InHand Networks

Industrial, Reliable, Flexible to Manage

InDTU332 Series

Industrial Cellular Modem

The InDTU332 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.

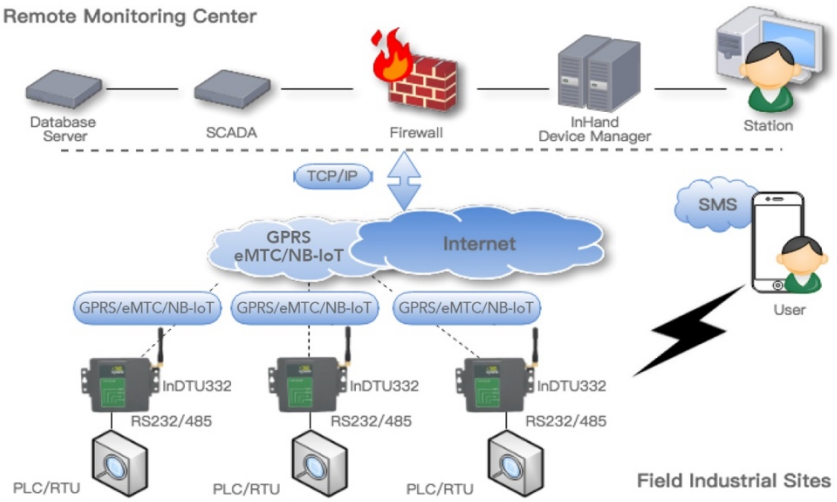
The InDTU332 series is small in size, operates between -40°C ~ 70°C and supports +5~35V DC wide voltage input, can provide stable data transmission channels for unattended industrial sites.

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 InDTU332 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



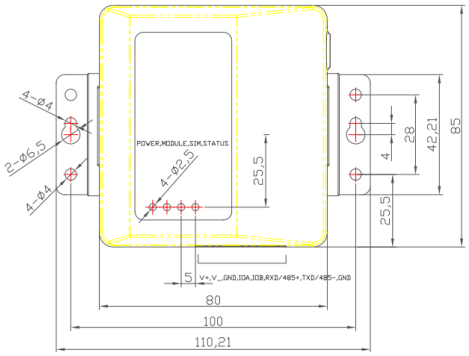
Features and Advantages

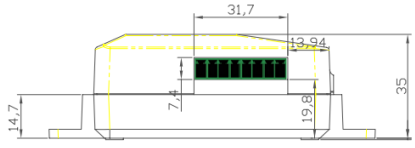
+ Long proven in large-scale applications
+ GPRS or eMTC/NB-IoT(LTE Cat M1/NB1) cellular networks
+ Fully industrial-grade, ready for challenging environments
+ Hardware and software watchdog and multi-layer link detection mechanism, ensure high device availability and reliability
+ Support multiple management gadgets and InHand Device Manager cloud platform for flexible and efficient on-site or remote network management
+ Support 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, support +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 Keepalive and application layer heartbeat, keeping wireless connection "always on"
- **Efficient to manage, flexible and easy to use**
  - ✓ Support configuration software login via local serial port
  - ✓ Support RTOOL remote configuration over TCP/IP
  - ✓ Support remote batch management by Device Manager cloud platform
  - ✓ Configuration via SMS (InDTU332G models only)
- **Feature-rich, to provide users with intelligent solutions**
  - ✓ Support transparent TCP/UDP protocol
  - ✓ Support InHand DC protocol
  - ✓ Support Modbus RTU/Modbus TCP protocol conversion
  - ✓ Support user-defined TCP/UDP data packets
  - ✓ Support multi-center, 1-5 centers

Dimensions (mm)

L×W×H=110×85×35mm





Interface

Pin	Signal Name	Description
1	GND	Ground
2	TXD/485-	Serial port 1 RS232 data transmitting or RS485-
3	RXD/485+	Serial port 1 RS232 data receiving or RS485+
4	TXD2	Serial port 2 RS232 data transmitting
5	RXD2	Serial port 2 RS232 data receiving
6	GND	Ground
7	V-	Negative
8	V+	Positive

Product Specifications

InDTU332 Hardware Specifications				
Item	InDTU332			
Interface				
Industrial Serial Port	2 x Logic serial ports: Serial port 1: RS-232/RS-485 (Optional) Serial port 2: RS-232			
	RS-232 signal: TXD, RXD, GND RS-485 signal: 485+, 485-, GND			
	8PIN industrial terminal, 3.81mm pitch			
SIM Card Slot	1.8V/3V, card slot			
Antenna	50Ω / SMA x 1			
Mechanical Properties				
Installation Method	Wall-mounting			
Protection Rating	IP30			
Cooling	Fanless			
Housing	ABS engineering plastics			
Power Supply				
Power Input	DC5-35V			
Power Interface	Pluggable industrial terminal connection			
Polarity Reverse Protection	Support			
Overload Protection	Support			
Consumption (@12V)		Standby	Working	Peak
	InDTU332G	10mA	40mA	45mA
	InDTU332N	15mA	30mA	160mA
Environment				
Operating Temperature	-40 ~ 70℃			
Storage Temperature	-40 ~ 85℃			
Ambient Humidity	5 ~ 95% (non-condensing)			
LED Indicators				
LED	POWER, MODULE, SIM, STATUS			
EMC Index				
Static	EN61000-4-2, level 3			
Surge	EN61000-4-5, level 3			
Shock Wave Immunity	EN61000-4-12, Level 3			
Certifications				
InDTU332G: CE, FCC InDTU332N: CE, FCC, PTCRB, IC, Verizon Wireless, AT&T				

InDTU332 Software Specifications	
Item	InDTU332
Network Connection	
Network Access	APN, VPDN
Access Authentication	CHAP/PAP
Network Type	GPRS or eMTC/NB-IoT(LTE Cat M1/NB1)
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	Support login security certification
Reliability	
Reliable Upgrade	Patent upgrade mechanism, ensures reliable upgrade
Link Connection Detection	Send 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 (InDTU332G only)
Configuration Backup	Support import and export of configuration files
Upgrade Method	Patent upgrade mechanism, upgrade firmware through local serial port or remotely
Log	Support local and online viewing of logs, facilitate engineers to check device operating status
Dial-on-Demand	Data activation, timed on/off, SMS activation, phone activation (InDTU332G only)
Network Management	Support InHand Device Manager remote central management

Ordering Guide

Part Number	Model code: InDTU332GS55-<232/485>		
	Network	Serial port: <232/485>	SIM
InDTU332GS55-232	GSM 850/900/1800/1900MHz	RS-232	Single
InDTU332GS55-232	GSM 850/900/1800/1900MHz	RS-485	Single
InDTU332NB02-232	eMTC/NB-IoT (LTE Cat M1/NB1) Band 1,2,3,4,5,8,12,13,17,18,19,20, 25,26,28 (band 39 in M1-only)	RS-232	Single
InDTU332NB02-485	eMTC/NB-IoT (LTE Cat M1/NB1) Band 1,2,3,4,5,8,12,13,17,18,19,20, 25,26,28 (band 39 in M1-only)	RS-485	Single
InDTU332NB02-232-DS	eMTC/NB-IoT (LTE Cat M1/NB1) Band 1,2,3,4,5,8,12,13,17,18,19,20, 25,26,28 (band 39 in M1-only)	RS-232	Dual
InDTU332NB02-485-DS	eMTC/NB-IoT (LTE Cat M1/NB1) Band 1,2,3,4,5,8,12,13,17,18,19,20, 25,26,28 (band 39 in M1-only)	RS-485	Dual

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 Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Encompass Product Partner in Asia-Pacific and Schneider Electric CAPP Technology Partner, while listed on NEEQ 430642 as of February 18, 2014, InHand Networks defines industrial innovation and reliability.

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