Otii Arc

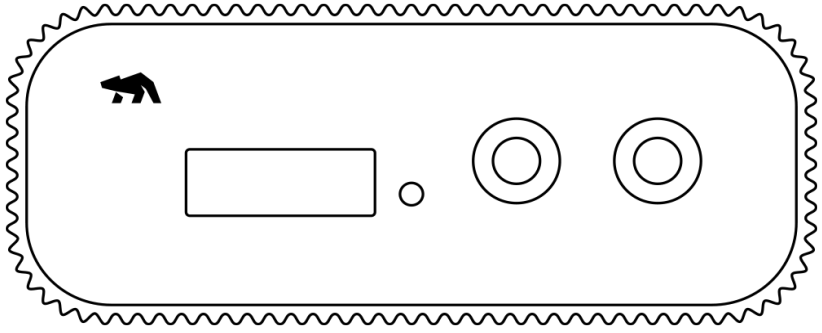
Product Specification

Otii Arc comes with the featured-packed standard Otii software. Made for hardware, firmware and software developers.

Otii Arc
Otii Arc is a small, portable power supply, a current and voltage measurement unit and a data-acquisition module. It can be powered by USB or by using an external DC-adapter. See technical specification below.
Otii is shipped with a USB A cable.

Otii desktop application
Otii Standard comes with a powerful and easy-to-use desktop application for Windows, Ubuntu & macOS. Use it to collect and analyze data from Otii Arc. It also exports the data to CSV.

Download the desktop application at https://www.qoitech.com/download



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Technical Specifications

	Min	Unit	Max
Operating Environment			
Operating environment	15 °C / 60 °F		25 °C / 77 °F
USB Power Supply[1]			
Output voltage (auto range)	0.5 V		3.75 V
Output voltage (locked to high current range)	0.5 V		4.2 V
Output voltage setting resolution		1 mV	
Output current		250 mA	
External 7.5 – 9 V Power Supply[2]			
Output voltage (auto range)	0.5 V		4.55 V
Output voltage (locked to high current range)	0.5 V		5.0 V
Output voltage setting resolution		1 mV	
Output current, max continuous[3]		2.5 A	
Output current, max peak[3]		5 A	
Programmable Current Sink (requires an Otii Battery Toolbox license)			
Sink current	0 A		2.5 A
Sink current, resolution		39 µA	
Sink voltage, USB power supply	0.85 V[4]		4.2 V
Sink voltage, external power supply	0.85 V[4]		5 V
Current measurement			
Accuracy		±(0.1% + 50 nA)[5]	
Sample Rate in ±19 mA range		4 ksps	
Sample Rate in ±2.7A range		1 ksps	
Sample Rate in ±5.0 A range		1 ksps	
Analog bandwidth (3 dB)		400 Hz	
Voltage measurement			
Total accuracy		±(0.1% + 1.5 mV)	
Sample Rate		1 ksps	
UART			
Bitrate	110 bps		5.25 Mbps

Digital I/O; GPO1, GPO2, TX[6]			
V_{IO} Expansion port operating voltage	1.2 V	VIO[7]	5 V[8]
V_{IL} Low-level input voltage			V_{IO} * 0.2 V
V_{IH} High-level input voltage	V_{IO} * 0.8 V		
I_{max} Maximum sink/source current			10 mA

ADC, Differential Analog/Digital Conversion pins ADC-, ADC+ [9]			
Voltage input	0 V		5 V
Shunt voltage range	-81.9175 mV		81.2 mV
Resolution		2.5 µV	
Accuracy		±(0.1% + 10 µV)	
Input impedance		220 kΩ	

ADC, Single Ended Analog/Digital Conversion pin ADC+			
Voltage input	0 V		5 V
Resolution		1.25 mV	
Accuracy		±(0.1% + 7.5 mV)	
Input impedance		830 kΩ	

SENSE, pins SENSE- and SENSE+			
Voltage input	0 V		5 V
Resolution		1.5 mV	
Accuracy		1%	
Input impedance		1 MΩ	

[1] USB power capacity and reliability in laptops and desktops greatly depend on host USB port/cable design.
[2] See list of recommended external power supplies and powered USB hubs at our FAQ
[3] Depends on chosen power supply. Otii Arc will monitor internal temperature and cut off if temperature limit is reached.
[4] Sink voltage can go below this specification if locked to high range. It is possible to go down to 0.5 V if the sink current is below 1.9 A. For currents below 19 mA, the measurement will have a lot more noise when locked to high range than in auto range.
[5] Up to 19 mA current in auto range, for higher currents, the accuracy is ±(0.1 % + 150 µA). Average > 1 s.
[6] See Nexperia SN74LVC8T245 for details.
[7] Expansion Port Digital voltage level is set by user in Otii SW.
[8] Maximum voltage will depend on your USB power supply and USB cable.
[9] See TI INA226 for details.

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Qoitech AB is a Swedish company bringing to market the most effective developer tools for visualisation, measurement and analysis of energy consumption of battery driven products. By enabling ease of use, our toolboxes help developers, throughout the stack, to develop for longer battery life, shorter development time and increased product quality.

Learn more at www.qoitech.com.