Block Diagram

Inputs

100 Hz Sinusoid
±5-50 mV

500 Hz Sinusoid
±10-150 mV

DC Battery Input
0-3.7 V

VBUS Input
USB-C Cable

Button 1 Press
for Saving RMS
Array

Button 2 Press
for sending
RMS array

Firmware

ADC Channel
1

ADC Channel
2

Calculate RMS
for Channels

Calculate PWM
Period for Channels

Read ADC Channel
for DC

Measure RMS Data
every second for
both AC Channels

Detect VBUS
On or off

Outputs

LED 1 Brightness
Modulated

LED 2 Brightness
Modulated

Bluetooth BAAS
GATT on Phone

LED 3 1 Hz Blink
& No Measurement
if VBUS High

Bluetooth Notification
for RMS Data