

# CPX60I

## 5G Industrial Indoor CPE



CAT20 5GNR/LTE/WCDMA USB 3.1/RJ45 RS485/RS232 Sub-6

The CPX60I from BTI WIRELESS is a 5G Industrial Indoor CPE. It provides high-speed data transmission for video and other bandwidth-intensive applications on various 4G and 5G spectrums. Sustainable and solid, the CPX60I is ideal for manufacturing, surveillance and other industrial applications as it meets strict and critical environmental requirements.



#### **KEY FEATURES**

- Qualcomm SDX55 single chip solution
- 5G NR and LTE-A CAT20 dual mode
- Supports BOTH SA and NSA
- 2 SKUs support European, Asian and North American 5G NR bands
- Ruggedized and anti-vibration design
- Powerful software features, supporting all router features
- Web, TR069 and SNMP based device management
- Supports USB 3.1, serial ports and GE ports

#### SYSTEM ELEMENTS













HARDWARE SPECIFICATIONS				
Technical Standard	WAN	5G NR/LTE/WCDMA/HSPA+		
	LAN	IEEE 802.3/802.3u		
Cellular Bands (CPX60I – AE Version)	5G NR	n1/n28/n41/n77/n78/n79		
	LTE	B1/B2/B3/B5/B7/B8/B20/B25/B28/B34/B39/B40/B41		
	WCDMA	B1/B2/B4/B5/B8		
*Cellular Bands (CPX60I – NA Version)	5G NR	n2/n5/n12/n25/n41/n66/n71/n78		
	LTE	B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B29/B30/B41/B42/B4		
		8/B66/B71		
	WCDMA	B1/B2/B4/B5/B8		

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2 x SIM slots (4FF, dual SIM single standby)   2 x DI/DO ports for RS485/RS232   1 x USB 3.1							
2 x DI/DO ports for RS485/RS232   1 x USB 3.1	External Port	4 x RJ45 gigabit ethernet ports					
2 x DI/DO ports for RS485/RS232  1 x USB 3.1  Antenna  6 SMA antenna ports for cellular  1 x power indicator  1 x network status indicator  1 x x SIM indicator  3 x signal strength indicators  Button  1 x reboot or restore button  LTE: 3CA and UL CA  NR: 2CA (available for software upgrade)  5G NR sub 6 bands  Class 3 - 23dBm  Maximum Transmission  Power  4G LTE  Class 3 - 23dBm  Downlink  Downlink  Downlink  4G LTE  Glass 3 - 23dBm  For NR (gigabit ethernet port)  930 Mbps  4G LTE (gigabit ethernet port)  930 Mbps  4G LTE  Glass 3 - 200 Mbps  4G LTE  WCDMA  Diplink  Downlink  15 G NR NSA Sub 6  900 Mbps  4G LTE  WCDMA  5.76 Mbps  Power Consumption  Power Consumption  187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Weight  187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Weight  Concrating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F		2 x SIM slots (4FF, dual SIM single standby)					
Antenna  6 SMA antenna ports for cellular  1 x power indicator  1 x network status indicator  1 x SIM indicator  3 x signal strength indicators  Button  1 x reboot or restore button  LTE: 3CA and UL CA  NR: 2CA (available for software upgrade)  5G NR sub 6 bands  Class 3 - 23dBm  Maximum Transmission  Power  4G LTE  WCDMA  Class 3 - 23dBm  WCDMA  Class 3 - 23dBm  For NR (gigabit ethernet port)  930 Mbps  4G LTE (gigabit ethernet port)  930 Mbps  4G LTE (gigabit ethernet port)  930 Mbps  5G NR SA Sub 6  900 Mbps  4G LTE  200 Mbps  WCDMA  5.76 Mbps  Power Supply  Power Consumption  187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Weight  187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Vograting temperature: -10 °C ~ 45 °C   14 °E ~ 113 °E		2 x DI/DO ports for RS485/RS232					
1 x power indicator   1 x network status indicator   1 x network status indicator   1 x SIM indicator   3 x signal strength indicators   Button   1 x reboot or restore button		1 x USB 3.1					
1 x network status indicator   1 x SIM indicator   3 x signal strength indicators   1 x reboot or restore button   1 x reboot or restore button   LTE: 3CA and UL CA   NR: 2CA (available for software upgrade)   SG NR sub 6 bands   Class 3 - 23dBm	Antenna	6 SMA antenna ports for cellular					
1 x SIM indicator   3 x signal strength indicators   1 x reboot or restore button		1 x power indicator					
1 x SIM indicator   3 x signal strength indicators		1 x network status indicator					
Button         1 x reboot or restore button           Carrier Aggregation         LTE: 3CA and UL CA           NR: 2CA (available for software upgrade)         5G NR sub 6 bands         Class 3 - 23dBm           Maximum Transmission         5G NR n41/n77/n78/n79         Class 3 - 23dBm           Power         4G LTE         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm         Class 3 - 23dBm           Downlink         4G LTE (gigabit ethernet port)         930 Mbps           Maximum Transmit         5G NR SA Sub 6         900 Mbps           Throughput         5G NR NSA Sub 6         650 Mbps           Uplink         4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W	LED indicators	1 x SIM indicator					
Carrier Aggregation         LTE: 3CA and UL CA           NR: 2CA (available for software upgrade)         5G NR sub 6 bands         Class 3 - 23dBm           Maximum Transmission         5G NR n41/n77/n78/n79         Class 2 - 26dBm           Power         4G LTE         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm           Downlink         4G LTE (gigabit ethernet port)         930 Mbps           4G LTE (gigabit ethernet port)         930 Mbps           5G NR SA Sub 6         900 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%		3 x signal strength indicators					
Carrier Aggregation         NR: 2CA (available for software upgrade)           5G NR sub 6 bands         Class 3 - 23dBm           Maximum Transmission         5G NR n41/n77/n78/n79         Class 2 - 26dBm           Power         4G LTE         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm           Downlink         5G NR (gigabit ethernet port)         930 Mbps           Maximum Transmit         4G LTE (gigabit ethernet port)         930 Mbps           Mpost Supply         Uplink         5G NR SA Sub 6         900 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs	Button	1 x reboot or restore button					
NR: 2CA (available for software upgrade)		LTE: 3CA and UL CA					
Maximum Transmission         5G NR n41/n77/n78/n79         Class 2 - 26dBm           Power         4G LTE         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm           Downlink         5G NR (gigabit ethernet port)         930 Mbps           4G LTE (gigabit ethernet port)         930 Mbps           5G NR SA Sub 6         900 Mbps           5G NR NSA Sub 6         650 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%	Carrier Aggregation	NR: 2CA (available for software upgrade)					
Power         4G LTE         Class 3 - 23dBm           WCDMA         Class 3 - 23dBm           Downlink         5G NR (gigabit ethernet port)         930 Mbps           4G LTE (gigabit ethernet port)         930 Mbps           4G LTE (gigabit ethernet port)         930 Mbps           5G NR SA Sub 6         900 Mbps           5G NR NSA Sub 6         650 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%           Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F				Class 3 - 23dBm			
WCDMA       Class 3 - 23dBm         Downlink       5G NR (gigabit ethernet port)       930 Mbps         4G LTE (gigabit ethernet port)       930 Mbps         5G NR SA Sub 6       900 Mbps         5G NR NSA Sub 6       650 Mbps         4G LTE       200 Mbps         WCDMA       5.76 Mbps         Power Supply         Power Consumption       < 24W         Dimensions (Maximum)       187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in         Weight       < 1 kg   2.2 lbs         Humidity       5% ~ 95%         Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	<b>Maximum Transmission</b>	5G NR n41/n77/n78/n79		Class 2 - 26dBm			
Downlink   Downlink   SG NR (gigabit ethernet port)   930 Mbps	Power	4G LTE Class 3 - 23dBm					
Maximum Transmit         4G LTE (gigabit ethernet port)         930 Mbps           Throughput         5G NR SA Sub 6         900 Mbps           5G NR NSA Sub 6         650 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%           Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F		WCDMA Class 3 - 23dBm					
AG LTE (gigabit ethernet port)   930 Mbps   56 NR SA Sub 6   900 Mbps   56 NR SA Sub 6   650 Mbps   650 Mbps		Davimlink	5G NR	(gigabit ethernet port)	930 Mbps		
Throughput         5G NR NSA Sub 6         650 Mbps           4G LTE         200 Mbps           WCDMA         5.76 Mbps           Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%           Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F		DOWNIINK	4G LTE (gigabit ethernet port)		930 Mbps		
Uplink  4G LTE  200 Mbps  WCDMA  5.76 Mbps  Power Supply  DC 12V ~ 36V  Power Consumption  Veight  187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Veight  4G LTE  200 Mbps  5.76 Mbps  7.36 Mbps  4 LTE  200 Mbps  7.76 Mbps  7.76 Mbps  7.77 Mbps  7.78 Mbps	<b>Maximum Transmit</b>		5G NR SA Sub 6		900 Mbps		
## Power Supply DC 12V ~ 36V  Power Consumption < 24W  Dimensions (Maximum) 187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in  Weight < 1 kg   2.2 lbs  Humidity 5% ~ 95%  Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Throughput	Haliak	5G NR NSA Sub 6		650 Mbps		
Power Supply         DC 12V ~ 36V           Power Consumption         < 24W           Dimensions (Maximum)         187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in           Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%           Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F		Oplink	4G LTE		200 Mbps		
Power Consumption       < 24W         Dimensions (Maximum)       187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in         Weight       < 1 kg   2.2 lbs         Humidity       5% ~ 95%         Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F			WCDMA		5.76 Mbps		
Dimensions (Maximum)       187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in         Weight       < 1 kg   2.2 lbs         Humidity       5% ~ 95%         Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Power Supply	DC 12V ~ 36V					
Weight         < 1 kg   2.2 lbs           Humidity         5% ~ 95%           Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Power Consumption	< 24W					
Humidity 5% ~ 95%  Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Dimensions (Maximum)	187 mm x 110 mm x 51.5 mm   7.36 in x 4.33 in x 2.03 in					
Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Weight	< 1 kg   2.2 lbs					
Operating temperature: -10 °C ~ 45 °C   14 °F ~ 113 °F	Humidity	5% ~ 95%					
	Temperature	Operating temperature: -10 °C $^{\sim}$ 45 °C   14 °F $^{\sim}$ 113 °F					
Storage temperature: -40 °C ~ 70 °C   -40 °F ~ 158 °F		Storage temperature: -40 °C $^{\sim}$ 70 °C $\mid$ -40 °F $^{\sim}$ 158 °F					

SOFTWARE SPECIFICATIONS				
Data Services	4 x APNs (2 for data, 1 for voice, 1 for management)			
	Multiple PDN (up to 16 PDNs)			
	IPV4/IPV6 compliance			
LAN	IEEE 802.1Q VLAN			
	DHCPV4/ DHCPV6 server/ client			
	DNS and DNS proxy			
	DMZ			
	UPNP			
	ALG			
	Multi-cast/ Multi-cast proxy			

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	MAC address fi	MAC address filtering		
	GPS broadcast	GPS broadcast to LAN		
		Image checksum		
	Version management	Active version and backup version		
		Rollback mechanism when upgrade fails		
	HTTP/FTP auto-upgrade			
	Upload/ Download the ACS specified file			
		Download the configuration file		
		Configure & queries parameters		
	TR069	Remote upgrade		
		Remote debugging operations		
		Cycle monitor		
Management	SNMP	Cycle monitor		
	SINIVIE	Various level of user login priority with different limitation and		
		display		
		Encryption backup current settings and restore the backup		
	WebGUI/ CLI	settings		
	Webdolf eli	Export current diagnosis results and operation logs		
		Statistics of LAN link status, transmit and receive traffic and up		
		time		
	Diagnostics			
	USIM PIN management and card authentication			
	USIM activation	USIM activation		
	Route mode	Route mode		
	Bridge mode/ E	Bridge mode/ Bypass mode		
	NAT mode			
	Static mode	Static mode		
	Port mirror			
	ARP	ARP		
VPN & Routing	IPV4/IPV6 dual	IPV4/IPV6 dual stack		
	Port forwarding	Port forwarding		
	IPSec	-		
	PPTP			
	GRE tunnel			
	L2TP V2/V3			
	VPN pass-through			
	Firewall			
	Mac address fil	Mac address filtering		
Security	IP address filtering			
	URL filtering			

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### **CPX60I CPE DATASHEET**

Access control HTTPS login from WAN DDOS attack protection Hierarchical user management

COMPLIANCE SPECIFICATIONS				
Environment Compliance	Cold: IEC 60068-2-1			
	Dry heat: IEC 60068-2-2			
	Damp heat cyclic: IEC 60068-2-30			
	Change of temperature: IEC 60068-2-14			
	Shock: IEC60068-2-27			
	Free fall: IEC60068-2-32			
	Vibration: IEC60068-2-6			

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