

For Poly-phase Meters, 0.1% & 0.5% Accuracy



Description

The 71M6533 is Teridian's 3rd generation poly-phase metering SOC with a 10MHz 8051-compatible MPU core, low-power RTC, FLASH and LCD driver. Teridian's patented Single Converter Technology[®] with a 22-bit delta-sigma ADC, seven analog inputs, digital temperature compensation, precision voltage reference and a 32-bit computation engine (CE) supports a wide range of metering applications with very few external components.

The 71M6533 adds several new features to Teridian's flagship 71M6513 poly-phase meters including advanced power management with <math><1\mu\text{A}</math> sleep current, 4KB shared RAM and 128KB FLASH which may be programmed in the field with new code/data during meter operation. Higher processing/sampling and larger memory offer a powerful metering platform for commercial and industrial meters with up to class 0.2 accuracy.

A complete array of ICE and development tools, programming libraries and reference designs enable rapid development and certification of meters that meet all ANSI & IEC electricity metering standards worldwide.

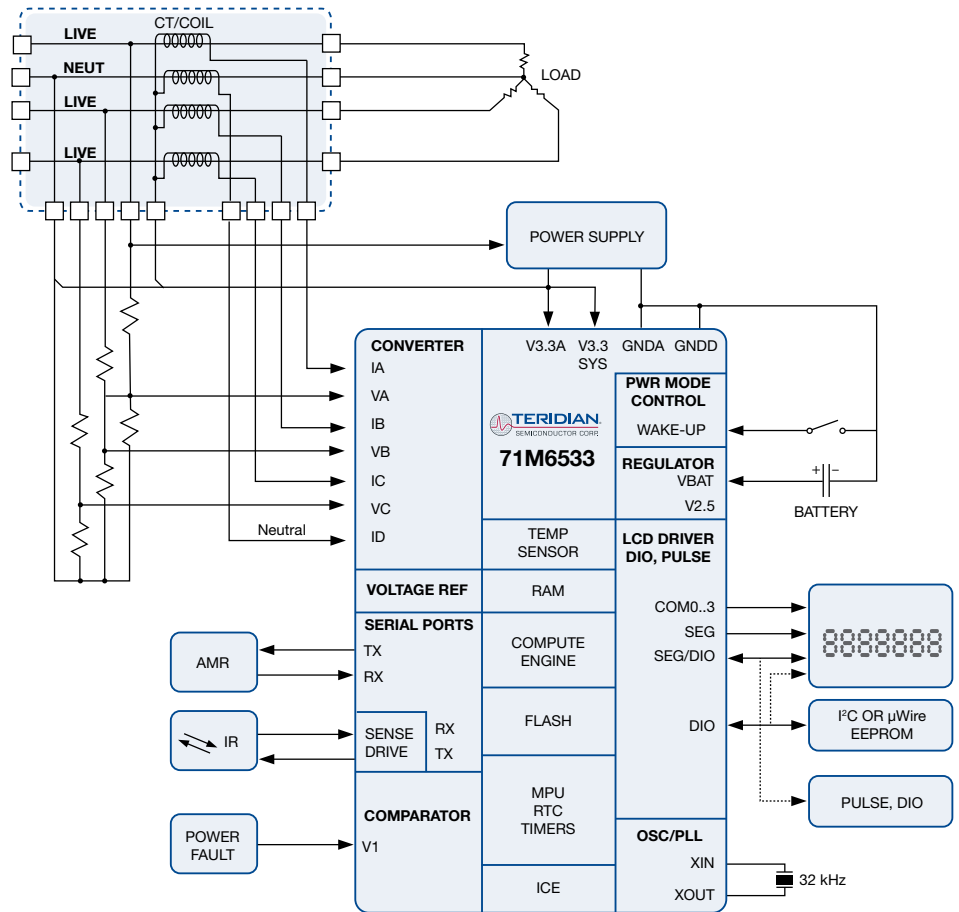
KEY FEATURES	KEY FEATURES
> Accuracy of over 2000:1 range < 0.1% – 71M6533H < 0.5% – 71M6533	> Three battery modes: Brownout mode (300uA), LCD mode (11uA), and Sleep mode (0.5uA)
> Exceeds IEC62053 / ANSI C12.20 standards	> Flash security
> Seven (7) sensor inputs supporting optional neutral current measurement	> In-system program update
> High-speed Wh/VARh pulse outputs with programmable width	> LCD Driver: 4 common segment drivers, up to 57 selectable segments
> 128KB Flash memory, 4KB RAM	> 6 dedicated plus 33 multi-function DIO pins
> Up to four pulse outputs with pulse count	> 8-bit MPU (80515), up to 10 MIPS
> Four-quadrant metering	> RTC for time-of-use functions
> Phase sequencing	> Hardware watchdog timer
> Line frequency count for RTC	> I ² C/Microwire EEPROM I/F
> Digital temperature compensation	> SPI interface
> Independent 32-bit compute engine	> Two UARTs for IR and AMR
> 40-70Hz line frequency range with same calibration, phase compensation ($\pm 7^\circ$)	> IR driver with modulation
> 26mW typical consumption @ 3.3V	> Industrial temperature range
> Wakeup pin and Wake-on-Timer	> 100-pin lead-free LQFP package



Applications

- > Industrial, commercial, and grid meters, 0.1% & 0.5% accuracy

Block Diagram



Ordering Information

PART DESCRIPTION	ORDERING NUMBER
71M6533 100-pin LQFP, Lead Free, 0.5% accuracy	71M6533-IGT/F
71M6533H 100-pin LQFP, Lead Free, 0.1% accuracy	71M6533H-IGT/F
71M6533 100-pin LQFP, Lead Free, 0.5% accuracy, Tape & Reel	71M6533-IGTR/F
71M6533H 100-pin LQFP, Lead Free, 0.1% accuracy, Tape & Reel	71M6533H-IGTR/F