



TECHNICAL SPECIFICATIONS & USER GUIDE

CRIKIT V2 MAIN UNIT HARDWARE SPECIFICATION:

Revision: 0.1

Issue Date: 30/05/2018

Variant: No GPS

PHYSICAL

Dimensions: 123 x 19 x 28 mm
Weight: 240 g

ENVIRONMENTAL

Storage Temperature: -30 to 60 °C
Operating Temperature: -20 to 50 °C
Ingress Protection: IP65

ELECTRICAL

Charging Input Voltage: 4 to 6 V
Charging Current: 300mA
Sensor Supply Voltage: 3.3 V (Nominal)
Sensor Supply Current: 250 mA (Max)
Analogue Input Voltage: 0 to 10 V
Analogue Input Impedance: 490 kΩ
Digital Input Voltage: 0 to 3.6 V
UART Input Voltage: 0 to 5 V
UART Output Voltage: 0 to 3.3 V
I2C I/O Voltage: 0 to 3.3V

BATTERY CHEMISTRY & CAPACITY:

Chemistry: LiFePO4 (Lithium Iron Phosphate)
Capacity: 2200mAh
Nominal Voltage: 3.3V (Not user accessible)
Time Between Maintenance Charges: 5 years at 20 °C
Number of Messages Between Charges: 6000 (approx. at 20 °C)

INTERNAL SENSORS:

TEMPERATURE

Range: -30 to 60 °C
Resolution: 0.5 °C
Accuracy: ±1 °C

ORIENTATION

Range, Pitch: -90 to 90 °
Range, Roll: -180 to 180 °
Range, Yaw: -180 to 180 °
Resolution: 0.01 °
Accuracy, Pitch & Roll: ±10 °
Accuracy, Yaw: ±15 °
(Note: Yaw may vary from site to site due to hard iron effects)

GPS CHIP:

Dimensions: 16.0 x 12.2 x 2.4mm
Chip Type: U-Blox NEO-6 Module
Horizontal Position Accuracy: ± 2.5m
Velocity Accuracy: ± 0.1m/s
Heading Accuracy: ± 0.5 degrees
Power Consumption: 55mA
Power Supply Voltage: -0.5V to 2.0V

WIRELESS

COMMUNICATIONS:

SIGFOX

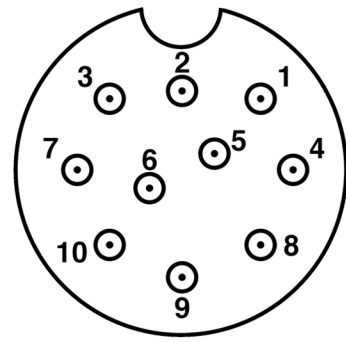
Sigfox Region: RCZ4
Tx Power: 20 dBm
Rx Sensitivity: -129 dBm

LoRaWAN

LoRaWAN Revision: 1.0.2
LoRaWAN Region: AS923
Tx Power: 14 dBm
Rx Sensitivity: -117 dBm

PIN CONFIGURATION:

1. GND
2. +5V Charging Input
3. +3.3V Sensor Bus Output
4. I2C - SCL
5. I2C - SCA
6. Interrupt Line (connect to GND to generate interrupt)
7. AT Mode Enable (connect to GND to enter AT mode)
8. Analogue Input
9. Serial - TX
10. Serial - RX



SETTING UP YOUR ENTO DASHBOARD:

1. Email your details to support@ento.co.nz to set up your account to access the dashboard
2. Once you've received your login details, login to the ENTO dashboard at: dashboard.ento.co.nz
3. If you have trouble logging in, or you want to change your password, contact us at the email listed above

INSTALLATION INSTRUCTIONS:

1. The Criket is mounted via two holes at either end of the device
2. When mounting the Criket, ensure that the main connector, and any external antennae are facing downwards
3. Ensure that the radio signal will not be obstructed by the objects in the environment (i.e. large metal objects)
4. Ensure that the Criket and any connections are not subjected to excessive forces once mounted

TO TEST SIGNAL:

In order for the device to accurately send and receive data, it has to be deployed in a LoRa or Sigfox coverage area.

1. Using the test switch, activate the Criket to send data.
2. If there is suitable coverage, data will be received, and confirmed on the dashboard.

LoRa Coverage: <http://www.sparkdigital.co.nz/solutions/mobility/iot/loracoverage/>
Sigfox Coverage: <https://www.sigfox.com/en/coverage>

WARNINGS & NOTICES:

Do not expose Criket to temperatures above 60°C

Do not deploy Criket in a corrosive environment

Do not exceed electrical and environmental specifications

WARRANTY INFORMATION

Ento warrants to every user that our devices will perform to its specified ratings and will be free from defects.

Ento will replace or repair any device, if the components (including casing) do not perform to the specified level, within 12 months from purchase date. Batteries are rechargeable and will only be replaced if they are defective. Excluded is failure due to improper use of the device, including damage due to being dropped, incorrect installation and use that exceeds electrical and environmental specifications.

CUSTOMER CARE & TECHNICAL SUPPORT:

For Customer Support and Troubleshooting Tips:

Email: support@ento.co.nz

Visit ento.co.nz for more information

Criket® is a registered trademark of ENTO.

