# UTS-GP Series

# Model:

# UTS-GP-T11-xx

USB Temperature Sensor



**Description:**
USB Temperature Sensor UTS-GP-T11 is a USB Thermometer. It is a fast ,accurate and reliable method for measuring temperature.

 The  UTS-GP-T11 can be used with the UTS GUI, a windows desktop application for logging , visualization and real time graphs. A simple versatile command set is also available to integrate into existing or bespoke systems.

Ideal for hobbyist and commercial applications it is fast and IP67 rated with engineering support and code examples for easy integration.
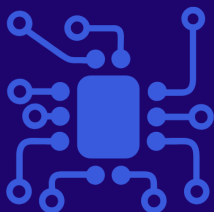Filtering logic as standard with additional advanced filtering mode available.

Compatible with Windows , Linux and of course Raspberry Pi.

| Probe |
| --- |
| ● Cable lengths 0.6m,1.5m<br>● IP67 Waterproof<br>● Probe dimensions 15*6mm<br>● Small probe area for fast response<br>● Operating temp of the probe $-10^{0}$C to $110^{0}$C |

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| Product Highlights: | Applications include, but not limited to: |
|---|---|
| -50°C to +110°C probe temperature range | Server Rooms |
| ± 0.5°C Accuracy between 0°C and 45°C | IoT Projects |
| 0.5°C resolution (standard) | Chamber and fridge monitoring |
| Windows and Raspberry Pi compatibility | Weather Station |
| ASCII command set | Temperature control |
| 140 samples per second | PC/ Raspberry Pi temperature monitoring |
| Sophisticated input filtering circuitry | Thermostatic controls |
| Advanced filtering mode | Engineering and Development |
| Full application and engineering support | Aquarium, vivarium and formicariums |

**Specification:**

| USB Series - USB Temperature Sensor - UTS-GP-T1-X | |
|---|---|
| Sensor technology | NTC |
| Output Versions | USB serial |
| Supply voltage | 5Vdc (USB port) |
| Temperature ranges | -10 °C to +110 °C |
| Accuracy | ±0.5 °C (0°C to 45°C) |
| USB operating temperature | 0 °C to +50°C |
| Probe Media temperature | -50 °C to +110 °C |
| Storage temperature | 0 °C to +50 °C |
| Probe material | TPE |
| Permissible media | Non aggressive/corrosive |
| Cable sheath material | TPE |
| Environmental Protection | IP67 |
| Sample Speed | 7ms (max) 200ms with graphical user interface |
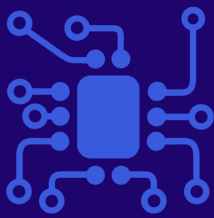
**Dimensional Drawings:**
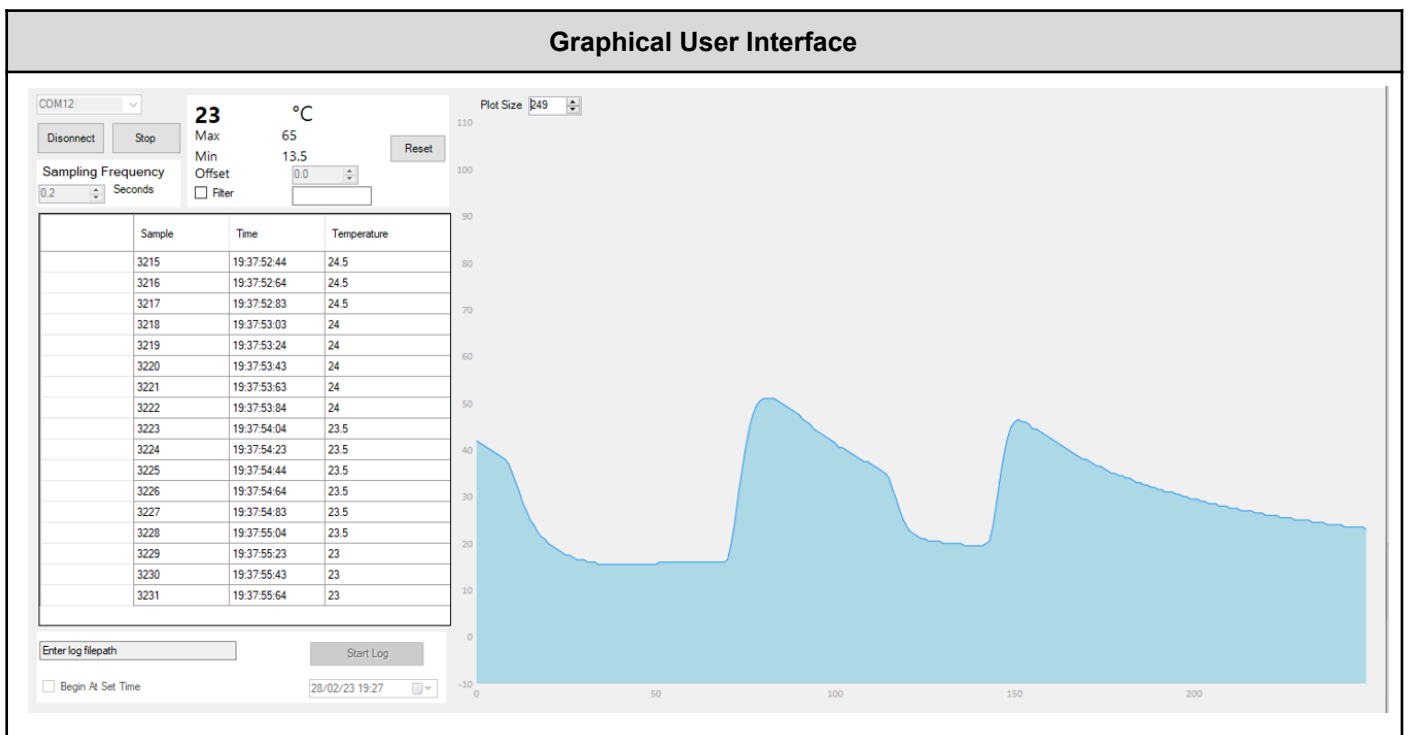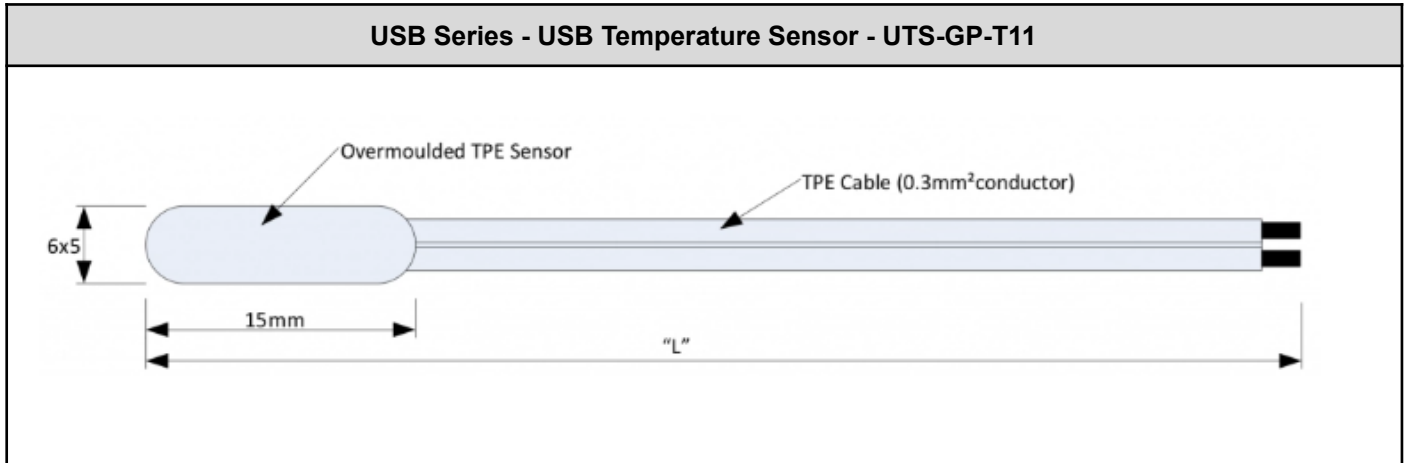
| USB Series - USB Temperature Sensor - UTS-GP-T11 |
| --- |



| Graphical User Interface |
| --- |



| Part Numbering system |
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UTS-GP-T11-XX

- XX = Cable length 6 = 0.6m 15 = 1.5.
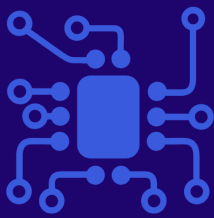
| UTS Command Set: UTS-GP-T11-x | | | |
|---|---|---|---|
| **Command Ascii** | **Response** | **# Data Bytes** | **Description** |
| RX201 | ASCII string | 10 | Poll Temperature Output Value Turn Stream OFF |
| RX202 | ASCII string | 10 | Stream Temperature Output Value Stream ON |
| RX301 | ASCII string | 22 | FW and HW Version of UTS Device |
| RX501 | NA | NA | Enter advanced filtering mode 10Hz |
| RX502 | NA | NA | Enter standard filtering mode 140Hz |

| Command Summary |
|---|

**Communication specification**
115200 Baud, 8 Data bits, , 1 Stop Bytes, Parity None

**RX201**
Poll Temperature Output Value Turn Stream OFF
Command : RX201\r\n
Return :1OK\r\n 24.5<\r><\n>

**RX202**
Stream Temperature Output Value Turn Stream OFF
Command : RX201\r\n
Return :2OK\r\n 24.0<\r><\n>

**RX301**
Request Firmware and Hardware version
Command: RX301
Return : FW-DtvX.X\r\nHW-vX.XXX\r\n
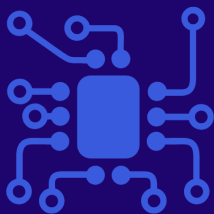
**RX501**
Avdanced Filtering command
Command: RX501
Return : NA

**RX502**
Standard Filtering command
Command: **RX502**
Return : NA

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| Software |
|---|
| The UTS-GP-T11-xx can be used with custom applications such as C# , Visual Basic or Python projects or the downloadable UTS GUI that has a real time graph , minimum and maximum indication and a logging function.<br><br>When used with a windows PC used for the first time a driver may need to be installed for the PC to recognize the device. |