STMICROELECTRONICS 8 & 16-Bit Microcontrollers

STMicroelectronics

ST9 EVALUATION BOARD

The aim of this Evaluation Board is to provide the user with a ready-to-use hardware environment for ST9 general purpose microcontrollers. The kit contains the hardware required for testing the principal peripherals, such as timers, SPI and SCI interfaces, A/D converters and I/O Ports. This kit, however, does not cover CAN and J1850 devices, but a wire-wrap area, available for connecting specific components, is included and can be used to connect CAN or J1850 transceivers. If the same peripheral is present several times on the MCU (e.g. the multifunction timer on the ST92F120/F124/F150/F250) the board may be used to test at least one of them, but not always all of them.

Kit Includes:

- Motherboard for ST9 Evaluation Board
- ST92F120-PQFP100 daughterboard
- ST92F150-TQFP64 daughterboard
- AC/DC adaptor
- RS232 serial cable (male-Male)

MOUSER STOCK NO.	Mfr. Part Number	Description	Price Each
511—ST92F150-EVAL		ST92F120, ST92F124, ST92F150, ST92F250	1,258.60

EMULATORS FOR THE ST9 FAMILY

The ST9 real time development system consists of various hardware and software components, which together form a flexible and sophisticated system designed to provide compreshensive development support for the ST9 family of microcontrollers.

Hardware Features:

- Clock source selectable
  - 4 MHz oscillator on probe
  - 5 MHz oscillator on probe
  - 5 MHz quartz on probe
  - TTL source from application
- Application power up detection
- 9 external input triggers
  - 1 input trigger on subclic connector
  - 8 input triggers from analyzer probe
- 2 output triggers (TTL levels)

Emulator Description:

- Mainboard is included in a box powered by an external power supply.
- Microcontroller specific probe
- Windows based IDE STVD9 software running under Windows 95/98/NT4.0.
- Emulator is connected to the user application through the probe: ST90158-EMU2B adapts to QFP80 or TQFP80 package.
- Emulator connected to a host PC or compatible with a standard parallel cable 3V or 5V +/- 10% operating voltage.
- Up to 24 MHz internal clock operation at 5V and 16 MHz at 3V.

MOUSER STOCK NO.	Mfr. Part Number	Description	Price Each
511—ST90158EMU2B		ST90T158	5,250.00
511—ST92F150EMU2		ST92F120, ST92F150, ST92F250	6,066.66
511—ST92141EMU2		ST92T141	4,083.80
511—ST92163EMU2		ST92T163	3,966.20

ST9 ENGINEERING PROGRAMMING BOARD (EPB)

These engineering programming boards (EPB) feature in-system programming capability for ST9 flash devices. Gang programmers are provided by various third-party vendors. The programming board is linked via a parallel port to a host PC running the ST9 Visual Programmer software (STVP9). This software interface allows you to customize and control the programming.

Hardware Features:

- Programs all the ST9 EPROM, OTP and Flash microcontfrollers
- Supports In Situ Programming (ISP) for Flash devices.

Hardware Features:

- View & verify microcontroller's memory contents
- Program executable files into microcontrollers
- Motorola S19 or Intel Hex file formats
- Either create a project that defines how to program the microcontroller or load the files whose contents you want to program and then execute the program.

MOUSER STOCK NO.	Mfr. Part Number	Description	Price Each
511—ST90E158EPB2/US		ST90T158	875.00
511—ST92F120EPB/US		ST92F120	700.00
511—ST92F150-EPB/US		ST92F124, ST92F150, ST92F240	875.00
511—ST92E141EPB/US		ST92T141	408.80
511—ST92E163EPB/US		ST92T163	350.00

ST10 FAST CORE WITH ADVANCED INTERRUPT MANAGEMENT 16-BIT

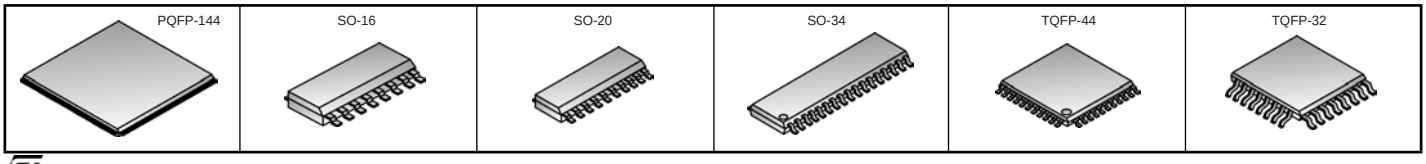
STMicroelectronics' ST10 processor core has been conceived specifically for embedded applications in custom system-on-chip products for demanding markets like hard disk, CD-ROM drives, DVD, car radio devices and engine management units. The ST10 architecture is a 16-bit instruction word CMOS microcontroller with 4-stage pipeline. Clocked at 40MHz, it executes speed critical routines, so instructions typically execute in 50ns. Building on ST's experience in embedded cores, the ST10 architecture is also based on an analysis of the real needs of system designers and software engineers in some of the fastest-moving segments of the industry, where high performance, low power consumption and fast time to market are all essential.

Abbreviations:

CAN = Controller area network SSC = Single-cycle switching support
CAPCOM = Capture compare
PEC = Peripheral event controller
PWM = Pulse width modulator
USART = Universal sync/async receiver transmitter

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part Number	Package Type	Features & Characteristics: Prog. Mem.	Memory Type	RAM	E²PROM	A/D inputs	Timers	Serial Interface	I/Os (HI-Curr)	Special Features	Price Each 1-99
Surface Mount												
511—ST10F168SQ6		PQFP-144	256K	Flash EEPROM	8K	-----	16x10-Bit	5x16-Bit	USART/SSC/CAN	111	ROMless, PEC, CAN, PWM, CAPCOM	33.92



CURRENT STANDARD 8-BIT MICROCONTROLLERS

ST7 Industry Standard Fast Core Architecture 8-Bit

The ST7 core is based on an industry standard 8-bit architecture, extended by STMicroelectronics to improve support for high level language programming and to provide additional interrupt handling features. The accumulator-based core has six internal registers including a 16-bit program counter. The instruction set has 63 instructions with 17 addressing modes offering 8x8-bit unsigned multiply, true bit manipulation, various bit/byte transfer modes and powerful branching logic. Peripheral resources are handled via dedicated interrupts and registers.

- Fast multiplication: 11 cycles or 1.37 µsecs for 8 x 8 bits (16-bit result).
- Rich choice of addressing modes for efficient handling of data in RAM (fast manipulation of tables).
- Direct memory addressing (no page handling overhead).
- Up to 16 interrupt vectors for flexible interrupt management.
- Fast interrupt response: 1.5µs typical (with 5-byte context save).
- Powerful bit manipulation instructions

Abbreviations:

ADC = Analog to digital converter
DALI = Digital addressable lighting interface
IAP = In-application programming
ICP = In-circuit programming
I2C = Inter-integrated circuit
PLL = Phase locked loop
ROP = Readout protection
SCI = Serial communcations interface
SPI = Serial peripheral interface
SWG = Square wave generator
USB = Universal serial bus

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part Number	Package Type	Features & Characteristics: Prog. Mem.	Memory Type	RAM	E²PROM	A/D inputs	Timers	Serial Interface	I/Os (HI-Curr)	Special Features	Price Each 1-99
Surface Mount												
511—ST7FLITE05Y0M6		SO-16	1.5K	Ext. Flash	128	-----	5x8-Bit	1x8-Bit, 1x12-Bit	SPI	13 (6)	ADC with op amp, PLL, ROP, ICP, IAP, 1% RC oscillator	1.40
511—ST7FLITE09Y0M6		SO-16	1.5K	Ext. Flash	128	128	5x8-Bit	1x8-Bit, 1x12-Bit	SPI	13 (6)	ADC with op amp, PLL, ROP, ICP, IAP, 1% RC oscillator	1.60
511—ST72T633K1M1		SO-34	4K	OTP EPROM	256	-----	8x8-Bit	1x16-Bit	USB	19 (10)	3 low speed USB endpoints	4.70
511—ST72T632K2M1		SO-34	8K	OTP EPROM	256	-----	8x8-Bit	1x16-Bit	USB/SCI	19 (10)	3 low speed USB endpoints	5.18
511—ST72T141K2M6		SO-34	8K	OTP EPROM	256	-----	8x8-Bit	2x16-Bit	SPI	26 (3)	sensorless brushless DC motor controller	4.55
511—ST72F623F2M1		SO-20	8K	Flash EEPROM	384	-----	3x8-Bit	6x8-Bit	USB	11 (8)	3 low speed USB endpoints, ICP, IAP, ROP	3.43
511—ST7FLITE20F2M6		SO-20	8K	Flash EEPROM	384	256	7x10-Bit	2x8-Bit, 1x12-Bit	SPI/DALI	15 (6)	ADC with op amp, PLL, ROP, ICP, IAP, 1% RC oscillator	2.16
511—ST7FLITE25F2M6		SO-20	8K	Flash EEPROM	384	256	7x10-Bit	2x8-Bit, 1x12-Bit	SPI/DALI	15 (6)	ADC with op amp, PLL, ROP, ICP, IAP, 1% RC oscillator	2.24
511—ST7FLITE29F2M6		SO-20	8K	Flash EEPROM	384	256	7x10-Bit	2x8-Bit, 1x12-Bit	SPI/DALI	15 (6)	ADC with op amp, PLL, ROP, ICP, IAP, 1% RC oscillator	1.89
511—ST72T631K4M1		SO-34	16K	OTP EPROM	512	-----	8x8-Bit	1x16-Bit	USB/SCI/I2C	19 (10)	3 low spped USB endpoints	5.39
511—ST72F621L4M1		SO-34	16K	Flash EEPROM	768	-----	8x10-Bit	6x8-Bit	USB/SPI/SCI	23 (8)	3 low speed USB endpoints, ICP, IAP, ROP	4.21
511—ST72F621L4M1L		SO-34	16K	Flash EEPROM	768	-----	8x10-Bit	6x8-Bit	USB/SPI/SCI	23 (8)	3 low speed USB endpoints, ICP, IAP, ROP	6.02
511—ST72F324K6T6		TQFP-32	32K	Flash EEPROM	1K	-----	8x10-Bit	10x16-Bit	SPI/SCI	24 (10)	ICP, IAP, nested interupts, TLI, clock security system, ROP, SWG	3.30
511—ST72F324J6T6		TQFP-44	32K	Flash EEPROM	1K	-----	12x10-Bit	10x16-Bit	SPI/SCI	32 (12)	ICP, IAP, nested interupts, TLI, clock security system, ROP, SWG	3.53

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