

Product Overview

LC87F1M16A: 8-bit Microcontroller with Full-Speed USB integrated 16K-byte Flash ROM and 1024-byte RAM

For complete documentation, see the data sheet.

The LC87F1M16A is an 8-bit microcomputer that, centered around a CPU running at a minimum bus cycle time of 83.3ns, integrates on a single chip a number of hardware features such as 16K-byte flash ROM (onboard programmable), 1024-byte RAM, an on-chip debugger, a sophisticated 16-bit timer/counter (may be divided into 8-bit timers), a 16-bit timer (may be divided into 8-bit timers or 8-bit PWMs), four 8-bit timers with a prescaler, a base timer serving as a time-of-day clock, two channels of synchronous SIO interface (with automatic block transmission/reception capabilities), an asynchronous/synchronous SIO interface, a UART interface (full duplex), a UART interface with Smartcard interface function (full duplex), a full-speed USB interface (function), a 12-bit 20-channel AD converter (12- or 8-bit resolution selectable), 2 channels of 12-bit PWM, a system clock frequency divider, an internal reset and a 35-source 10-vector interrupt feature.

Features

- Flash ROM Capable of on-board programming with a wide range of supply voltages: 3.0 to 5.5V Block-erasable in 128 byte units Writes data in 2-byte units 16384 x 8 bits
- RAM : 1024 x 9 bits
- Bus Cycle Time : 83.3ns (When CF=12MHz)
- Minimum Instruction Cycle Time (tCYC) : 250ns (When CF=12MHz)
- Support the full-speed USB version 2.0 specifications

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Bits	ROM (bits)	RAM (bits)	Bus Cycle Time Min (µs)	Instruction Cycle Time Min (µs)	Interrupts	IO Ports	ADC	PWM Outputs	Timers	USB	LCD Controller / Driver	V _{DD} Min (V)	V _{DD} Max (V)	Package Type
LC87F1M16AUWA-2H	2.2666	Pb-free Halide free	Active	8	16K x 8 (Flash)	1024 x 9	0.083	0.25	35 sources, 10 vector or address	38	12/8-bit x 20 channel	2	16-bit x 2 8-bit x 4	DEVICE (Full Speed)		2.7	5.5	SPQFP-48 / SQFP-48

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