
20-Bit $\Sigma\Delta$ ADC with 8-bit Microcontroller

Features

- 2.2V to 3.6V operation voltage range
- 8-bit CISC architecture microcontroller
- 4Kx16 Bytes MTP with 32-word Information data
- Advanced multi-mode power management
- Support multi-clock sources
 - Internal 12MHz HSRC
 - Internal 32KHz LSRC
 - External crystal oscillator
- System manager controller
- External vector interrupts for interrupt controller
- Real-time clock with programmable alarm control
- Digital interfaces
 - I2C x1
- 1CH SE ADC I/O Channels
- Integrated temperature sensor
- Analog peripheral function
 - Excitation current DAC
 - Rail-to-rail comparator
 - Hysteresis comparator
 - LVD and LVR functions
 - Rail-to-rail operational amplifier
- 16 GPIOs with multi-Configurable modes
- IR remote control
- Multi-function ALU (MFA)
- -40 ~85°C operation temperature
- Package Type
 - TSSOP-20L

Applications

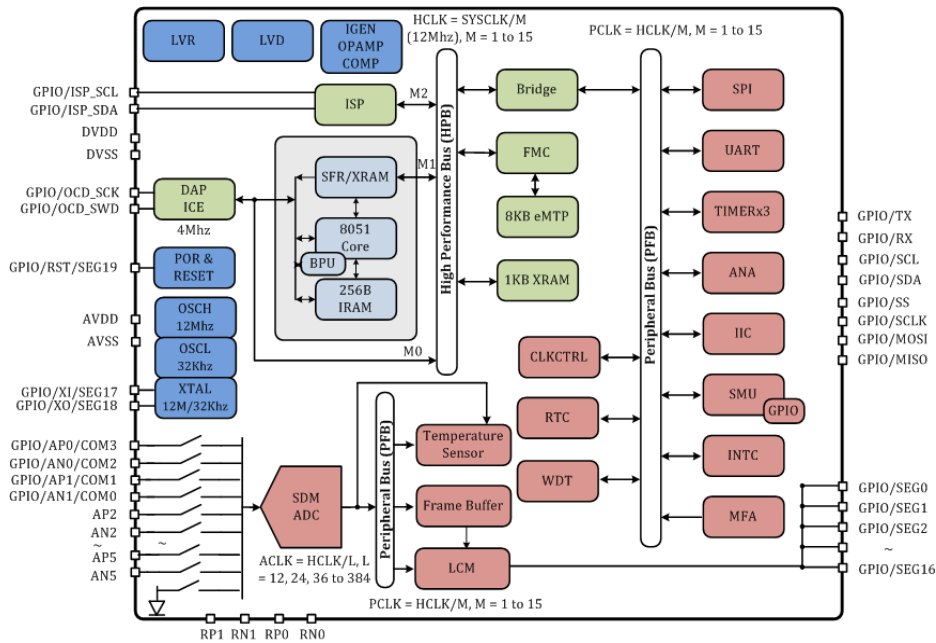
- Instrumentation signal measurements
- Temperature measurements
- Gas detectors
- Smoke detectors
- Weigh scale facilities
- Pressure measurements
- Industrial system controller
- Smart Home sensor analog front-end controller
- Home appliance sensor signal processor

Description

ESMT FE8116x series is a general purpose 8051 platform that targets on various consumer applications. The MCU platform is integrated with an 8051 core running up to 12MHz, integrating 4K-word flash memory, and up to 1K-byte data SRAM (x-ram) with 256-byte internal-SRAM (i-ram). The MCU platform is also integrated with rich peripherals, including real-time clock (RTC), watchdog timer controller (WDT), timer controller (TMR), UART interface controller (UART), I2C serial interface controller (I2C), serial peripheral interface controller (SPI), 24-bit high resolution delta-sigma ADC (SDM), analog controller (ANAC), STN LCD driver (LCM), and multi-function ALU (MFA).

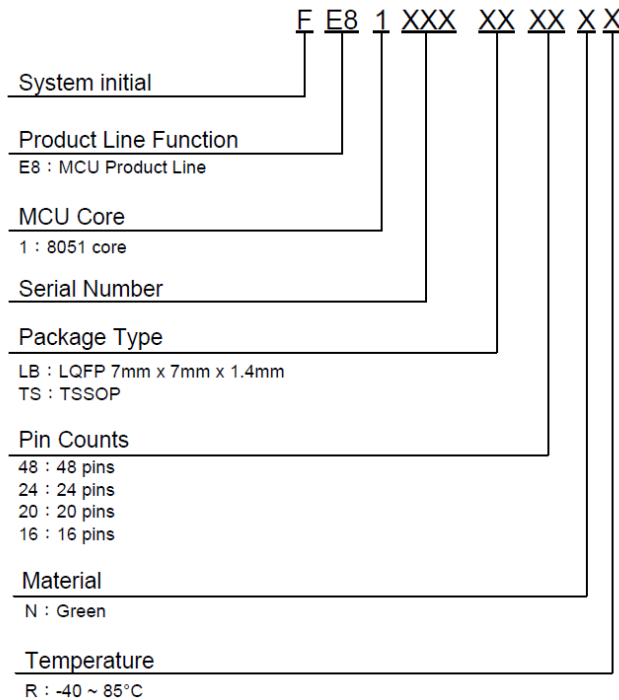
FE81162 supports 2.2V ~ 3.6V supply voltage range. The recommended operation temperature is -40°C to 85°C.

Functional Block Diagram



Device Naming Information

Part No.	Flash	SRAM	IO	Timer/PWM	UART	SPI	I2C	MFA	Comp.	ADC	AMP	RTC	OCD/ISP
FE81162	8KB	1KB	16	2	X	X	1	X	1	1	X	1	Y



■ Vertical fan implementation (FE81162)

Features

- Multi-frequency PWM output
- Dual seven-segment display driver
- Embedded IR remote control detection
- 4K-word program memory
- 1K-byte data memory
- 16 configurable multi-function GPIO ports
- I2C digital interface
- Buzzer driver
- Hardware reset input
- Interrupt output
- Single-channel 20-bit ADC input

