TBox Nano specifications

INPUTS & OUTPUTS

Removable I/O connectors: Yes

Maximum I/O points:
- 1 x Digital Output
- 4 x Digital Input
- 3 x Analog Input
- 1 x RS485 serial port

Digital modules: Built in
Analog modules: Built in

ANALOGUE INPUTS

Type of input (not independent):
- 2 x 4 - 20mA
- 1 x 0 - 5V
- 20 bits
- 0.1% (voltage)
- 0.15% (current)
- 24V DC

Accuracy:
- 20 bits
- 0.1% (voltage)
- 0.15% (current)

Sensor supply output: 24V DC

DIGITAL INPUTS

Contact wetting voltage: Volt free contacts
Input pulse frequency: 0 - 5Hz

PROCESSOR UNIT

Type: Kinetis K66
(ARM Cortex M4) 96Mhz
Flash: 8MB Flash + 2 x 1MB CPU Flash
RAM: 4MB SRAM + 256KB CPU SRAM
Memory (SD card): Up to 32GB
Real-time clock: Yes
Event logging: Yes

COMMUNICATIONS

Wireless: 3G
Local: USB
Protocols:
- Modbus (RTU/TCP, Master/Slave)
- DNP3
- IEC 60870-5-104
Others available on request

CONFIGURATION

Local (PC/Laptop): Yes
Remote via network: Yes
Programmable Logic: Yes

POWER

Battery (default): 19.2V DC lithium battery
12.4Ah
Power down modes: Yes

ENVIRONMENTAL

Working temperature: -40°C to +70°C
Storage temperature: -40°C to +85°C
Submersion: IP68 4 metres for 4 days

DIMENSIONS

Width: 142mm (5.59”)
Height: 197mm (7.75”)
Depth: 115mm (4.52”)
Weight: 1.5kg

APPROVALS

CE, UL/Csa, FCC, RCM, RED
Introducing the TBox Nano, a battery-powered telemetry unit and data logger which combines advanced logic processing for control applications with ultra-low power monitoring and exceptional battery life for wireless monitoring. With the TBox Nano, you will never be in the dark about the operation of your remote assets.

The TBox Nano:
Is a state-of-the-art data logger with the logic processing and control capability of an RTU.

Provides innovative push technology for instant notifications.

Accurately logs and transmits data wirelessly, year after year.

Has a robust, IP68-rated rugged construction.

Servelec Technologies’ TBox Nano is a powerful self-contained data logger, RTU and machine to machine (M2M) transmitter.

Included in the TBox Nano are many of the RTU features already available in TBox application software including logic processing and push technology.

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**Typical applications**
The TBox Nano saves you money. With the logic and control capability of an RTU and the ultra-low power operation of a wireless logger the TBox Nano removes the necessity for multiple devices for one application. Its digital output and logic processing capability means it operates like an RTU, enabling you to control your remote dispersed assets wirelessly.

The TBox Nano is ideal for control and monitoring applications such as:
- Sewer monitoring and pump control
- River level monitoring and sluice gate control
- Temperature monitoring
- Water level monitoring
- Flow monitoring
- Pressure monitoring

**Features**
The wide range of TBox Nano features include:
- 1 DO, 4 DI, 3 AI and 1 RS485 serial port
- Built in 3G modem
- Lithium battery with up to ten years’ battery life
- IP68 enclosure, submersible 4 metres for 4 days
- Modbus, DNP3 and IEC 60870-5-104 protocols supported
- Advanced logic processing
- Highly configurable alarms
- User friendly configuration
- Expansive historical data storage capacity

**Intuitive configuration**
TWinSoft is an easy-to-use and intuitive Windows application which is used to configure TBox hardware. The wizard, simple dialogue boxes and predefined variables allow users to rapidly create their applications and dynamically control communication, alarms, data logging and logic, locally or remotely, in complete security.