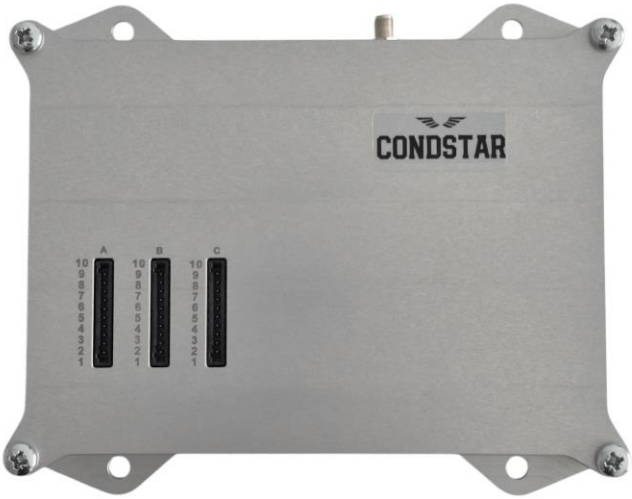
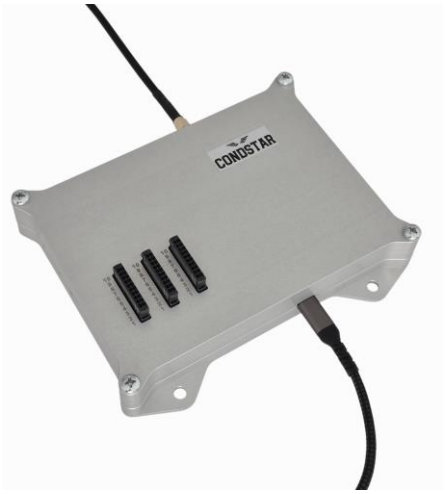
XT6000

Industrial Internet of Things (IIoT)
Data Sheet





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Features of XT6000 model

- Cellular IIoT for reliable and powerful Industries
- Communicate over LTE 5G/4G/3G networks worldwide
- Multi regional deployments LTE/NB-IoT - Global coverage
- Ready programmed as Modbus Master
- Monitor and control and exchange data collection
- Integrated with Hologram Cloud server - TCP Socket connection
- Cellular network status indication and cellular modem power status indication and device power statues indication
- Ultra-Wide-Band and highly efficient Cellular Antenna Indoor/Outdoor
- Full duplex communication protocol & M2M connectivity
- 4 Isolated Digital inputs include statues monitoring
- 4 Isolated Digital outputs including High side outputs and up to load current 0.5A
- 3 Isolated inputs for precisions 10 bits Analog to Digital Converter for voltage and current measurement modes
- 1 Isolated Serial Communications RS485
- Possibility of managing of Analog to Digital Converter and Serial Communications RS485 by timers
- 1 Isolated DC voltage rail outputs +3.3V
- ESD Protection 8KV (air), 4KV (contact)
- EMC Compliance Design
- Nano SIM card holder
- Powering up by USB-C connector and AC Adapter PD
- Durable metal casing withstands harsh physical conditions

Electrical specifications

Cellular modem

Grade	IoT Professional
Region	Multi region - Cloud for Global use
RAT	LTE Cat M1 / NB-IoT
LTE bands	1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 28, 66, 71, 85
LTE power Class consumption	23 dBm
Mobil network	LTE 5G/4G/3G
Protocol	Embedded TCP/IP

Digital input in port A

No. of inputs	3
Input filter cut-off frequency	2.5kHz
Input impedance	Rin = 6.5kΩ
Input voltage range	10-30V DC
Isolation Protection	3000Vrms
Overvoltage protection	Yes

Digital input in port B

No. of inputs	1
Input filter cut-off frequency	5kHz
Input impedance	Rin = 9.2kΩ
Input voltage level	5V DC or 3.3V DC
Isolation Protection	2000Vrms
Overvoltage protection	Yes

Digital output in port A

No. of outputs	2
Output type	Photorelay - High side switch
ON-State resistance	Max 150mΩ
Load current	Max 0.5A DC pr. output
Feeding voltage range	5-30V DC
Isolation Protection	3000Vrms
Overvoltage protection	Yes

Digital output in port C

No. of outputs	2
Output type	P-channel MOSFET switch
Output voltage level	3.3V DC
Load current	Max 20mA DC pr. output
Isolation Protection	2000Vrms
Overvoltage protection	Yes

Analog to Digital Converter (ADC)

No. of inputs	3
Input type	Analog
ADC Mode options	-Voltage mode (default mode) -Voltage and current mode
Input voltage range for voltage mode channel	0-5V DC
ADC voltage measurement tolerance	Max ±20mV DC
Input current range for current mode channel	0-25mA DC
ADC Resolution	10 bits
Input impedance for voltage mode channel	Rin > 1MΩ
Input impedance for current mode channel	Rin = 120Ω
Isolation Protection	2000Vrms
Overvoltage protection	Yes

Serial Communications RS485

Speed (Baud rate)	9600 bits per second
Data bits	8 bits
Stop bits	1 bit
Parity	None
Flow control	None
Integrated Termination	Yes (120Ω)
Isolation Protection	2000Vrms
RTU Transmission mode	Yes

DC Voltage Rail in port C

Output voltage level	+3.3V DC
Load current	Max 50mA
Isolation Protection	2000Vrms
Overload protection	Yes

Timers

No. of timers	2
No. of timers for Analog to Digital Converter	1
No. of timers for Serial Communications RS485	1
Timer setting range	1 - 3 hours
Timer setting step	1 hour
Tolerance	±30 second pr. hour

Antenna

Type	Cellular LTE 5G/4G/3G
Frequency range	617-6000MHz
Gain	Max 5.2dBi
Radiation pattern	Omnidirectional
Mounting Style	I-Bar Adhesive mount
Dimensions	L:176.5mm, W: 59.2mm, H:13.6mm
Cable length	1m

Power supply and Consumption

Required power supply	AC power Adapter (USB Type-C) Input:100-240V AC, 50/60Hz, 0.5A Output:5V/3A, PD > 20W
Type power cable	USB-C
Current consumption (from USB-C connector XT6000) at full operation without load consumption of DC voltage rails	Max 180mA @ 5V DC
Power consumption (from USB-C connector XT6000) at full operation without load consumption of DC voltage rails	Max 900mW
Current consumption (from USB-C connector XT6000) at full operation with Max load consumption of DC voltage rails	Max 270mA @ 5V DC
Power consumption (from USB-C connector XT6000) at full operation with Max load consumption of DC voltage rails	Max 1350mW

General

Casing

Casing material	Aluminum
Appearance	Silvery white
Dimensions	L: 182.35 mm, W: 152.58 mm H: 27 mm
Mounting holes	Yes
Total weight for XT6000	0.7 kg

Connectors and Reset and Status indications

RF SMA	Connector for Cellular Antenna
USB-C Type	Connector for AC power Adapter (USB Type-C) 5V/3A
Nano SIM holder	Connector for SIM card, Push-Push type
3 pieces of 10 position Terminal Block Header	Connectors for Isolated IO interface ports A, B and C
Tactile switch	Reset Button
4 LEDs	Green LEDs for status indications at operation

Requirements information

Operating temperature	-40℃ to 85℃
Storage temperature	-45℃ to 85℃
Humidity	5-100% RH

Included parts with this product

Antenna	I-Bar Adhesive mount Indoor/Outdoor Ultra-Wide-Band Cellular Antenna for LTE 5G/4G/3G
Power cable	USB-C High Power Cable – 2 meters
Plugs for cable mounts for ports A, B and C in XT6000	3 pcs of Pluggable Terminal Blocks

Pluggable Terminal Blocks

No. of contacts	10
Pitch	2.54
Appearance	Vertical
Applicable wires	-Solid wires: 0.14 to 0.5 mm^2 -Standard wires: 0.2 to 0.5 mm^2 -Ferrules: 0.25 to 0.34 mm^2 -AWG: 26 to 20

Warranty information

Warranty	2 years warranty

Documentation

Technical Doc.	XT6000 User Manual
Software Doc.	XT6000 Cloud Communications

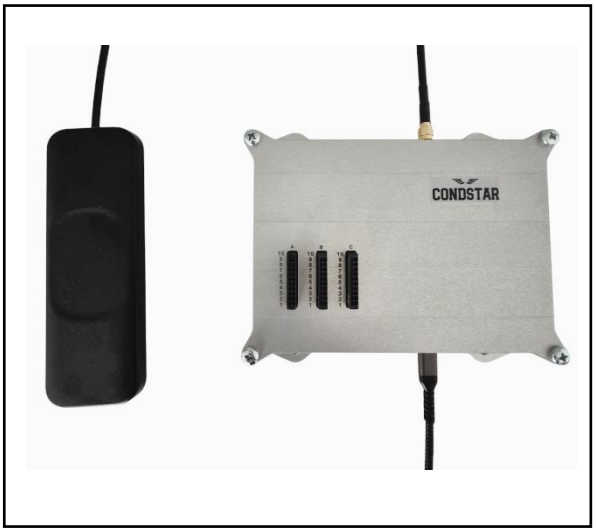

Figure 1-1. Cellular IIoT XT6000

The Cellular IIoT XT6000 has another style of cellular network antenna than the one showed in figure 1-1. It is Hinged Dipole Cellular Network Antenna that can be deliver with XT6000 instead of the I-Bar adhesive indoor/outdoor cellular network antenna. The hinged dipole cellular network antenna for XT6000 can be seen in the figure 1-2 below.

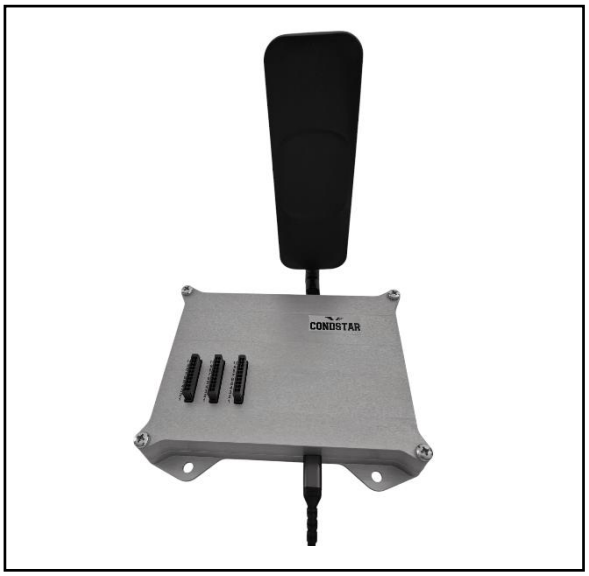

Figure 1-2. Cellular IIoT XT6000 with Hinged Dipole Cellular Network Antenna