PRODUCT SUMMARY

› The **NTC-500** router is a high-end high-speed industrial-grade 5G router. Designed with critical and complex applications in mind, it provides ultra-reliable, high bandwidth throughput even in extremely harsh environments.

› The **NTC-500** supports the latest 3GPP Release 16 5G features including 5G Non-standalone (NSA), 5G Standalone (SA) and 5G Slicing which enables complex end-to-end, on-demand quality of service solutions in partnership with leading carrier networks.

› Perfect for connected smart building systems, vending and ticketing machines, digital signs, surveillance systems, traffic light control and remote vehicle automation.

› The **NTC-500** is an ideal and cost-effective solution for Private 5G Networks deployed in industrial, mining or construction settings.

› 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, and configure and update the **NTC-500** from anywhere using a wide range of management protocols including OMA LWM2M, TR-069, SNMP, HTTP/HTTPS, and SMS.
TECHNICAL SPECIFICATIONS

CELLULAR BANDS (NTC-501)
5G NR Bands
› n2, n3, n5, n7, n12, n14, n25, n29, n30, n38, n41, n48, n66, n71, n77, n78
4G / LTE Bands
› B2, B4, B5, B7, B12, B13, B14, B25, B26, B29, B30, B38, B41, B42, B43, B46, B48, B66, B71

CELLULAR BANDS (NTC-502)
5G NR Bands
› n1, n3, n5, n7, n8, n20, n28, n38, n40, n41, n75, n76, n77, n78
4G / LTE Bands
› B1, B3, B5, B7, B8, B20, B28, B32, B38, B40, B41, B42, B43

DEVICE CATEGORY
4G / LTE
› Uplink: 2CA Single TX, 256QAM
› Downlink: 5CA MIMO 4x4, 256QAM
5G NR
› Uplink: MIMO 2x2 Single Carrier up to 100MHz, 256QAM
› Downlink: MIMO 4x4 Dual Carrier up to 120MHz, 256QAM

PEAK DATA SPEEDS*
5G SA Sub-6
› 2.4 Gbps (DL) / 900 Mbps (UL)
5G NSA Sub-6
› 2.5 Gbps (DL) / 550 Mbps (UL)
4G / LTE
› 1.6 Gbps (DL) / 200 Mbps (UL)

ANTENNA CONNECTORS
SMA connectors
› 4 x Cellular ports for external cellular antennas

INTERFACES
› 1 x 2.5 Gbps LAN/WAN port
› 1 x USB-C port

LED INDICATORS
› 1 x Power
› 1 x SIM
› 1 x 4G
› 1 x 5G
› 1 x Signal strength
› 2 x Custom indicators

SIM CARD READER
1 x SIM card slot
› Supports Mini USIM/SIM Format (2FF)
› Optional soldered-down SIM (ETSI MFF2 DFN-8 USIM)

CELLULAR
› Profile managed packet data connections
› Profile Routing
› Data Profile IP Passthrough
› SIM Management
› SIM Security (PIN configuration, enable and disable)
› Automatic and manual cellular band selection
› Automatic and manual operator selection
› 5G and LTE Cell Lock
› Up to 6 APN configurations
› Up to 8 Bearers and Traffic Classes

NETWORK AND ROUTING
› Static Routing, 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)
› VLAN Management
› IPS Firewall to protect against DoS attacks
› Network Service Assurance
› 5G Dynamic Slicing

VPN
› IPSec tunnel termination (for up to 5 tunnels)
› GRE Tunnelling
› OpenVPN (Client, Server and P2P)

ADMINISTRATION AND 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 v3 including cellular specific MIB, config and firmware download
› TR-069 and LWM2M 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 deviceis system clock
› Advanced Diagnostics and Control via SMS
› Query status information via SMS ñ such as Signal Strength, WAN IP, Uptime, and many more
› Configure device remotely via SMS ñ such as APN, authentication settings, and many more
› Execute commands via SMS ñ 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
› Site and location settings
› Field test information for LTE and 5G

REMOTE MANAGEMENT
› Firmware Upgrade locally via LAN or remotely Over-The-Air (HTTPS, SNMP, TR-069, LWM2M)
› Triggered firmware upgrade via SMS (initiate download & install from HTTPS)
› MQTT client for data reporting to Microsoft Azure and AWS cloud services**

TEMPERATURES
› Operating Temperature Range: -30°C to +70°C
› Storage Temperature Range: -30°C to +85°C
› Operating Humidity Range: 0-95%

POWER SUPPLY
› Power input via 2-way termination block receptacle
› Field terminable power input via screw type terminal block included
› DC Power (8 - 40V DC)
› Recommended DC supply via terminal block (12V 1.5A)

DIMENSIONS, WEIGHT AND MOUNTING
› Device dimensions (excluding external antennas): 143.5mm (D) x 110.5mm (W) x 30mm (H) / 445g
› Wall mount support in multiple orientations via embedded mounting holes
› DIN Rail mount support via plastic bracket included in the box

*Theoretical only - actual values depend on network conditions
**Feature under development
FEATURES AT A GLANCE

› 5G Standalone (SA)
› 5G Non-Standalone (NSA) with failover to 4G
› 2.5Gbps Ethernet Port
› Robust ruggedized industrial-grade metal housing with multiple mounting options
› Wide operating temperature range
› Designed, assembled and tested for unmanned locations in extreme environments
› Easy and clear LED status display for connection status and network type as well as two user-customizable LEDs.

MODEL VARIANTS

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