

Samsung S3FN21D

Large-size LCD control with Cortex M0

Overview

S3FN21D is a cost effective LCD microcontroller with a CORTEX M0 CPU core. A large LCD display size, USB and special mobile features brand this product for battery driven applications.

Key Features

- Cortex-M0 CPU @ 40MHz (36 DMIPS)
- 128 KB Flash and 8 KB SRAM
- Internal R-OSC: 20MHz ($\pm 1.5\%$), 32kHz
- 146 I/O Pins
- LCD Controller: 32 com x 80 seg (Booster circuit for LCD bias)
- 12ch 10Bit ADC (Tcon = 20us)
- 2 x 32-bit Timer/Counter, 6 x 16-bit Timer/Counter, Watch Timer, Watchdog Timer, Free Running Timer
- 2 x PWM
- USB FS 2.0 with V-BUS LDO
- 3 x USART-LIN, 2 x I²C, 2 x SPI
- POR & LVD

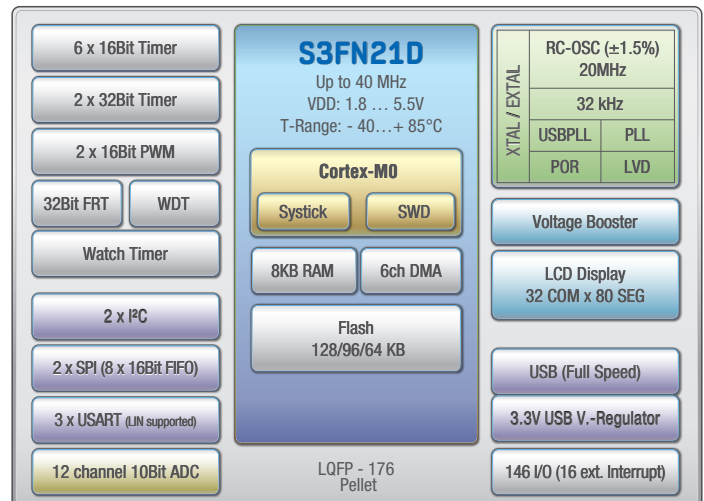
Applications

- Label Printers
- Home appliance applications

Cortex Line-up under production



Block Diagram



*RC-OSC Accuracy condition: @5V, 25°C

Cost-effective Cortex-M0

Up to 2560 segment addressing

Wide operating voltage range

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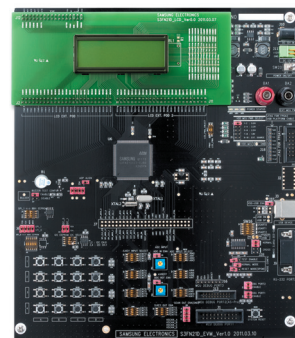
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Development Tools

Tool	Company	Product	Description
Compiler	IAR	EWARM	Full version IDE for Cortex M0/M3
		EWARM-KS	Kick start version IDE for Cortex M0/M3 (code limited)
	Keil	MDK ARM	Full version IDE for Cortex M0/M3
		MDK BASIC	Code limited version IDE for Cortex M0/M3
Debugger (opt. Trace)	Samsung	SM_Link	Low cost Emulator
	IAR	J LINK	Debugger via JTAG/SWD
		J TRACE	Debugger incl. Trace function via JTAG/SWD
	ARM/Keil	U LINK 2	Debugger via JTAG/SWD
		U Link Pro	Debugger incl. Trace function via JTAG/SWD
Programmer	Seminix	AS-Pro2	Via MCU programming interface
		GW-Uni2	8-Gang programmer

Boards

Board	Company	Product	Description
EVA Board	YIC	S3FN21D_EVM	EVA board for S3FN21D



Device Order Codes

Order Code	Flash	Package	Description
S3FN21DXZZ-EJ8D	128K	LQFP-176Pins	24 x 24, Lead pitch 0.5mm, Tray (Lead free)
S3FN21DXZZ-C0CD	128K	Pellet	-
S3FN21DXZC-C0CC	96K	Pellet	-
S3FN21DXZB-C0CB	64K	Pellet	-

Information Access

- User Manuals, Datasheets and application notes are available on Samsung website.
<http://www.samsungsemi.com>