

has been added for table interruption processing frequently used in engine control. With this hardware, multiply and divide processing speed can become approximately three times as fast as 1 MHz/2000 operating at the same clock frequency.

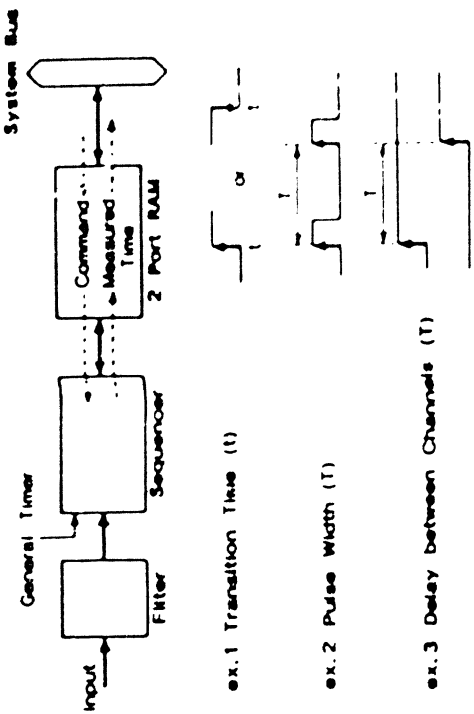
**Past Timed Input Port (FTI)**

FTI is a highly functional and intelligent input port, designed to reduce the load on the CPU during high speed pulse input. All that is necessary with FTI is to write a command into the command memory; a search is then made for a leading or trailing edge on the designated channel, and the time is measured. It is further possible to measure pulse width, and frequency or phase difference. A block diagram and examples of input are shown in Fig.3.

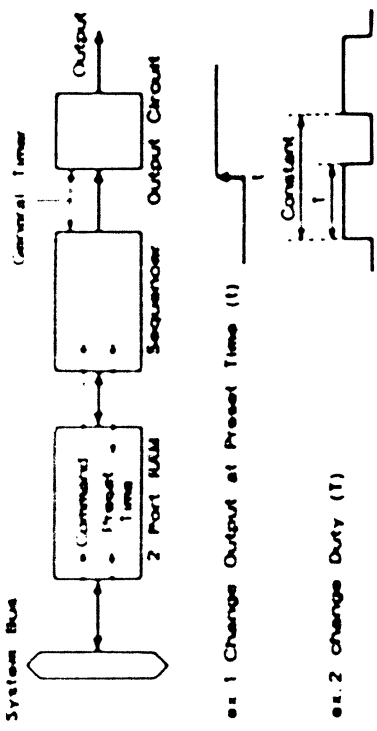
FTI is a function that is indispensable for the signal processing of such parameters as engine speed and vehicle speed. It reduces CPU interrupt processing and this enables an increase in precision.

**Direct Memory Access (DMA)**

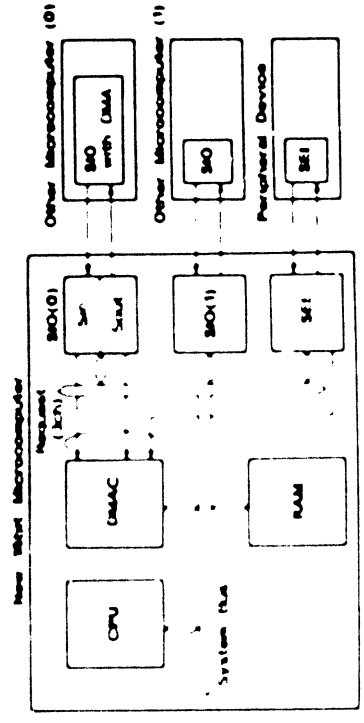
DMA is a card for high speed, high volume transmission of data between a single chip microprocessor without any additional load on the CPU. The DMA can handle independent channels, and starts direct memory transfer between the peripheral device and the RAM. A block diagram is shown in Fig.4.



**Fig.3 Block Diagram of FTI and Examples of Measured Time**



**Fig.4 Block Diagram of FTO and Examples of Output Pulse**



**Fig.5 Block Diagram of DMAC**