC-140 has a user-friendly web interface and 8 tri-colour LED indicators for easy setup and ongoing management. The device can be managed using any browser, and text messages (SMS) can be used to securely access the current status, change configurations or execute commands.

FUTURE-PROOF REMOTE ASSET MANAGEMENT
The NTC-140 enables carrier grade remote management with support for protocols such as LWM2M, TR-069 and SNMP to allow quick and easy integration with a wide range of remote management platforms. The NTC-140 is a future-proof 4G device that is ideal for long-term deployments, ensuring a low total cost of ownership and a high rate of return as networks advance. Designed to ensure a quick response to events requiring human intervention, the built-in event notification engine, which sends alarms and notifications via email or SMS, allows an automated layer of self-monitoring.

INDUSTRIAL GRADE DESIGN
Ideal for remote and industrial environments, the NTC-140 is easily mountable and features a hard wearing polycarbonate and rubber enclosure. Electrical components have been carefully selected to allow the NTC-140 to operate at extreme temperatures; and extensive environmental testing ensures that the device continues to operate under extreme conditions of temperature, shock and vibration.
In the event of a primary comms failure the NTC-140 can keep the office connected via 4G.

Connecting the NTC-140’s WAN port to the existing modem / Router allows it to sense when the fixed line connection goes down.

Application Example
Wireless 4G failover

Device Features
At a glance

1. MAIN Cellular antenna connector
2. MicroSD card slot (up to 32GB MicroSD cards)
3. GPS antenna connector
4. AUX Cellular antenna connector
5. SIM card slot (for USIM/SIM 2FF format)
6. SIM tray eject button
7. Micro USB 2.0 OTG port (host or device mode)
8. Reset button
9. Molex Mini-Fit 4 pin connector (power, ignition input and I/O port)
10. Gigabit Ethernet LAN port
11. Gigabit Ethernet LAN/WAN port

Package Contents
What’s in the box?

1 x NetComm Wireless 4G M2M Router (NTC-140-02)
2 x Cellular antennas
1 x DIN rail mounting bracket
1 x Quick start guide
1 x Power supply cable with fitted Molex connector
1 x 1.5m black Ethernet cable

* GPS Antenna sold as optional accessory
Technical Specifications

**PROCESOR & STORAGE**
- Powerful 720Mhz ARM Cortex A8 processor with 128MBbyte DDR3 RAM
- 256MByte Flash memory storage (~120MB available on board space for user content)
- MicroSD card slot for additional storage

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

**CELLULAR BANDS**
- LTE:  
  - Band 1 (2100 MHz)
  - Band 3 (1800 MHz)
  - Band 7 (2600 MHz)
  - Band 8 (900 MHz)
  - Band 20 (1900 MHz)
- UMTS/HSI/PSA/PSI/PSA+ /DC-HSPA+:
  - Band 1 (2100 MHz)
  - Band 2 (1900 MHz)
- 4G:  
  - Band 3 (1800 MHz)
  - Band 4 (2100 MHz)
  - Band 5 (850 MHz)
  - Band 8 (900 MHz)
- GSM/GPRS/EDGE:  
  - GSM 850 (850 MHz)
  - ECGM 900 (900 MHz)
  - GEC 1900 (1900 MHz)
- PCS 1900 (1900 MHz)

**FEAK DATA SPEED**
- LTE: Category 3
  - 100 Mbps / 25 Mbps (Downlink/Uplink) (20MHz bandwidth)
  - 50 Mbps / 25 Mbps (Downlink/Uplink) (10MHz bandwidth)
- HSPA+:
  - 42 Mbps (Downlink)
  - 5.76 Mbps (Upstream)
- EDGE: 23.4kbps throughput

**COMMENTS**
- 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

**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 SMA connector for GPS

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

**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**
- Module Manufacturer’s Recommended Operating Temperature: -40ºC to +85ºC
- Storage Temperature: -40ºC to +85ºC

**POWER SUPPLY**
- AC Power supply available as an optional accessory
- Power input and I/O via 4-way Molex mini-fit connector
- DC Power (28 ~ 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) ~ 350g

**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 (Europe)
- RCM (Australia and New Zealand)
- E-Mark (Europe)
- TRA (UAE)
- IAN (Singapore)
- CITC (Saudi Arabia)
- MOIC (Kuwait)
- SASO (Saudi Arabia)
- ICASA (South Africa)
- CB Compliant
- RH4
- WWEE

**CARRIER APPROVALS**
- STC
- Telstra

---

**NETCOMM WIRELESS LIMITED HEAD OFFICE 18-20 Orion Road, Lane Cove, NSW 2066, Sydney, Australia ABN 85 002 490 486**

**AUSTRALIAN OFFICE**
T: +61 2 9244 2070  
E: m2msales@netcommwireless.com

**NORTH AMERICA OFFICE**
T: +1 320.566.0316  
E: NA.sales@netcommwireless.com

**EUROPEAN OFFICE**
T: +31 3 5326 3153  
E: EU.sales@netcommwireless.com

**JAPAN OFFICE**
T: +81 3 5326 3153
E: J.P.sales@netcommwireless.com

**MENA OFFICE**
T: +971 4 450 8667  
E: MENA.sales@netcommwireless.com

Trademarks and registered trademarks are the property of NetComm Wireless Limited or their respective owners. Specifications are subject to change without notice. Images shown may vary slightly from the actual product.