SECTION 1
INTRODUCTION

The MC68332 microcontroller, a highly-integrated 32-bit microcontroller, combines high performance data manipulation capabilities with powerful peripheral subsystems. The microcontroller unit (MCU) is built up from standard modules that interface via a common internal bus (IMB). Standardization facilitates rapid development of devices tailored for specific applications.

The MC68332 incorporates a 32-bit central processor unit (CPU32), a system integration module (SIM), a time processor unit (TPU), and a queued serial module (QSM), and a 2-Kbyte static RAM module with TPU emulation capability (TPURAM).

The maximum system clock for MC68332 can be either 16.78 MHz, 20.97MHz, or 25.17 MHz. An internal phase-locked loop circuit synthesizes the system clock from a slow reference (typically 32.768 kHz) or uses an external frequency source. System hardware and software support changes in clock rate during operation. Because the MCU is a fully static design, register and memory contents are not affected by clock rate changes.

High-density complementary metal-oxide semiconductor (HCMOS) architecture makes the basic power consumption low. Power consumption can be minimized by stopping the system clock. The CPU32 instruction set includes a low-power stop (LPSTOP) command that efficiently implements this capability.

Documentation for the Modular Microcontroller Family follows the modular construction of the devices in the product line. Each device has a comprehensive user's manual that provides sufficient information for normal operation of the device. The user's manual is supplemented by module reference manuals that provide detailed information about module operation and applications. Refer to Motorola publication ***Advanced Microcontroller Unit (AMCU) Literature*** (BR1116/D) for a complete list of documentation to supplement this manual.