STMICROELECTRONICS Current 8 and 16-Bit Microcontrollers

ST9 HIGH PERFORMANCE STANDARD CORE ARCHITECTURE 8/16-BIT

The rapidly growing area of real-time applications represents one of the most demanding operating environments for today's microcontrollers. Processors are required to execute complex control algorithms, within a defined minimum response time. With the increasing complexity of embedded control applications, a significant increase in CPU performances and peripheral functionality over conventional 8-bit controllers is required. Designed to meet market needs for cost-effective, high-performance MCUs, the ST9 family bridges the gap between the worlds of 8 and 16-bit microcontrollers and covers a large range of requirements in the high-end 8-bit and low-end 16-bit applications. With an ST9 microcontroller you have the 16-bit performance (sophisticated data manipulation, real time event handling) and the 8-bit advantages (price, noise, power consumption,...). With the ST9 family, STMicroelectronics offers significant performance and flexibility advantages over traditional 8-bit microcontrollers. It is the unequalled solution for more performance. It provides innovative answers to your embedded control requirements with competitive MCU solutions for today and tomorrow.

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 microprocessors. 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 multichannel timer on the ST9F120F124F150F250) the board may be used to test at least one of them, but not always all of them.

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 comprehensive 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
• 6 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 STV99 software running under Windows 95/98/NT4.
• Emulator is connected to the user application through the probe. ST90150-EMU2B adapts to QFP90 or TQFP100 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.
• Motherboard for ST9 Evaluation Board
• ST9F120F124F150F250 daughterboard
• ST9810-TP00F4 daughterboard
• AC/DC adapter
• RS232 serial cable (male-Male)

ST9 ENGINEERING PROGRAMMING BOARD (EPB)

These engineering programming boards (EPB) feature in-system programming capability for ST9 flash devices. During programming sessions 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 (STVP99). This software interface allows you to customize and control the programming.

Hardware Features:
• Programs all the ST9 EPROM, OTP and Flash microcontrollers
• Supports In Situ Programming (ISP) for flash devices.

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

ST10 FAST STANDARD 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 CMOS microcontroller with 4-stage pipelines. Clocked at 40 MHz, it executes speed critical routines, so instructions typically execute in 50ns. Building on ST's experience in embedded cores, the ST10 architecture is 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.

For quantities of 100 and up, call for quote.