

Low-power Smart Meter ASIC

FM331x Serial

Main Features

- Operating voltage range: 2.0V ~ 5.5V
- Operating temperature range: -40 °C ~ 85 °C
- Built-in 16bit Flip80251 MCU core
- Built-in LCD / LED driver circuit, Upper to 4 COM 、6COM、8COM
- 128Kbytes FLASH ROM, 4Kbytes xRAM
- Built-in low-power consumption real-time clock (RTC) with temperature compensation
- Built-in 4-way independent hardware UARTs, supports the function of infrared modulation output and receive signal capture (the baud rate adaptive can be realized)
- Built-in 2-way independent hardware 7816 protocol interface That can connect to the CPU Card & ESAM module directly。
- Built-in 1-way I2C interface, that can connect to EEPROM directly.
- Built-in 1-way SPI interface
- Built-in POR, BOR and LVD circuit
- Built-in 11-bits ADC channels
- Support various working mode (sleep/stop/normal mode)that can meet the different power requirements.

FM331x family's Advantage

- Built-in LCD driver circuit, help you save one **LCD Driver** chip.
- Built-in low-power hard Real-Time clock with temperature compensation circuit, help you save one **Real-Time Clock** chip.
- Built-in 4 channel hardware UARTs interface, easily designed to interface with infrared, RS485 and PLC.
- Built-in 2 channel hardware 7816 protocol interface, easily designed to interface with CPU cards and ESAM (pre-pay application, general MCU doesn't have this interface)
- Built-in 1 channel I2C hardware interface, easily designed to interface with EEPROM
- Built-in 1 channel SPI hardware interface.

Typical applications

Single-phase low cost LCD power meter

State Grid Remote Control & Local Prepay Smart Meter(New Spec)

Single-phase Contactless CPU card prepaid Smart Meter

Single-phase Keypad/STS Prepaid Electricity Meter

IEC62056 Power Meter