



3G M2M Router Plus



Perfect for

- Point-to-point or point-to-multipoint machine-to-machine IP connectivity
- Controlling and monitoring of connected machines from remote locations
- Collection and analysis of data from connected machines
- Commercial and Industrial deployments in harsh environments

KEY FEATURES

- ⌚ Penta-band 3G with quad-band 2G auto-fallback
- ⌚ HSPA+ up to 14.4 Mbps DL
- ⌚ 1 x 10/100 Ethernet port
- ⌚ Full passive Power over Ethernet (PoE) support (802.3af)*
- ⌚ RS232/RS422/RS485 Port and USB 2.0 OTG port
- ⌚ Built in GPS supporting an active GPS Antenna via external SMA connector
- ⌚ Three multi-purpose I/O ports
- ⌚ One dedicated ignition input
- ⌚ Intelligent, Tri-Colour LED display for clear, easy to read modem status information
- ⌚ Extensive device management with support for TR-069, Web GUI and full feature management with SMS
- ⌚ Flexible mounting suitable for in-home use or industrial applications with built-in wall mount and DIN rail mounting options
- ⌚ Integrated ZigBee multipoint mesh wireless networking*

* Features available on NTC-6200-01/11 only





3G M2M Router Plus

The NTC-6200 series are intelligent penta-band 3G and quad-band 2G M2M Routers designed for Machine-to-Machine (M2M) applications taking advantage of the high speed and wide coverage of modern cellular networks.

Featuring Ethernet, Serial (RS232/422/485), and USB 2.0 connectivity, the NTC-6200 series can interface with a diverse range of equipment used in a wide variety of vertical applications. The 6200 series also features built in GPS support and a dedicated ignition input making it ideal for vehicle applications. The device features integrated Zigbee¹ with embedded antennas for multipoint wireless networking and multipurpose digital and analogue I/O ports.

The router's open Linux operating system and Software Development Kit (SDK) offers the capability to install custom software applications within the substantial onboard flash memory. The routers also allow full remote system monitoring, remote diagnostics, remote configuration and firmware updates over the air. The 6200 series is designed with durability in mind. Its compact rubberised case design has flexible mounting options and has been tried and tested in extreme applications to ensure users can enjoy a reliable and long product life-span.

APPLICATION EXAMPLES



SPECIFICATIONS

PROCESSOR & STORAGE

- Powerful 450Mhz ARM9 processor with 64MByte DDR2 Ram
- 256MByte Flash memory storage (~120MB available on board space for user storage)

OPERATING SYSTEM

- Embedded Linux 3.6

PEAK DATA SPEED

- 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

- UMTS/HSDPA/HSUPA: 800/850/900/2100/1900 Mhz
- GSM/GPRS/EDGE: 850/900/1800/1900 Mhz

CONNECTIVITY

- 1x (RJ-45) 802.3af Power over Ethernet (PoE)¹ 10/100Base-TX Port with Auto MDIX
- 1x RS232 Serial Port DB-9 female DCE supporting either 9 wire RS232 or RS485/RS422 (software selectable).
- Software controlled termination resistors for RS485
- Mini USB 2.0 OTG interface with 0.5A supply capability
- 3x Multipurpose I/O pins

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

SIM CARD READER

- Lockable Tray Reader with Push-Button-to-Release
- 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 2G/3G (1x Main and 1x RX Diversity)
- 1x SMA connector for GPS

LED INDICATORS

- 8x tri-colour 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

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 active GPS Antenna
- Active antenna voltage: 3.05V
- Maximum current: 50mA
- Short circuit protection
- Tracking sensitivity under open sky: -159dBm
- Acquisition sensitivity under open sky: -149dBm
- Cold start sensitivity: -145dBm
- Time to first fix (TTFF): Cold 25s, Warm 10s typical
- Redirect NMEA stream to serial or forward over IP
- Odometer reading available via Web-UI, CLI and SDK

ZIGBEE¹

- Operating frequency: 2.4Ghz
- 1x Internal antenna
- Chipset: Silicon Labs EM357

NETWORK & ROUTING

- Static Routing, RIP (v1/v2), Port Forwarding and DMZ
- Dynamic DNS
- VRP 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 Tunneling
- 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/SSH 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: -20°C – +70°C
- Storage Temperature Range: -30°C – +80°C

POWER SUPPLY

- Power input and I/O's via 6 way termination block receptacle
- Field terminable power input via screw type terminal block included
- DC Power (8 - 40V DC) or via 802.3af Power over Ethernet (PoE) (PoE available on NTC-6200-01/11 only)
- 1x Dedicated ignition input on 6 way connector
- Power consumption 6W, recommended DC supply via terminal block (12V 1.5A) or Class 3 Power Level via PoE (PoE available on NTC-6200-01/11 only)
- Vehicle compatible protection on DC Input Jack. (ISO7637 standard)
- Dual power mode supported (PoE primary, seamless failover to DC Jack on PoE loss)

DIMENSIONS, WEIGHT & MOUNTING

- Device dimensions (excluding external antenna): 143mm (L) x 107mm (W) x 34mm (D) / 221g (254g 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)

REGULATORY COMPLIANCE

- FCC, PTCRB, CE, GCF, WEEE, RoHS, RCM, IC, e-mark

¹ Feature available on NTC-6200-01 and NTC-6200-11 only