



TOP-TSD501

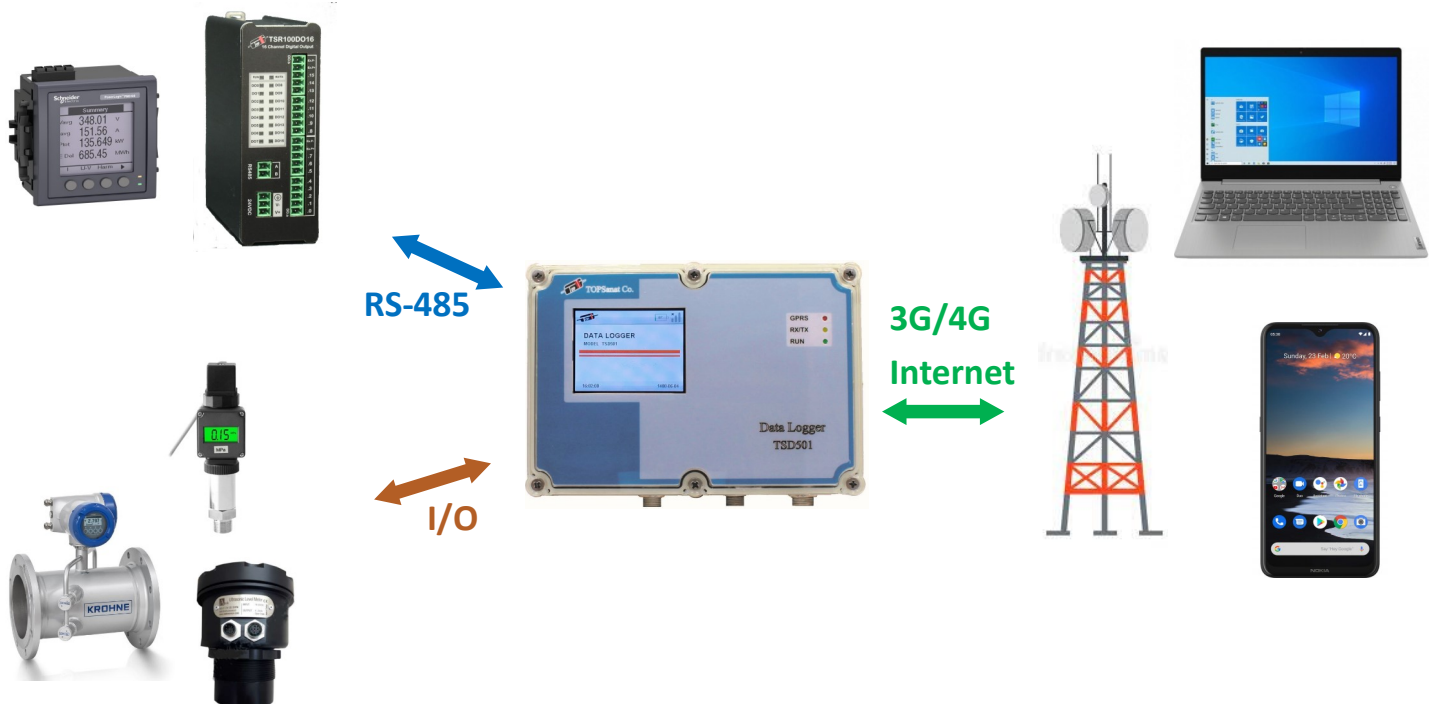
Intelligent 4G/3G/2G Remote Terminal Unit
4-Ch AI , 2-Ch DI Module

Features	
■	Multi-band LTE-TDD/ LTE-FDD/ HSPA+ / GSM/GPRS/EDGE
■	Dual-band UMTS/HSDPA 900/1800 MHz
■	Modbus/TCP-UDP-ASCII-RTU Protocol for SCADA Software
■	Support DNP3/TCP-Serial_IEC60870-101-104 Protocol?
■	SD Card
■	USB Device
■	cellular communication
■	RS485
■	IO Scan Time < 1ms

Introduction

TOP-TSD501 is an intelligent active 4G Remote Terminal Unit. It can be used in Machine to Machine application fields to transfer the local I/O or Modbus,DNP3,IEC101-104,device’s data via WCDMA/ GPRS by the defined period or DI/AI triggers. The local I/O data can also be stored in the Data flash to become a remote data logger. With The simple I/O linkage function, TOP-TSD501 can reach the real time control in local field.

Application

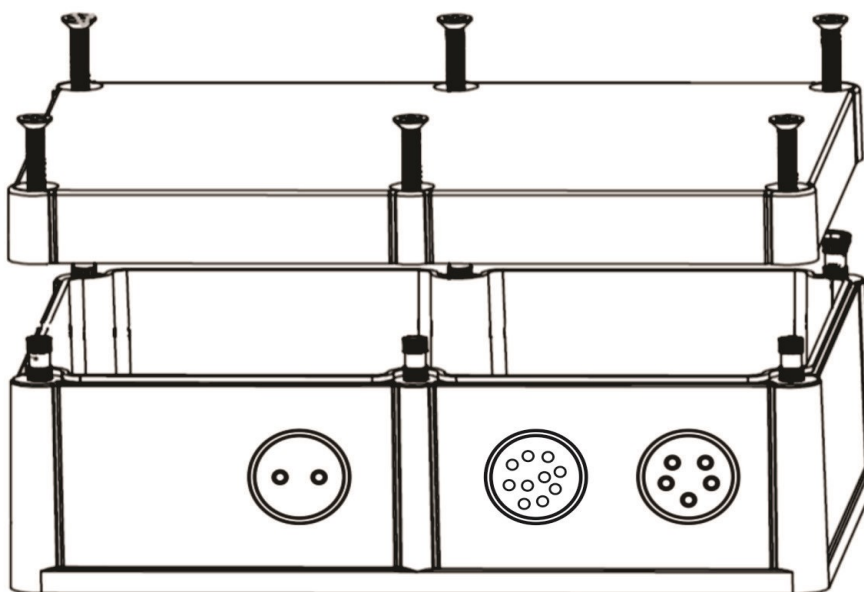


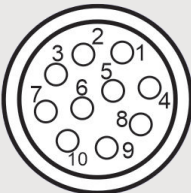
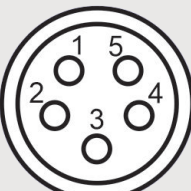
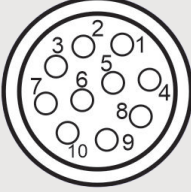
System Specification

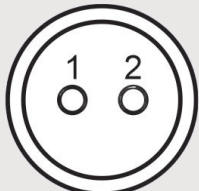

System		
CPU	ARM Cortex M4	
SRAM	192Kbyte	
Flash Memory	Internal	1MB High Speed Flash
	External	32Mb
Watchdog Timer	Yes	
LED Indicator	3LEDs (NET, RX/TX, RUN)	
Communication		
Serial Port	RS485	Modbus master Modbus slave (ASCII – RTU)
LED Indicators		
NET	2G/3G/4G	
RX/TX	Data transfer	
RUN	System Running	
Power Requirements		
Protection	None	
Frame Ground Protection	ESD	
Required Supply Voltage	220VAC	
Battery Backup	Yes (optional / 12VDC)	
Battery Charger	Yes (14.5VDC)	
Power Consumption	44 V/AH	
Mechanical		
Casting	PL(ABS) - IP68	
Dimension (W x L x H)	185 mm x 129 mm x 70 mm	
Installation	Wall mounting	

Cellular Interface		
Standards	LTE-TDD/LTE-FDD/HSPA+	
Band Option	Multi-band GSM/GPRS/EDGE 900/1800 MHz	
	LTE-TDD B38/B40/B41	
	FDD-LTE B1/B3/B5/B7/B8/B20	
HSPA+ Data Rate	Max. 5.76Mbps(UL) , 42Mbps(DL)	
GPRS Data Rate	85.6Kbps (DL/UL)	
LTE cat1 Data Rate	5Mbps (UL) , 10Mbps(DL)	
GPRS Multi-Slot Class	Class 12	
Analog Input		
Input Channels	2 (differential) 1(power loop)	
Input Type	0 ~ 3 v, 0~20mA , 4~20mA	
Resolution	12 bit	
Sampling Rate	384k Sample/Sec. (Total)	
Accuracy	LSB 1±	
Overcurrent Protection	40mA Max.	
Individual Channel Configuration	Yes	
Input Impedance	Voltage	2MΩ
	Current	150Ω
Digital Input		
Input Channels	2 (source)	
Contact	Isolated Contact	
On Voltage Level	+10 VDC ~ +28 VDC	
Off Voltage Level	+4 VDC Max.	
Input Impedance	10 KΩ , 0.5W	
Overvoltage Protection	+28 VDC	
Environment		
Operating Temperature	-20 °C ~ +70 °C	
Storage Temperature	-40 °C ~ +85 °C	
Humidity	10 ~ 90% RH, Non-condensing	

Pin Assignment



Inputs & Communication			
Analog Inputs		1	+AI1
		2	-AI1
		3	+AI2
		4	-AI2
		7	+24v External power
		8	AI4
Digital Inputs		1	DI1
		2	DI2
		3	+24v External power
RS485		9	A
		10	B

Power			
Power Supply		1	~AC
		2	~AC
		4	+ Battery
		5	- Battery