



The Yocto-Thermocouple device is a USB temperature sensor. It lets you perform via USB instant temperature measurements on two thermocouple inputs, as well as record the measures on its internal flash for later retrieval when connected again by USB. Thanks to the use of thermocouples, this tiny module can measure the temperature of liquids, small objects, food, mechanical pieces, ovens, and so on. It is very reactive to quick temperature changes (detection in 30 [ms], stable measure in 100 [ms]).

The use of thermocouples makes it easy to measure a temperature away from the module. However, if you need to measure something dozens of meters away, you can avoid to use an expensive long thermocouple by moving the thermocouple inputs further away from the USB connector: simply split the board into two parts and solder a 4-wire cable on the designated pads.

This device ships with two 50cm fine-wire twisted-pair thermocouple cables type K, which can be used to measure temperatures between -75°C and 260°C (PFA insulated, measure point non-insulated). To use a wider measuring range with the device, you can use any of the more sophisticated thermocouples that you can find on a specialized shop.

Specifications

Product ID	THRMCPL1
USB connector	micro-B
Width	20 mm
Length	45 mm
Weight	4.5 g
Sensor	Type K,E,J,N,R,S,T
Channels	2
Refresh rate	5 Hz
Accuracy	1°C 1%
Sensitivity	0.1°C
IEC protection class	class III
Normal operating temperature	5...40 °C
Extended operating temperature [‡]	-30...85 °C
Max. temperature	1768 °C
Min. temperature	-200 °C
RoHS compliance	RoHS III (2011/65/UE+2015/863)
USB Vendor ID	0x24E0
USB Device ID	0x0028
Suggested enclosure	YoctoBox-Short-Thick-Black
Harmonized tariff code	8542.3190
Made in	Switzerland

[‡] The extended temperature range is defined based on components specifications and has been tested during a limited duration (1h). When using the device in harsh environments for a long period of time, we strongly advise to run extensive tests before going to production.



For more information: www.yoctopuce.com/EN/products/yocto-thermocouple