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STK58C318 MICRO CONTROLLER

GENERAL DESCRIPTION

STK58C318 8 - bit microcontroller is a low power, high speed CMOS device containing RAM, I/O, CPU, and customer - defined MASK ROM on a single chip. STK58C318 uses a advanced 1.2 micron CMOS technology to provide superior operation performance which goes beyond RISC architecture efficiency alone, advantage of these unique devices include:

* High speed architecture

The 12-bit RISC instruction bus allows for instruction "pipelining", which gives users an exceptional speed advantage of five times over competitive architectures, permitting real time algorithm execution as compared with less precise look - up table approaches.

* Flexible, Affordable MASK ROM

Customers can apply the EPROM for verifying the program which can enjoy the many benefits of EPROM based microcontroller. then, customers can experience the cost advantage using the MASK ROM based STK58C318 to improve the profitability.

FEATURES

* Ultra wide performance ranges :

- # Frequency : 25KHz — 20MHz (200 ns instruction rate)
- # Voltage : 2.5V — 6.0V single supply
- # Current : 1 μ A standby mode
 - 35 μ A (125us instruction rate)
 - 2.5 mA (2us instruction rate)
 - 30mA (200 ns instruction rate)

- * Design with fully static CMOS MASK ROM technology.
- * Low-cost RC oscillator or crystal oscillator.
- * 18-pin DIP package & 12 bidirectional I/O lines.
- * Powerful "single Word" instruction set.
- * Free running watchdog timer.
- * Oscillator start-up timer.
- * 8-bit real time clock counter(RTCC)with optional 8-bit programmable prescaler.
- * 2-level stack for subroutine nesting.
- * Efficient MASK ROM program memory organizations : 512 \times 12 bits.
- * 32 bytes of RAM & 8-bit ALU.
- * Low cost PC-Based software development system.

APPLICATION

AUTOMOTIVE CONTROL SYSTEMS

- * Under Hood.
- * Cabin, ABS CAN.

APPLIANCES

- * Display, Timing,
- * AC Motor Control

HOME AND VEHICLE SECURITY SYSTEMS

- * Remote IR, RF, and AC Carrier Control
- * Keypad Decode
- * DTMF Control
- * Sensor Management

INDUSTRIAL/PROCESS CONTROL

- * Panel Display and Remote Sensors

COST - SENSITIVE CONSUMER PRODUCTS

- * Educational Toys,
- * Sounds, Speech Control.

TELECOMMUNICATIONS

- * Cordless Telephones.
- * Answering Machines.

SENSORS AND INSTRUMENTATION

- * Remote Intelligence.
- * High Speech Precision.

PERSONAL COMPUTERS

- * High speed serial Bus Controller
- * Pointing Devices, Mouse.
- Trackball, Joystick, Light