

InDTU512 Series OSOS Modem

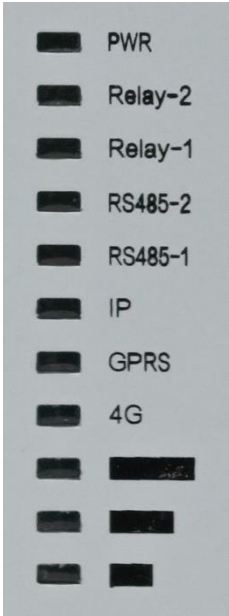
- LTE CAT 1
- Rich interfaces
- IEC62056-21
- DLMS
- Li-ion Battery

InDTU512 is a wireless data terminal designed according to the requirements of the Automatic Meter Reading System (OSOS) for communication via cellular networks, which can be referred to as the OSOS Modem. InDTU512 enables the master station to access the connected metering devices via the internet, allowing the master station to obtain the operational parameters of the meters at any time and record detailed traceability information. InDTU512 is equipped with various hardware interfaces such as Ethernet port, serial port, digital input, relay output, etc., enabling it to connect to various devices on-site and achieve multiple applications.



LED Definition

LED	Status declaration
PWR	Steady on: The power supply is normal Off: No external power supply is available
Relay-2	Steady on: Closing
Relay-1	Steady on: Closing
RS485-2	Blinking: Data is being exchanged through serial port 2. Off: No data is being exchanged over serial port 2
RS485-1	Blinking: Data is being exchanged through serial port 1 Off: No data is being exchanged over serial port 1
IP	Steady on: The device obtains an IP address for network communication Off: The device does not obtain an IP address for network communication
GPRS	Steady on: 2G Off: Not 2G
4G	Steady on: 4G Off: Not 4G



Feature and Advantage

Performance and Platform

- MIPS24 KEc (575/580 MHz)
- 128MB RAM
- 64MB Flash

Rich interfaces

- 2x RS-485
- 1x USB2.0
- 2x Relay outputs
- 4x DI
- 1x Ethernet(Optional)

Stable communication

- LTE CAT 1
- Independent hardware and software watchdog
- Multilevel link detection, communication self-healing
- Support supercapacitor



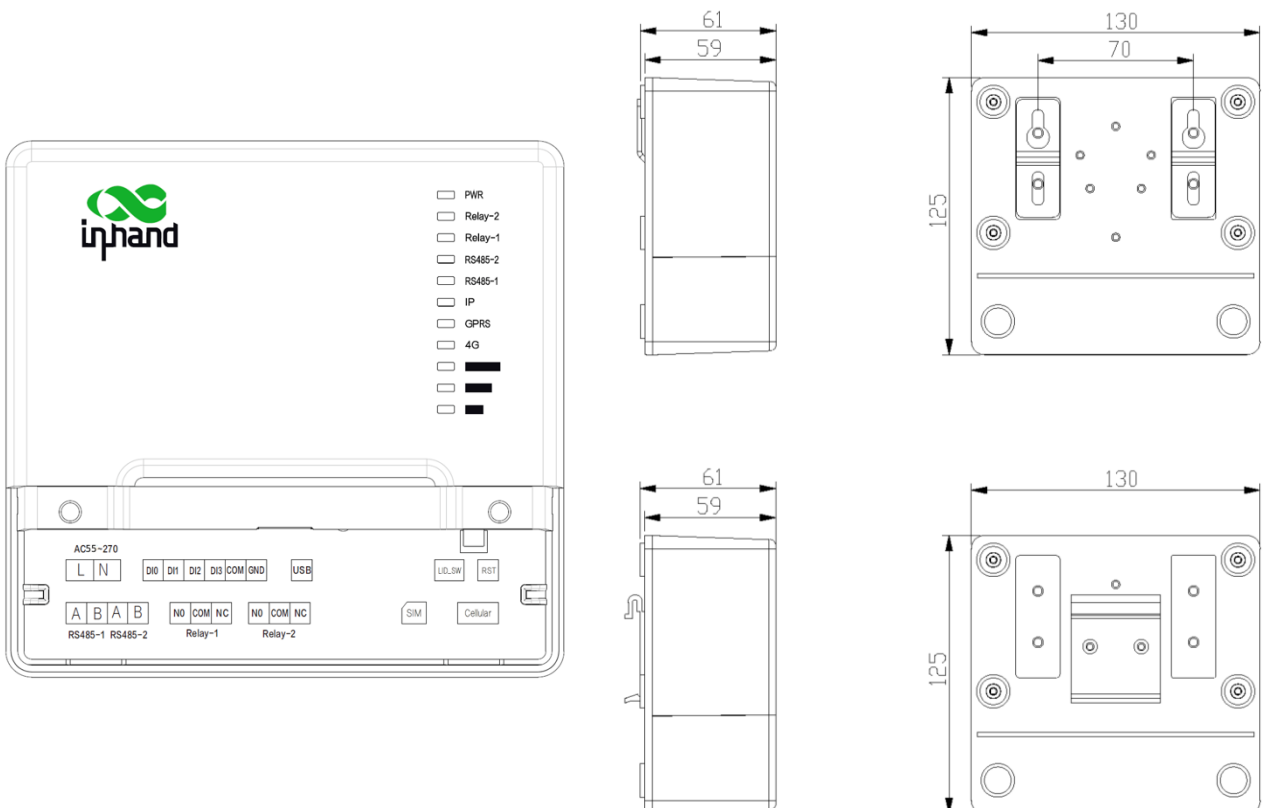
Industrial-grade, ready for harsh industrial environments

- Operating temperatures up to -30 ~ 70 °C, supports +55 ~ 270 VAC wide voltage power inputs, protection rating IP40, providing stable and secure network communications for demanding unattended industrial sites

Multiple acquisition protocol

- IEC62056-21
- DLMS
- MASS
- MQTTS
- Viko
- TeleMetriX Head-End

Dimensions (mm)



Product Specifications

Hardware Specifications			
Item	InDTU512		
Hardware Platform			
CPU	MIPS24KEc(575/580 MHz)		
RAM	128MB		
FLASH	64MB		
Interfaces			
Cellular	4G cellular module, CAT1, Non-removable		
USB	1*USB2.0, Type-C		
Serial Port	2*RS485, terminal-block connector RS485: Data+, Data-, GND		
SIM Card	Mini SIM-2FF card, support 1.8/3V SIM/UIM card eSIM(Optional)		
Antenna Connector	1x Cellular Antenna		
Button	1x System reset button		
Open lid detection device	1x Open Cover Inspection key		
Digital I/O	2x Relay outputs: 240VAC/5A 4x digital inputs: Dry contact Logic1, Open; Logic0, Close to ground		
Ethernet	1x 100Mbps Ethernet(Optional)		
Others			
RTC	Real time clock operated from on-board coin-cell battery		
Punctuality accuracy	0.5S/ day		
Battery	Li-ion Battery (500mAh); Supercapacitor (Optional)		
Power			
Power Supply	AC input unregulated 57V to 270 VAC, nominal 230V, instantaneous voltage protection of 6KV Reverse voltage protection		
Power Consumption	20VA (MAX)		
Mechanical characteristics			
Mounting	DIN rail/Mounting ear(default)	Enclosure Material	Plastic
Dimension	130 x 125 x 68 mm	Protection	IP40
Ambient Temperature And Humidity			
Operation temperature	-30 ~ 70℃	Ambient humidity	0-93%
Dedared Pollution Degree	3		
LED			
System	1 x Power, 3 x CSQ, 1 x IP, 1 x 4G, 1 x GPS, 2 x RS485, 2 x Relay		
LAN	2 per port (10/100 Mbps)		
Safety&EMC			
Safety&EMC	IEC 62368-1		
	EN 55032, Class A		
	EN 55035, Level 2		
Others			
Others	EN 60068-2-30		
	EN 60068-2-31		
	EN 60068-2-1		
	EN 60068-2-2		
	EN 62262		
	IEC 60529		
	IEC 60695-11-10 standard V-0 class		

Software Specifications	
Item	InDTU512
Operating System	
OS	Linux
Internet	
Access authentication	APN,VPDN
Internet access	CHAP,PAP
Network format	LTE CAT1
Network Protocol	
IP Application	ICMP, DNS, TCP/UDP, TCP Server, DHCP, NTP
IP Routing	Static routing
Reliability	
Cover opening alarm	Detection lid is opened
Power failure alarm	Detecting an external power failure
Link Detection	Sends heartbeat packets to detect, auto redials when disconnected
Embedded Watchdog	Device runs self-detection, auto recovers from malfunctions
Temperature Detection	The CPU temperature can be detected and recorded in logs
Communication Protocol	
Acquisition protocol	IEC62056-21 Mode-C, DLMS
Access platform	MQTT/MQTTs/Vko/MASS/TeleMetriX Head-End
Network Management	
Configuration	Web Via USB
Upgrade	Local Via USB/ETH, Remote Via FTP/InHand DM platform
Log	Support local system log and important log power-off autosave

Model	<WMNN>: Cellular Type & Frequency Band	Serial Port	USB	IO	Ethernet
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InDTU512-L-FQ53	EMEA CAT1 FDD:B1/B3/B7/B8/B20/B28 TDD:B38/B40/B41 GSM:B2/B3/B5/B8	2x RS485	1x USB2.0	2x Relay outputs, 4x DI	No
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About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



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