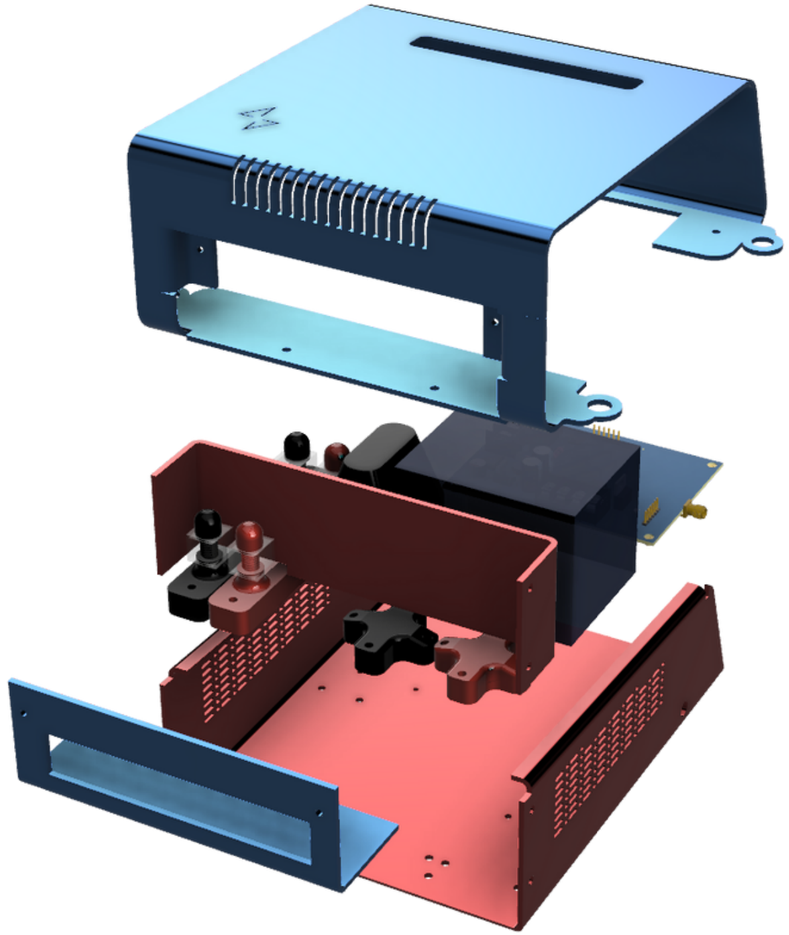
Switch

SWITCH ELECTRIC LTD

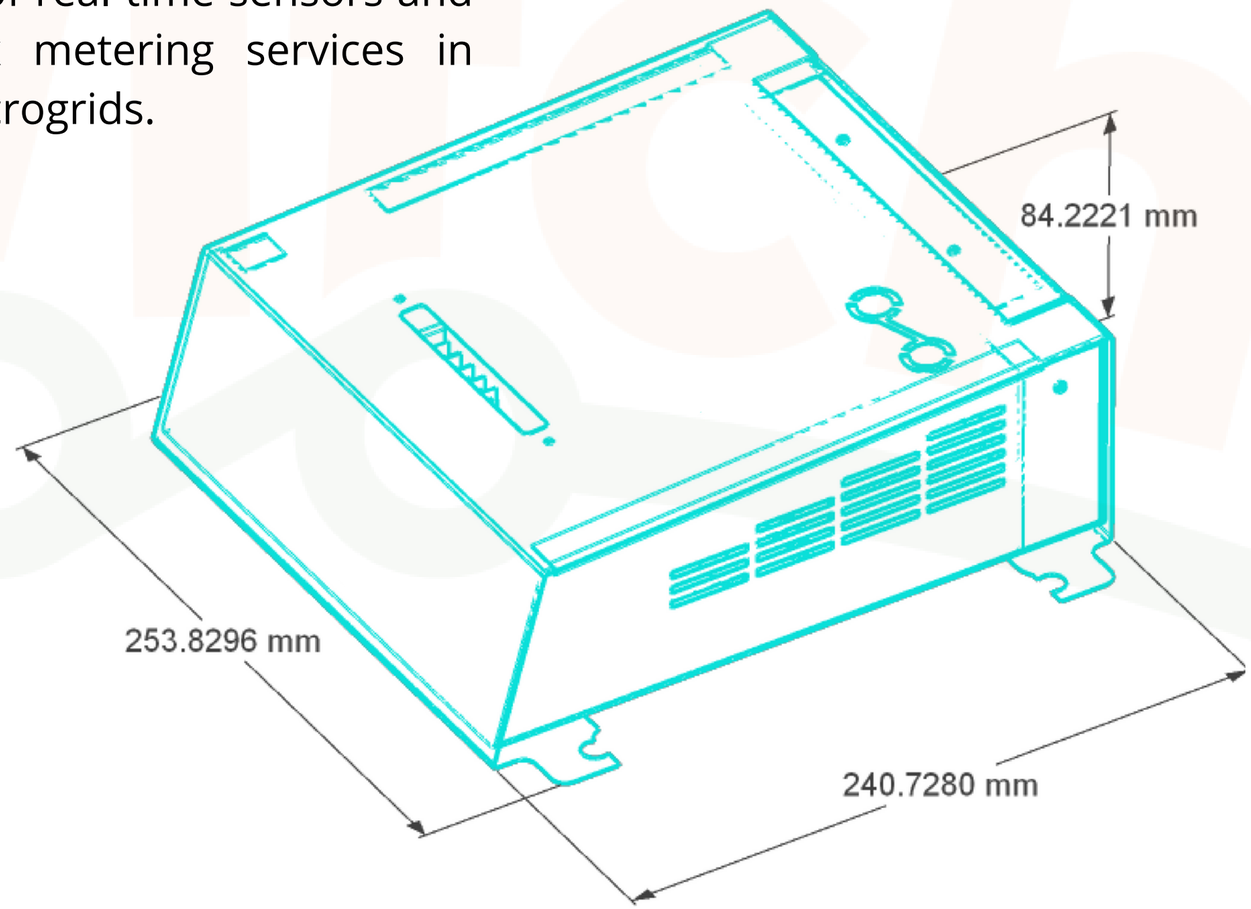
Maxwell 1.0.6



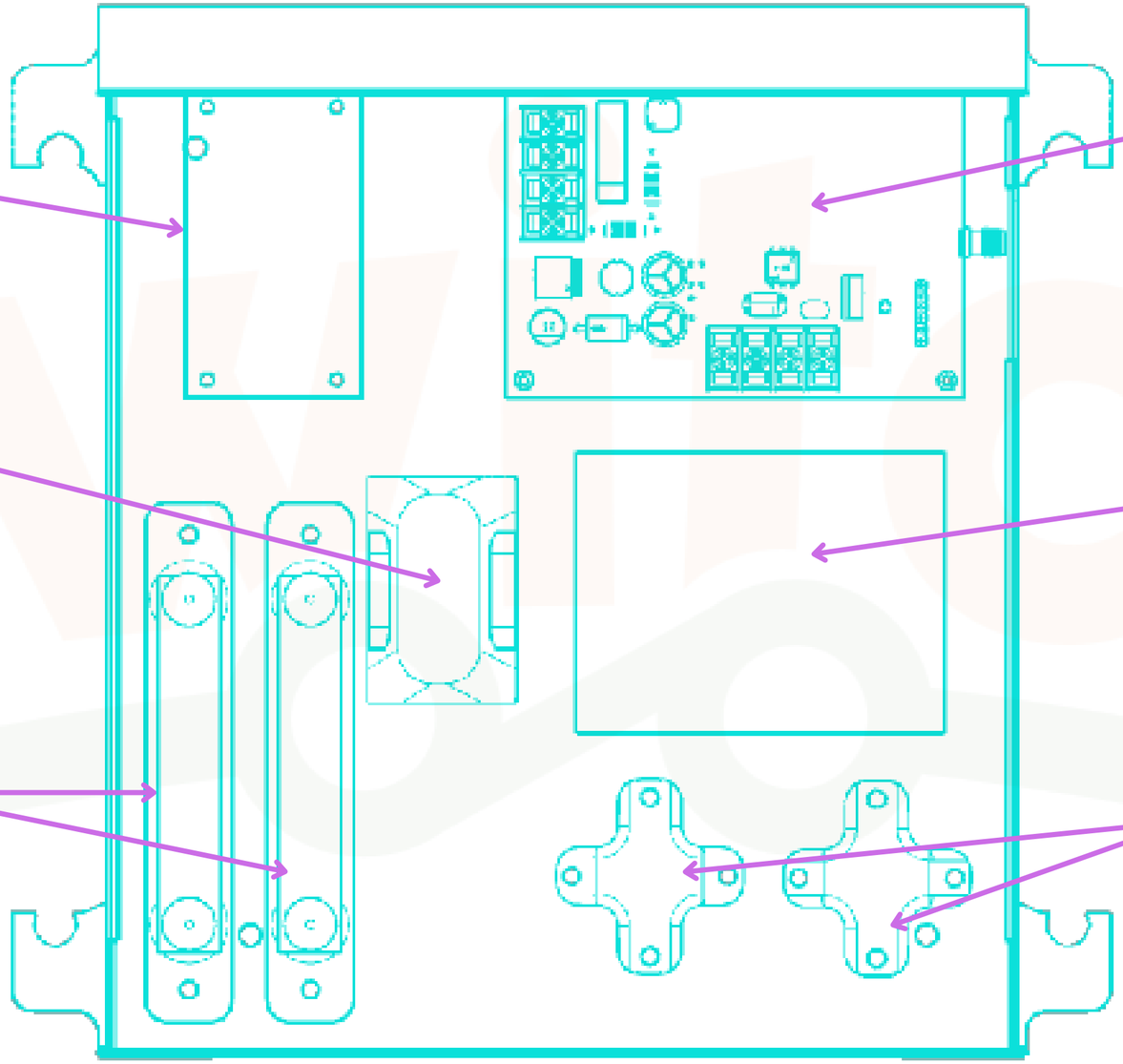
Overview

Maxwell Smart Meter is a smart metering / energy monitoring device, designed to , built on the power of real-time sensors and web3 technologies to enable complex metering services in decentralized energy systems such as microgrids.

- ED25519 digital signature authentication
- -10°C to + 55°C operating temperature
- Instantaneous current measurement
- Programmable data publishing rate
  - default: every 900 seconds
- True RMS voltage measurement
- Real-time clock synchronization
- 120A maximum current rating
- Remote controllable relay
- Active energy calculation



Components



Power Supply

12V 8A AC-DC Switching power supply module

Current Sensor

Split Core Current Transformer Current Sensor

Input Terminals

150A Block Bus Bar, 300VAC, 6 terminals per block

Circuit board

4 layered PCB STM32WLE5CCU6 micro-controller

...see following page for more

Electromechanical Relay

12V 24VDC 220VAC Relay
120A Current Rating

Output Terminals

150A Block Bus Bar, 300VAC, 2 terminals per block

Circuit Board

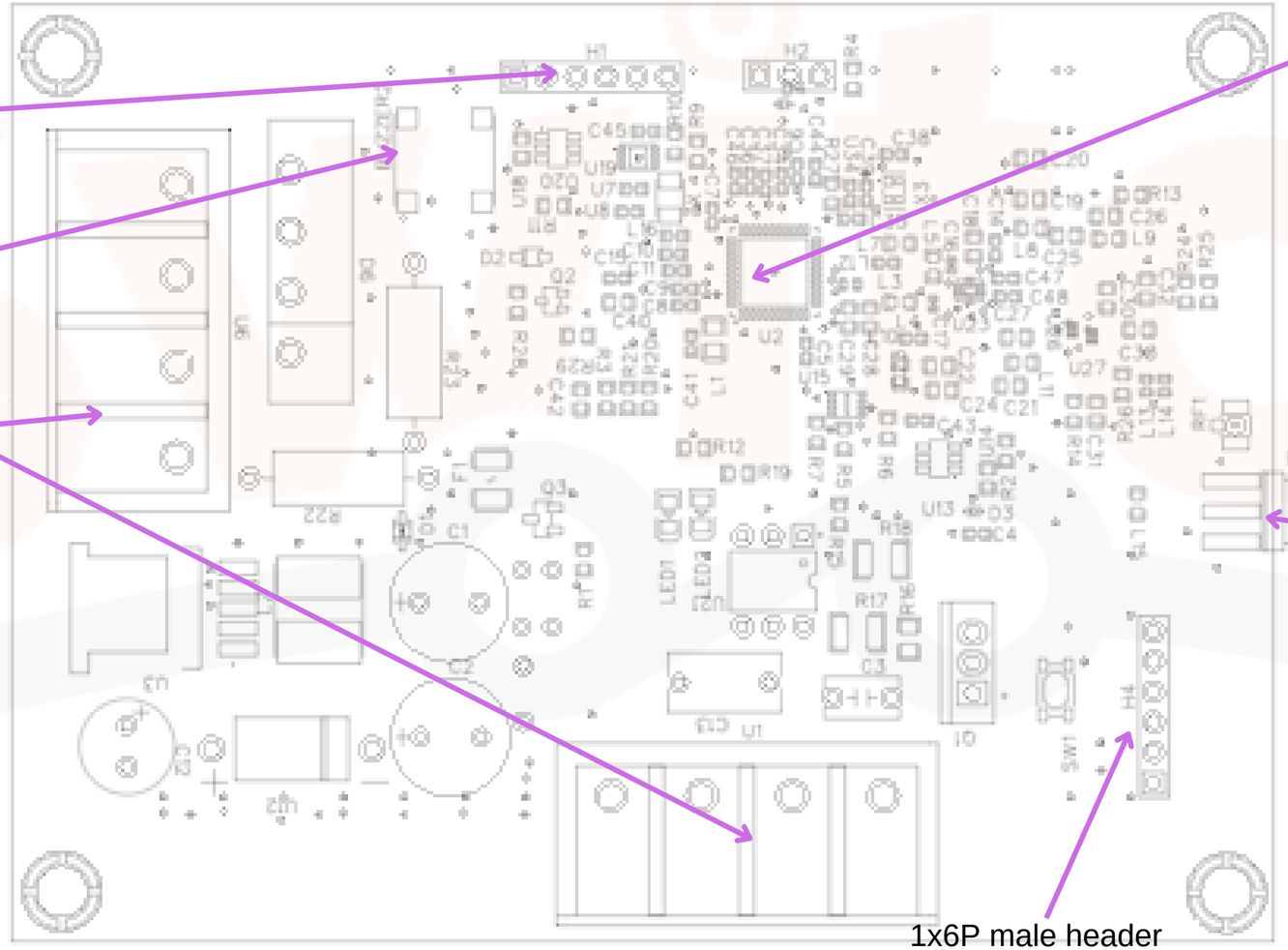
SWITCH ELECTRIC LTD

1x6P male header (UART, I2C interface)

80dB Magnetic SMD buzzer

1x4P Barrier Terminal Block

1. 12VDC input
2. Relay coil AC input
3. Relay coil AC output
4. current sensor input



1x6P male header (JTAG interface)

Microcontroller

- STM32WLE5CCU6, 32-bit Arm® Cortex®-M4 CPU
- 32MHz Clock speed
- 256KB internal STM Flash, 16MB external Flash
- **Interfaces**: JTAG, UART, I2C
- **Peripherals**: LEDs, Reset Button, Active Buzzer

Female RF Connector

- Communication Frequency: 915MHz, Antenna gain: 5dbi, Antenna Type: SMA Male Antenna
- Compliant with the following radio frequency regulations such as ETSI EN 300 220, EN 300 113, EN 301 166, FCC CFR 47 Part 15, 24, 90, 101 and the Japanese ARIB STD-T30, T-67, T-108

SWITCH ELECTRIC LTD