MAXWELL 1.04

SPECIFICATIONS DOCUMENT

WEB3-NATIVE ENERGY METERING

Maxwell is an IoT device, designed and built by the engineering team at Switch Electric to harness the power of real-time sensors and web3 technologies–allowing us to execute complex metering services in decentralized energy systems such as microgrid. The smart meter collects and aggregates over 3,600 data points per minute across a variety of parameters including energy usage, voltage, frequency, current and power factor. The Maxwell is also designed to be an versatile and can be openly adapted for many other use cases outside of energy distribution and retail.

CONTACT

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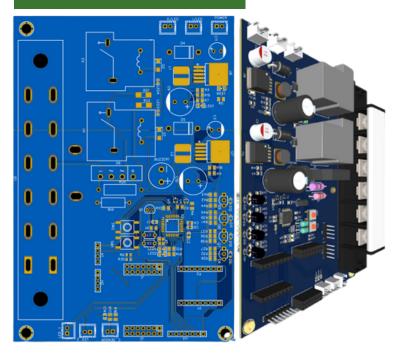www.whyNotSwitch.com

Technical specifications

Operating Temperature	-25℃ to +55℃
Data transfer	semtech sx1276 (LoraWAN)
Maximum current	100 amps
Sensing/Measurement	True RMS, 0.01sec sampling rate
Frequency/Input voltage	50-60 hz / 100-240v
Digital signature scheme	Secp256k1 &SHA256 digest
Micro controller unit	STM32G4A1KE / ATMEGA328
Real-time clock	Quartz crystal oscillator 16MHz
Power Consumption	0.025 W
communication range	3kM (line of sight)

Circuit Board Design

Compatible Technologies

w3bstream
helium
Chainlink
EVM
zkSync
(In development)