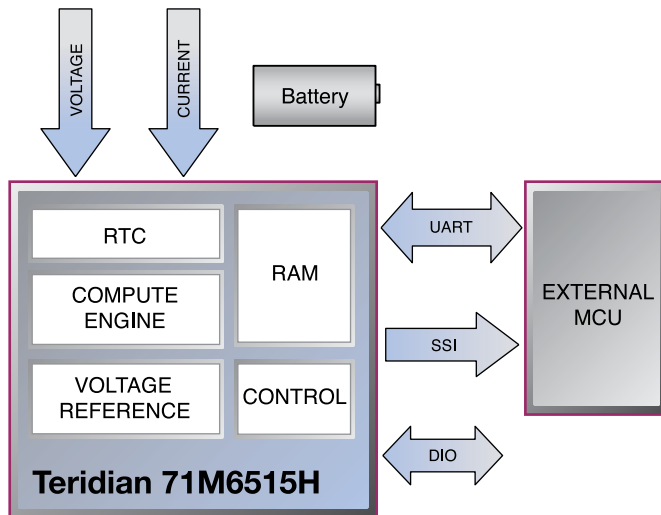


71M6515H

Teridian Semiconductor's Power Meter ICs

The 71M6515H is a high accuracy power meter IC suitable for four quadrant 3 phase applications. It utilizes Teridian's proprietary Single Converter Technology™ with a 21bit 2nd order sigma-delta A/D converter with six analog inputs, thermally compensated high precision reference and programmable compute engine resulting in exceptional performance. An internal RTC and battery backup reduce total BOM for Industrial or Commercial TOU meters.

71M6515H block diagram



The 71M6515H interfaces with an external processor through UART and synchronous serial interfaces (SSI) and supports transfer of measurement results as well as raw samples for external signal processing. Teridian Semiconductor's development tools include a PC based host emulation program with an easy to use graphical user interface.



Applications

- Industrial Meters
- Commercial Meters

Features

High Accuracy

- ❖ < 0.1% WH accuracy over 2000:1 range
- ❖ Exceeds IEC61036/IEC62053/ANSIC12.20 specifications
- ❖ Precision ultra-stable voltage reference deviates less than 10ppm/°C from spec
- ❖ Single converter technology reduces crosstalk and power consumption
- ❖ Six sensor inputs-VDD referenced
- ❖ Auxiliary analog input(VX) for A/D Converter
- ❖ -90dB THD max
- ❖ Digital temperature compensation
- ❖ Measures WH, VARH, VAH, Vrms, Irms, and load angle on each phase for 4 quadrant metering
- ❖ Up to 4 low Jitter outputs display net WH, net VARH, VAH, or imported data from host
- ❖ One set of calibration data for 47 to 63Hz line frequency
- ❖ Broad phase compensation (± 7 deg)

Battery Backup

- ❖ Protects accumulated data and powers real time clock during power supply outage
- ❖ Compatible with Li-ion, NiCd, or super-capacitor
- ❖ Battery backup current is less than 4uA

External Data Interface

- ❖ UART Host Interface
- ❖ 8 general purpose I/O pins
- ❖ 5 or 10MHz High speed synchronous serial output for DSP interface
- ❖ IRQ output signal for alarms and end of measurement intervals
- ❖ Alarms on Voltage sag, Over voltage, Over current and Excess voltage offset

Low System Cost

- ❖ Power Consumption 30mW @3.3V, 6.6uW battery backup
- ❖ Real time clock for time of day functions
- ❖ Built in Power fault detection
- ❖ Single 32kHz crystal timebase
- ❖ Single supply operation (3.3v)
- ❖ 64-lead LQFP package

Ordering Information

| PART DESCRIPTION | ORDERING NUMBER | PACKAGE MARKING |
|---------------------------------------|-----------------------|---------------------|
| 71M6515H 64-Pin LQFP | 71M6515H-IGT | 71M6515H-IGT |
| 71M6515H 64-Pin LQFP Lead-Free | 71M6515H-IGT/F | 71M6515H-IGT |



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