



UL01

Description

The Uberlogger is a simple yet powerful datalogger which logs 8 analog inputs and 6 digital inputs to a CSV on an SD card. The analog channels can be set as NTC input or normal analog input, with different voltage ranges of -10V / +10V or -60V / +60V at max 16 bits.

- 8 Analog or NTC inputs (selectable)
- 6 digital inputs
- Support for external trigger and external control through digital inputs
- Log frequencies: once per hour, once per 10 minutes, once per 5 minutes, once per minute, once per 10 seconds, 1 Hz, 2 Hz, 5 Hz, 10 Hz, 25 Hz, 50 Hz, 100 Hz, 250 Hz
- ADC resolution 12-bit or 16-bit
- Voltage range of +/-10V or +/-60V (selectable)
- Works via USB-C powered port (300 mA max.)
- 2.4GHz Wi-Fi connection modes
 - Access point
 - Client mode (connect to access point)
 - Both modes can be active simultaneously
- Web interface
 - Max. 1 Hz live data view of the channels
 - Start / stop logging
 - Configure settings
 - Optional password protection for the web interface
- Two physical buttons: one for starting and stopping logging, one to reset
- 2 LEDs: log status (green) and error state (red)
- REST API control for configuring and controlling the logger and retrieving data
- RTC clock to keep track of time which is also stored in the CSV as UTC time (no time zone supported)
 - Time will be synced to your PCs time through the web interface
 - A lithium cell is included in the board to keep time running when power is off.
- 1x USB-C cable, 1x 32GB micro SD card and 8x NTCs included
- Firmware upgradable for new features

Electrical specifications

Parameter	Description	Value
Electrical characteristics		
Supply voltage		4.75 V ... 5.25 V
Supply current		300 mA (max)
Analog input characteristics		
Input voltage range	Selectable	-10 V ... +10 V -60 V ... +60 V
Input impedance		100 kOhm (min)
Input accuracy		+/-0.5%
ADC resolution	Selectable	12-bit 16-bit
Analog filter	Analog anti-aliasing filter cut-off frequency (1st order)	5 kHz
Digital filter on analog inputs	Digital anti-aliasing filter cut-off frequency (1st order) Active in 16-bit mode only	$f_{\text{sample}}/2$
Averaging	Averaging values over time using IIR filter	Only for $f_{\text{sample}} < 1$ Hz
Input protection	Over-voltage protection	clamped
Digital input characteristics		
Input voltage range		-60 V ... +60 V
Input impedance		100 kOhm
Analog filter	Analog de-bounce filter cut-off frequency (1st order)	100 kHz
Input LOW	Voltage to read digital LOW (false)	1.0 V
Input HIGH	Voltage to read digital HIGH (true)	2.0 V
Input protection	Over-voltage protection	Clamped
Connectivity/interfaces		
NTC type		10 kOhm @ 25 °C, beta=3950
NTC connector		JST-XH 2.5 2p
Wi-Fi		802.11 b/g/n
Wi-Fi supported frequencies		2.4GHz
Wi-Fi security		WPA2/WPA3 personal
USB-Port-C		Only used for power
SD-Card		MicroSD Up to 32GB FAT only Max file size 4GB
Mechanical		
Outer dimensions UL01		148x77x23 mm (approximately)
Enclosure type UL01		Board stack with descriptive silkscreen