

# MDN80I

## 5G Ruggedized Dongle



CAT20

5G NR/LTE/WCDMA

RS485

IP65

MDN80I Ruggedized Dongle from BTI is designed for industrial applications that converts 5G wireless signals into Gigabit Ethernet, providing stable and high-speed 5G access for the devices.

Designed for both indoor and outdoor harsh industrial environments, MDN80I meets high standards in vibration tolerance and is ideal for operations in robot, AGV, AMR, unmanned delivery cars, drones, logistics, automated manufacturing, port and other outdoor applications. MDN80I can also offer precise information about its real-time location; its built-in GNSS receiver allows GPS, GLONASS, Beidou and Galileo constellations.

## KEY FEATURES

- Qualcomm SDX62 chipset solution
- 5G NR and LTE-A CAT20 dual mode
- Supports both SA and NSA
- Global/CBRS bands supported
- Ruggedized and anti-vibration design
- Powerful software features
- Web, TR069 and SNMP based device management
- Supports 2.5G Ethernet port and RS485 industrial interface
- IP65 rating for outdoor environment

## SYSTEM ELEMENTS



## HARDWARE SPECIFICATIONS

<b>Chipset</b>	Qualcomm SDX62 SoC	
<b>Cellular Bands(MDN80I-A Europe &amp; Asia version)</b>	5G NR	n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78
	LTE	FDD B1/B3/B5/B7/B8/B20/B28/B32 TDD B38/B40/B41/B42/B43
	WCDMA	B1/B5/B8
<b>Cellular Bands(MDN80I-B North American version)</b>	5G NR	n2/n5/n7/n12/n13/n14/n25/n26/n29/n30/n38/n41/n48/n66/n70/n71/n77/n78
	LTE	FDD B2/B4/B5/B7/B12/B13/B14/B25/B26/B29/B30/B66/B71 TDD B38/B41/B42/B43/B48 LAA B46

<b>Category</b>	Rel-16/Sub6 5G & CAT20		
<b>GNSS</b>	GPS/GLONASS/BeiDou/Galileo		
<b>Network Mode</b>	Supports SA/NSA		
<b>External Port</b>	1 x 2.5G Ethernet port 1 x RS485 1 x SIM Slot (4FF)		
<b>LED</b>	4 LED Indicators (PWR, NET, SIM, Tri-color SIG)		
<b>Antenna Port</b>	4 x LTE/NR Antenna 1 x GNSS		
<b>Carrier Aggregation</b>	LTE: DL 5CA and UL 2CA NR: 2CA		
<b>MIMO(MDN80I-A Europe &amp; Asia version)</b>	Downlink	5G NR: 4x4 MIMO on n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75 n76/n77/n78 LTE: 4x4 MIMO on B1/B3/B5/B7/B8/B20/B28/B32/B38/B40/B41 B42/B43	
	Uplink	5G NR: 2x2 MIMO on n38/n41/n77/n78	
<b>MIMO (MDN80I-B North American version)</b>	Downlink	5G NR: 4x4 MIMO on n2/n5/n7/n12/n13/n14/n25/n26/n29/n30/n38 n41/n48/n66/n70/n71/n77/n78 LTE: 4x4 MIMO on B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B29/B30/B38/B41/B42/B43 B48/B66/B71	
	Uplink	5G NR: 2x2 MIMO on n38/n41/n48/n77/n78	
<b>Maximum throughput</b>	Downlink	5G NR SA (Gigabit Ethernet port)	2.4Gbps
		5G NR NSA (Gigabit Ethernet port)	2.5Gbps
		4G LTE (Gigabit Ethernet port)	1.6Mbps
		WCDMA (Gigabit Ethernet port)	42Mbps
	Uplink	5G NR SA Sub 6	900Mbps
		5G NR NSA Sub 6	550Mbps
		4G LTE	200Mbps
		WCDMA	5.76Mbps
<b>Maximum transmission power</b>	5G NR Sub 6 bands	Class 3 (23 dBm ±2 dB)	
	n41/n77/n78 HPUE	Class 2 (26 dBm +2/-3 dB)	
	4G LTE	Class 3 (23 dBm ±2 dB)	
	B38/B41/B42 HPUE	Class 2 (26 dBm ±2 dB)	
	WCDMA	Class 3 (24 dBm +1/-3 dB)	
<b>Power supply</b>	DC 8~24V, 12V default		

<b>Power Consumption</b>	<24W
<b>GNSS</b>	Support GPS, GLONASS, Beidou and Galileo
<b>Dimensions</b>	125mm x 75mm x 25mm
<b>Weight</b>	420g
<b>Humidity</b>	Operation humidity: 5% - 95% (non-condensing) Storage humidity: 5% - 95% (non-condensing)
<b>Temperature</b>	Operating temperature: -40 °C ~ +70 °C Storage temperature: -40 °C ~ +85 °C

## SOFTWARE SPECIFICATIONS

<b>WAN</b>	Multi-APN support, maximum four
	IP pass-through
	IPv4/v6 dual stack
<b>LAN</b>	IEEE 802.1Q VLAN
	DHCP Server
	DNS and DNS proxy
	DMZ
	Multi-cast/ Multi-cast proxy
<b>Protocol</b>	Routing: Static routing
<b>Device management</b>	TR069
	SNMP v2
	WebGUI
	Software upgrade via Web UI/TR069/FOTA
	USIM PIN management
<b>Routing Mode</b>	Route mode
	Bridge mode
	NAT mode
	Static Route
	Port Mirror and Port Forwarding
	IPV4/IPV6 dual stack
<b>VPN</b>	PPTP
	GRE tunnel
	L2TP V2/V3
<b>Security</b>	Firewall
	Mac address filtering
	IP address filtering

	URL filtering
	Access control
	HTTPS login from WAN
	DOS attack protection
	Two level of user authority

**COMPLIANCE SPECIFICATIONS**

<b>Environment Compliance</b>	Protection rating: IP65
	Shockproof: ISO 16750-3 : 2012 ( E )

Contact Us

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