

Industrial Design, Low Power Consumption, High Reliability

InDTU324 Series

Industrial Cellular Modem

The InDTU324 series industrial grade wireless data terminal uses cellular network as the bearer network to provide wireless data transmission channel over TCP/ IP. It functionally completes wireless data communications between remote control station serial devices and the central control system, to enable remote control of industrial field sites.

The InDTU324 series is small in size, operates between -40°C ~ 70°C and supports +5 ~ 35V DC wide voltage input, can provide stable data transmission channels for unattended industrial sites.

The product supports various configuration and management methods including PC configuration tool, RTool remote management tool and InHand Device Manager cloud, simplifying on-site deployment and maintenance work, greatly improving deployment efficiency and reducing overall system operation cost, so that customers can really experience the convenience of wireless communication.

The InDTU324 series products are particularly suitable for data acquisition and monitoring of distributed unattended field devices, such as:

- Power distribution automation
- Power meter reading
- Street light monitoring
- Smart water
- Heating system monitoring
- Environmental monitoring
- Meteorological monitoring

Application Case



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Features and Advantages

- + Long proven in large-scale applications
- + 4G/3G/GPRS cellular networks
- + Fully industrial-grade, ready for challenging environments
- + Hardware and software watchdog and multi-layer link detection mechanism, ensures high divide availability and reliability
- + Support for multiple management gadgets and the InHand Device Manager cloud platform for flexible and efficient on-site or remote network management
- + Support for industrial protocol conversion to help users solve interconnection issues

Fully industrial-grade, ready for challenging industrial environments

Fully industrial-grade chip, operating temperature as wide as -40°C ~ 70°C, supports +5 ~ 35VDC wide voltage power input, protection rating up to IP30, to provide reliable network communications for electric power, industrial and other unattended sites.

Ultra low power consumption, adaptable to various field power supply modes.

High-reliability design, ensure continuity of data transmission Self-recovery: embedded watchdog, self recover from faults, ensuring normal operation of the device.

Link redundancy: SMS and IP link mutual backup to ensure continuous data transmission.

Link detection: multi-layer link detection mechanisms including PPP layer heartbeat, ICMP detection, TCP Keep alive and application layer heartbeat, keeping wireless connection "always on".

Efficient to manage, flexible and easy to use

Support for configuration software login or AT command(AT MODE only) via local serial port.

Support for RTOOL remote configuration over TCP/IP.

Configuration via SMS.

Support for remote batch management by Device Manager cloud platform.

Feature-rich, to provide users with intelligent solutions Support for transparent TCP/UDP protocol.

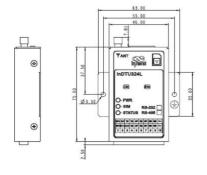
Support for InHand DC protocol.

Support for Modbus RTU/Modbus TCP protocol conversion.

Dimensions (mm)

LxWxH=75x46x20mm





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Pin	Name	Description			
	RS232 PIN				
1	GPO	General GPIO (DO), on/offline indicator of DTU			
2	RXI	Serial port 1 data receiving			
3	TX1	Serial port 1 data transmitting			
4	TX2	Serial port 2 data transmitting			
5	OFF	Power control: off at high electrical level (3.0-10V), on at low level (0-0.3V) or suspended			
6	RX2	Serial port 2 data receiving			
7	GPI	General GPIO (DI), reserved (Do not recommend to connect.)			
8-9	GND	Ground			
10	V+	Positive			
		RS485 PIN			
1	GPO	General GPIO (DO), on/offline indicator of DTU			
2	B(-)	Serial port 1 RS485-			
3	A(+)	Serial port 1 RS485+			
4	TX2	Serial port 2 data transmitting			
5	OFF	Power control: off at high electrical level (3.0-10V), on at low electrical level (0-0.3V) or when suspended			
6	RX2	Serial port 2 data receiving			
7	GPI	General GPIO (DI), reserved (Do not recommend to connect.)			
8-9	GND	Ground			
10	V+	Positive			



Product Specifications

Interfaces Industrial Serial Port 1: RS-232/RS-485 (Optional) Serial port 2: RS-232 Serial port 2: RS-232 RS-232 signal: TXD, RXD, GND RS-232 signal: TXD, RXD, GND RS-485 signal: 485+, 485-, GND 10PIN industrial terminal, 3.5mm pitch SIM Card Slot 1,8V/3V, drawer-type slot Antenna 50Q / SMA x 1 Mechanical Properties Installation Metal Cooling Fanless Power Supply Potection Rating IP30 Power Input DCS-35V Polarity Reverse Vertex Supported Power Input DCS-35V Polarity Reverse Supply Supported Power Input DCS-35V Polarity Reverse Supply Supported Power Input DCS-35V Polarity Reverse Supply Supported Power Input DCS-35V Overload Prector Supported (@12V) InDTU324L 12mA 47mA 202mA 63mA Ambient Temperature -40 - +70°C Ambient Humidity \$-95% (non-condensing) \$-95% (non-condensing) Storage -40 - +85°C InDTU324L 12mA 47mA	InDTU324 Hardware Specifications							
Serial port 1: RS-232RS-232 signal: TXD, RXD, GND RS-485 signal: 485+, 485-, GNDABS-232 signal: TXD, RXD, GND RS-485 signal: 485+, 485-, GND10PIN industrial terminal, 3.5mm pitchSIM Card SlotAntenna50Q / SMA x 1Vertex Vertex	Interfaces							
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	Surge	EN61000-4-5, level 2						
	Shock Wave Immunity							
Certification								
CE								

InDTU324 Software Specifica	ations					
Network Connection						
Network Access	APN, VPDN					
Access Authentication	СНАР/РАР					
Network Type	GPRS/3G/4G					
Network Protocol						
Network Protocol	Ping, DNS, transparent TCP/UDP, InHand DC TCP/DC UDP, user-defined login/heartbeat data packet					
Protocol Conversion	Modbus RTU/TCP protocol conversion					
Network Security						
Multi-level Authorization	User levels: administrator, maintenance staff					
Certification Security	Supports login security certification					
Reliability						
Reliable Upgrade	Patent upgrade mechanism, ensures reliable upgrade					
Link Connection Detection	Sends heartbeat packet detection, auto connect once disconnected					
Embedded Watchdog	Device operation self-detection technology, and self- recovery from operation faults					
Network Management						
Configuration Method	Local serial port, RTool, InHand Device Manager, SMS					
Configuration Backup	Supports import and export of configuration files					
Upgrade Method	Patent upgrade mechanism, upgrade firmware through local serial port or remotely					
Log	Supports local and online viewing of logs, facilitates checking device operating status					
Dial-on-Demand	Data activation, timed on/off, SMS activation, phone activation					
Network Management	Supports InHand Device Manager remote central management					



Ordering Guide

Model code: InDTU324- <wmnn>-<s>-</s></wmnn>							
Model	<th><s>: Serial Port Type</s></th> <th>:AT/DATA</th>	<s>: Serial Port Type</s>	:AT/DATA				
InDTU324LQ25-232	Europe and Asia Pacific - LTE CAT4: LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8	RS232	DATA MODE				
InDTU324LQ25-232-A	Europe and Asia Pacific - LTE CAT4: LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8	RS232	AT MODE				
InDTU324LQ25-485	Europe and Asia Pacific - LTE CAT4: LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8	RS485	DATA MODE				
InDTU324LQ25-485-A	Europe and Asia Pacific - LTE CAT4: LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8	RS485	AT MODE				
InDTU324NQ96-232	Europe and Asia Pacific - Cat M1/Cat NB1/EGPRS: LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (for Cat M1 only) EGPRS:850/900/1800/1900MHz	R\$232	DATA MODE				
InDTU324NQ96-232-A	Europe and Asia Pacific - Cat M1/Cat NB1/EGPRS: LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (for Cat M1 only) EGPRS:850/900/1800/1900MHz	R\$232	AT MODE				
InDTU324NQ96-485	Europe and Asia Pacific - Cat M1/Cat NB1/EGPRS: LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (for Cat M1 only) EGPRS:850/900/1800/1900MHz	R\$485	DATA MODE				
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About Us

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following groundbreaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including

management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.





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