



**MELFAS Inc.**

## **MIT-300 Datasheet**

Micro-controller IC for advanced In-Cell Touch Sensing

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### **Features**

#### **• Embedded MCU**

- Cortex-M3
- WIC included
- JTAG-DP and SW-DP included

#### **• Embedded DSP**

- Dedicated DSP blocks are included

#### **• Embedded Oscillators**

- Main Oscillator (20~72MHz configurable)
- Low power Oscillator (1~6MHz configurable)

#### **• Clocks**

- Main clock can be fed from either main oscillator or low power oscillator
- Any clocks can be selectively gated for power saving in normal operation mode
- All clocks can entirely be cut in sleep mode

#### **• Power saving modes**

- 2 power saving modes are supported
- Restricted power saving and quick wakeup time in Light sleep mode
- Maximum power saving and limited wakeup source and slower wakeup time in Deep sleep mode

#### **• Power consumption**

- Standby : 50uA
- Active : 12mA

#### **• Embedded Memories**

- 128KB embedded flash
- 32KB SRAM for system memory
- 32KB SRAM for stepping stone memory
- 12KB SRAM for frame memory

#### **• Peripherals**

- 1 I2C Slave
- 1 SPI Master
- 1 SPI Slave
- 24 GPIOs
- 4 Timers, 2 Watchdogs
- DSP

#### **• Interfaces**

- I2C Slave for Host interface
- SPI Slave for Host interface
- SPI Master for data transmission
- JTAG for debugging
- GPIO for interrupt or wakeup signal

#### **• Power supply**

- 1.8~3.3V main supply
- 2.5~3.6V supplementary supply
- 2 ways to feed 1.2V digital core supply
  - Using internally generated LDO output
  - Using external supply and disabling the internal LDO

#### **• Flash programming**

- ISC using I2C Slave
- ISC using SPI Slave
- Flash programming by JTAG is supported

#### **• Package**

- UQFN 32ld 4x4x0.5T, 0.40mm pitch

#### **• Applications**

- Low power MCU optimized for touch data processing

Datasheet (REV. 0.6)

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