**TBox Nano specifications**

**INPUTS & OUTPUTS**
- Removable I/O connectors: Yes
- Maximum I/O points: 1 x Digital Output, 4 x Digital Input, 3 x Analogue Input, 1 x RS485 serial port
- Digital modules: Built in
- Analog modules: Built in

**ANALOGUE INPUTS**
- Type of input: 2 x 4 - 20mA, 1 x 0 - 5V
- Resolution: 20 bits
- Accuracy: 0.1% (voltage), 0.15% (current)
- Sensor supply output: 24V DC

**DIGITAL INPUTS**
- Type of input: Volt free contacts
- Contact wetting voltage: 5V DC nominal
- Input pulse frequency: 0 - 5Hz

**PROCESSOR UNIT**
- Type: Kinetix 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, USB
- Local: RS485
- Protocols: Modbus (RTU/TCP, Master/Slave), DNP3, IEC 60870-5-104

**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

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Battery operated, ultra-low power wireless telemetry unit and data logger for remote applications.
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.

**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.

**Up to ten years’ battery life**
Submersible casing (IP68, 4 metres at 4 days)
Wide operating temperature range (-40°C – +70°C)
Remove the need for multiple devices
Chamber, pole and wall mounting options
30 years telemetry industry experience inside every unit