

WxS990E

NB-IoT Smart IoT and RTU 2-in-1 Terminal

Related Products

Product #	Interf.	Descriptions
WxS9900	11MPI+RS485+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx00,PSB-BD01,Enclosure)
WxS9901	RS485+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx01,PSB-BD01,Enclosure)
WxS9902	0-20mA*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx02,PSB-BD01,Enclosure)
WxS9903	0-20mA*4+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx03,PSB-BD01,Enclosure)
WxS9904	0-3.3V*2+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx04,PSB-BD01,Enclosure)
WxS9905	0-3.3V*4+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx05,PSB-BD01,Enclosure)
WxS9906	0-10V*2+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx06,PSB-BD01,Enclosure)
WxS9907	0-10V*4+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx07,PSB-BD01,Enclosure)
WxS9908	PT100*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx08,PSB-BD01,Enclosure)
WxS9909	PT100*5+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx09,PSB-BD01,Enclosure)
WxS990A	Switch*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0A,PSB-BD01,Enclosure)
WxS990B	Switch*5+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0B,PSB-BD01,Enclosure)
WxS990C	Unibus*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0C,PSB-BD01,Enclosure)
WxS990D	Unibus*18+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0D,PSB-BD01,Enclosure)
WxS990E	IIC*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0E,PSB-BD01,Enclosure)
WxS990F	SPI*1+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0F,PSB-BD01,Enclosure)
WxS990G	Uart*2+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0G,PSB-BD01,Enclosure)
WxS990H	Uart*3+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0H,PSB-BD01,Enclosure)
WxS990J	Uart*1+RS485+OD*2+PWR*2	NB-IoT Smart IoT and RTU 2-in-1 Terminal (Inc.WxS99xx,PSM-xx0J,PSB-BD01,Enclosure)
WxS9950	Ai/Ao/Di/Pi/Ro/IIC/SPI/Ci + RS232/485/Ro/RJ45	NB-IoT Smart RTU

Product Highlights

- ❖ Interfaces supported:
 - MPI: IIC *1
 - RTU interfaces
 - OD*2 output for external devices controlling
 - PWR*2 output for external devices/sensors power supply or customization usage
- ❖ 2-in-1 DC(5V/12V)+Battery(3.6V Li-SOCI2 ER34615H/M) Power Supply, DC in priority
- ❖ Built-in sensor options including:
 - PSS-403011 IIC Temperature and Humidity Sensor (Indoor)
 - PSS-403013 IIC Temperature and Humidity Sensor (IP67,Outdoor)
 - PSS-403015 IIC Temperature and Humidity Sensors (Indoor)
 - PSS-403017 IIC Temperature and Humidity Sensors (IP67,Outdoor)
 - PSS-403019 IIC Temperature and Humidity Sensors (Indoor)
 - PSS-40301B IIC Temperature and Humidity Sensors (IP67,Outdoor)
 - PSS-403021 IIC Temperature + Humidity + Barometric Pressure Sensors(Indoor)
 - PSS-403023 IIC Temperature + Humidity + Barometric Pressure Sensors (IP67,Outdoor)

- ❖ RTU OD & PWR(PWM) output control interfaces
 - OD output control interface for controlling external devices such as electric relay, AC contactor, beeper, draught fan, lamps and lantern etc.
 - PWR*2 output, one default for external devices/sensors power supply voltage output, one with 3.3V voltage; or customization usage, such as for PWM port
 - PWR port signal can be used as PWM output to control stepper motor or lamp
 - Sensor(s) data or OTA Command triggered OD/PWR controlling signal & interfaces

- ❖ Power supply options:
 - PSB-BT01 WxS Terminal Battery Power (3.6VDC Output) (3.6V Li-SOCI2 ER34615H/M)
 - PSB-BT02 WxS Terminal Battery Power Board (3/5/9/12VDC Output) (3.6V Li-SOCI2 ER34615H/M)
 - PSB-DC01 WxS Terminal DC Power Board (Inc. PSP-DC012V)
 - PSB-BD01 WxS Terminal Battery (3.6V Li-SOCI2 ER34615H/M) & DC Power Board (Inc. PSP-DC012V)
 - Battery capacity ER34615H: 19000mAh/ER34615M: 13500mAh

- ❖ iEdge 4.0 terminal enclosure options
 - ENC-102001 WxS Series 4.0 Enclosure(φ145x90x55mm, IP67)
 - ENC-102002 WxS Series 4.0 Poromeric Enclosure(φ145x90x59mm)
 - ENC-102003 WxS Series 4.0 High Poromeric Enclosure(φ145x90x70mm)

- ❖ Terminal and sensor parameters configurable with Configuration Tool running on PC
 - NB-IOT Bands Supported and SW Configurable
 - NB-IOT Uplink Transmission Cycle Configurable
 - Sensor Parameters Configurable
 - Sensor Data Report Cycle Configurable

- ❖ FOTA (Over The Air) firmware upgrade, including to upgrade loader and application images
- ❖ OTA (Over The Air) terminal running parameters supported including output signal
- ❖ Low power consumption, years of battery operational life with 3.6V Li-SOCI2 ER34615H/M Battery with various scenarios
- ❖ Integrated internal antenna, or optional external SMA/IPEX antenna
- ❖ NB-IOT Compliance

Specifications

Parameters	Value
Smart Terminal	
Interfaces	MPI Interface: IIC *1 Output Control: OD*2 & PWR*2
Data Report	Cross-threshold report, plus periodic report (the threshold and the periodic report cycle are both user-configurable)

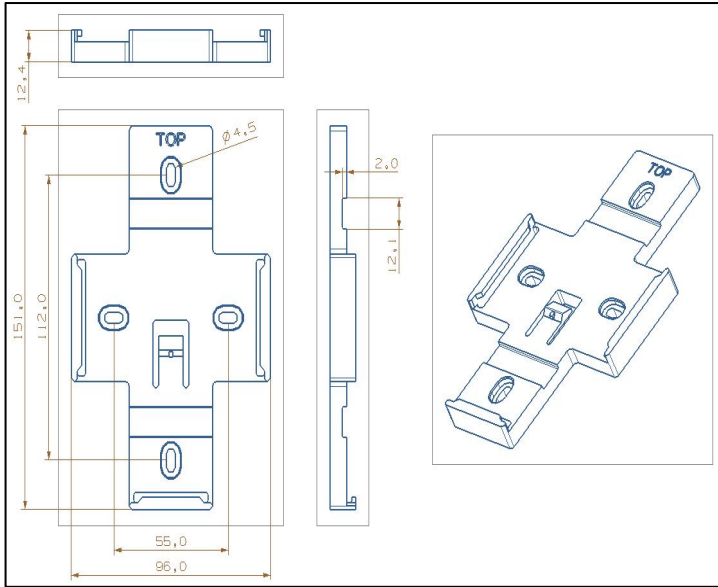
Intensive data sampling and averaging	Support intensive data sampling and averaging to improve data accuracy
Wireless	
Frequency band	LTE-FDD: B1/2/3/4/5/8/12/13/18/19/20/25/26(Cat M1 Only)/27(Cat M1 Only)/28/31/66/71(Cat NB2 Only)/72/73/85/86(Cat NB2 only)/87/88 ; EGPRS: 850/900/1800/1900MHz
Rate	LTE Cat M1:Max. 588 (DL), Max. 1119 (UL) LTE Cat NB1:Max. 32(DL), Max. 70(UL) LTE Cat NB2:Max. 127 (DL), Max. 158.5 (UL) EDGE:Max. 296 (DL), Max. 236.8 (UL) GPRS :Max. 107 (DL), Max. 85.6 (UL)
Protocols	PPP/TCP/UDP/SSL/TLS/FTP(S)/HTTP(S)/NITZ/PING/MQTT(S)/MQTT-SN/LwM2M/CoAP(S)/IPv6/DNS/NTP
SMS	Point-to-point MO and MT/SMS Cell Broadcast/Text and PDU Mode
Current consumption	3.9µA@PSM
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)
Mechanical	
Dimension	3 Enclosure options with different size WxS Series 4.0 Enclosure(φ145x90x55mm, IP67) WxS Series 4.0 Poromeric Enclosure(φ145x90x59mm) WxS Series 4.0 High Poromeric Enclosure(φ145x90x70mm)
IP rating	IP65 & IP67
Operating Temperature	-40C to +85C
Total Weight	150 g
Electrical	
Supply Voltage	3.6VDC
Power Type	Replaceable 1 ER34615H/M 3.6V Li-SOCI2 Battery (H/M); DC 4.5V – 12V optional

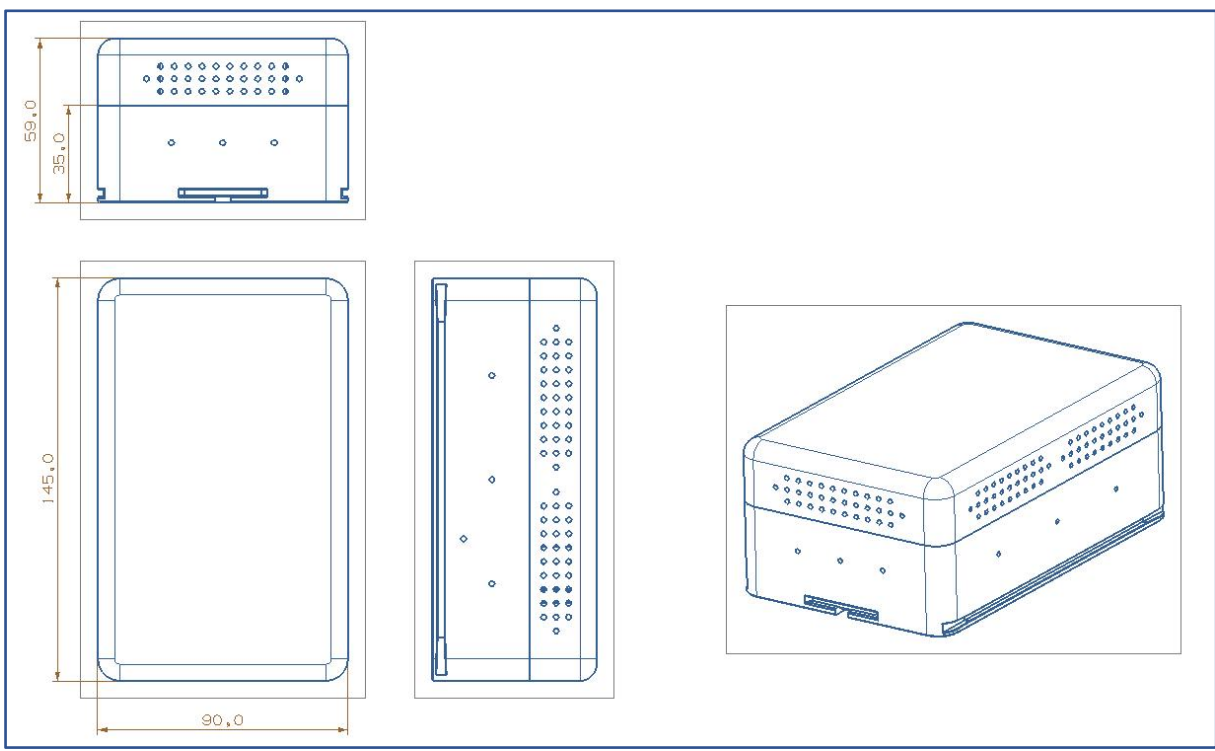
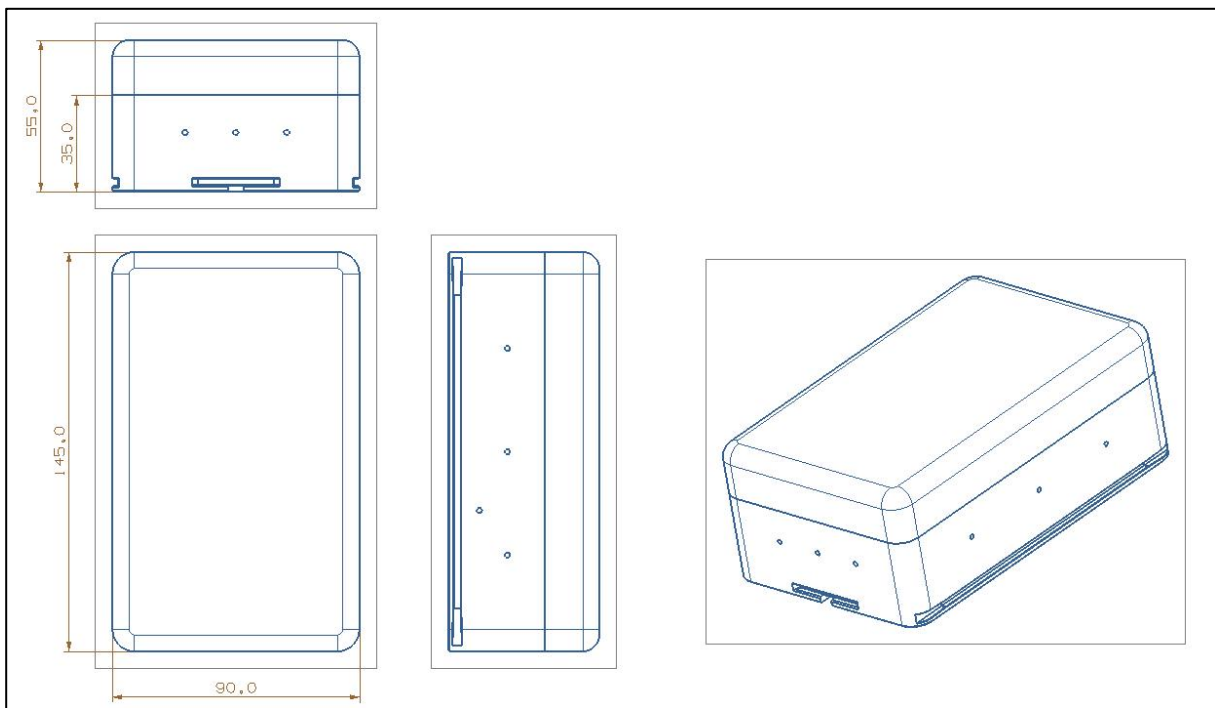
Configuration Tool

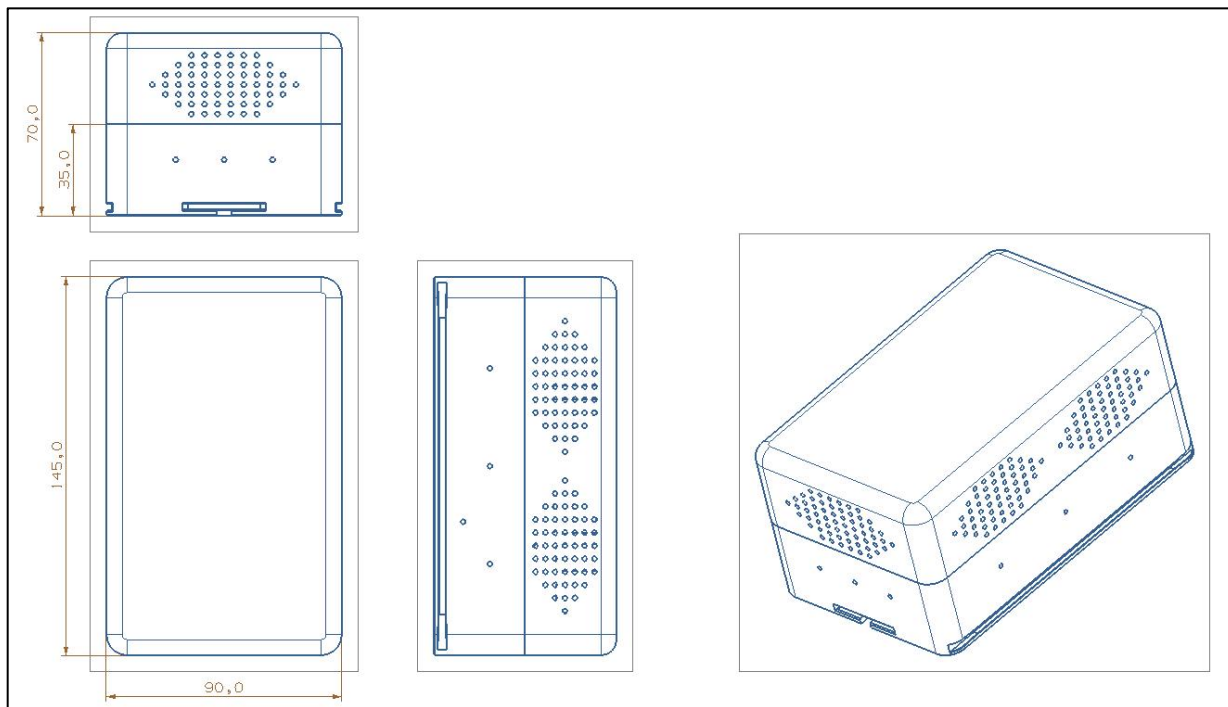
- ❖ iEdge4.0 WxS IoT Terminal products can be configured with PolySuite software-visual based Configuration Tool or CLI interface command or OTA via IoT platform, such as PolySuite PaaS platform iView.
- ❖ Download link <http://ota.polysense.online/wincc/ConfigurationTool.rar>

Installation Guide

- ❖ Below diagram shows the general installation guide for WxS990E, it can be installed on any flat and solid surface:

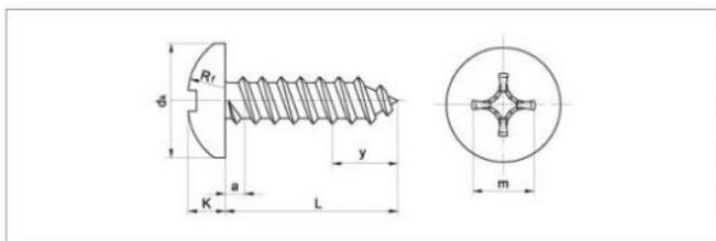






❖ Below is the recommendation of the self-tapping screw and its sizes:

螺纹规格		ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dk	min	3.7	5.3	6.64	7.64	9.14	10.57	11.57
K	min	1.4	2.15	2.35	2.8	3.4	3.7	4.3
m		1.9	3	3.9	4.4	4.9	6.4	6.9
L		4.5mm-100mm						



Product Images

❖ WxS Series 4.0 Enclosure(φ145x90x55mm, IP67)



❖ WxS Series 4.0 Poromeric Enclosure(φ145x90x59mm)



❖ WxS Series 4.0 High Poromeric Enclosure(ϕ 145x90x70mm)

