

By QOITECH



TECHNICAL SPECIFICATION

OPTIMIZE POWER USAGE IN IoT DEVICES

Qoitech AB is a Sony Group company bringing to market the Otii solution a comprehensive toolkit for energy optimization of devices within IoT, Internet of Things. Otii was envisioned by a team of developers at Sony Mobile Communications, leveraging twenty years' experience in developing energy optimized devices for the global telecom market. Otii launched in Europe in July 2017, and is one of the new businesses established within the Sony acceleration and incubation program in Europe. Otii is used by a growing number of developers committed to creating energy-efficient and sustainable IoT devices.

www.qoitech.com

FEATURES

	OTII SOLUTION	OTII ENTERPRISE LICENSE
General		
Quick Install On Three Platforms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All-in-one Measurement Unit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Measure		
Use Otii Arc	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Multiple Recordings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
High Dynamic Range In One Setting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Battery Simulation		<input checked="" type="checkbox"/>
Battery Profiling		<input checked="" type="checkbox"/>
Analyze		
View Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Zoom, Scroll & Select	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Statistics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Offset Recordings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Downsample	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Crop	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Share		
Save Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Open Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Export As Csv	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Logs		
Sync Recordings With Debug Logs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Offset Logs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Filter Logs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Import Logs		<input checked="" type="checkbox"/>
Automate		
Create And Run Scripts From Within Otii Using Lua		<input checked="" type="checkbox"/>
Control Otii From Other Systems Using Any Language (TCP Server)		<input checked="" type="checkbox"/>
Run From Command Line		<input checked="" type="checkbox"/>
Switchboard		<input checked="" type="checkbox"/>
Support		
Software Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hardware Repair & Maintenance (Excl. Shipping Costs)		<input checked="" type="checkbox"/>
Calibration Service (Excl. Shipping Costs)		<input checked="" type="checkbox"/>

SPECS

	Min	Typ	Max
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 Voltage Accuracy		±1%	
Output Current		250 mA	
EXTERNAL 7.5-9V 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 Voltage Accuracy		±1%	
Output Current, max continuous ⁽³⁾		2.5 A	
Output Current, max peak ⁽³⁾		5.0 A	
PROGRAMMABLE CURRENT SINK			
Sink current	0 A		2.5 A
Sink current, resolution		39 µA	
Sink voltage, USB power supply	0.85V ⁽⁴⁾		4.2V
Sink voltage, external power supply	0.85V ⁽⁴⁾		5.0V
CURRENT MEASUREMENT			
Accuracy		±(1% + 0.5 µA)	
Sample Rate in ±19 mA range		4 ksps	
Sample Rate in ±2.7 A range		1 ksps	
Sample Rate in 0 – 5 A range		1 ksps	
Analog Bandwidth (3dB)		400 Hz	
VOLTAGE MEASUREMENT			
Total accuracy		±(1% + 10 mV)	
Sample Rate		1 ksps	
UART			
Bitrate	9600 bps		4 M bps

SPECS

	Min	Typ	Max
DIGITAL I/O; GPO1, GPO2, TX ⁽⁵⁾			
V _{IO} , Expansion Port Operating Voltage	1.2 V	V _{IO} ⁽⁶⁾	5 V ⁽⁷⁾
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+ ⁽⁸⁾			
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 www.otii.com/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 0.5V if the sink current is below 1.9A. For currents below 19mA, the measurement will have a lot more noise when locked to high range than in auto range.
- 5) See Nexperia SN74LVC8T245 for details.
- 6) Expansion Port Digital voltage level is set by user in Otii SW.
- 7) Maximum voltage will depend on your USB power supply and USB cable.
- 8) See TI INA226 for details.

Otii helps companies create energy efficient apps and IoT devices to meet the increasing market demands for long-lasting products. Our state-of-the-art solution leverages on over fifteen years' experience in developing energy optimized smart devices for the global telecom market. The Otii system is a comprehensive toolkit for energy optimization of IoT devices.

It is easy to use, requires minimal setup, and lets developers measure and analyze energy usage at any stage of development. Otii is owned by Qoitech and is a part of Sony.

Learn more: www.qoitech.com

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