Chip Set for Polyphase Electricity Metering Utilizing Capacitive Isolation

Metrology Processor supports up to four isolated remote ICs

SY7T625 Metrology Processor

Isolated AFE interface supports up to four compatible Silergy isolated remote ICs (SY7M007)

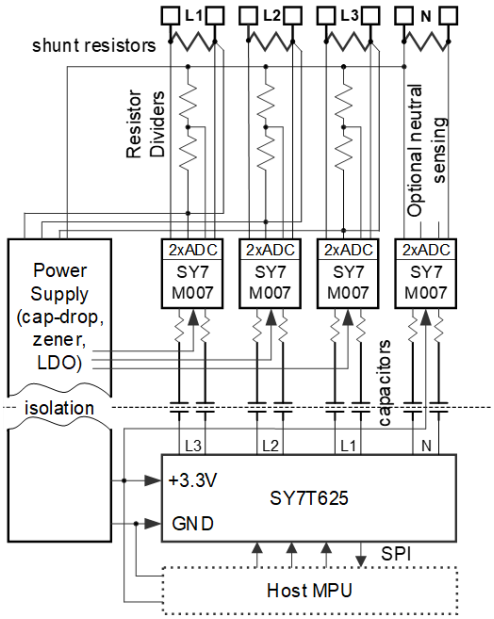
Powerful 24-bit Compute Engine with 20MHz clock frequency, supported by accelerators for multiply, divide, and square root operations

Factory-programmed or field programmable with Silergy provided code images that provide a wide array of metrology data (active, reactive energy, Vrms, Irms, frequency, etc.)

Flexible and fast calibration

SPI host interface, up to 10MHz

Two pulse outputs and 10 additional digital I/O pins



SY7M007 Isolated Remote

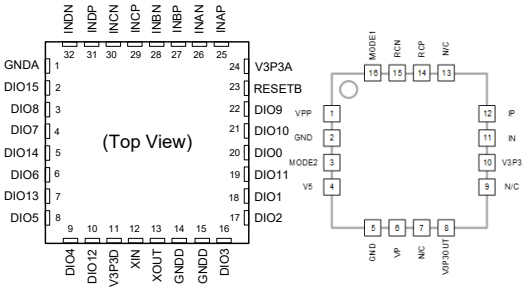
Dual delta-sigma ADCs with pin-selectable gains and 4.5kHz effective sample rate, ideal for shunt sensors

Capable of ±0.1% Wh accuracy over 5,000:1 current range

On-chip digital temperature sensor and 5V-to-3V LDO

Flexible power-supply options

Capacitors can be implemented in PCB copper



SY7T625 SYM007

Part Number	Supply Voltage Range	Supply Current (typ)	Package	Features
SY7T625	3.0V—3.6V	12mA	QFN32	Metrology Processor supports up to four dual-channel remotes
SY7M007	3.0V—5.0V	2mA	QFN16	Dual-channel precision remote IC, built-in voltage regulator and temperature sensor

High Accuracy - Space Saving - Easy Design - Robust Performance

Silergy's capacitive remotes simplify Electricity Meter design