

Comparison b/w the Microprocessor, Microcontroller, ARM and PIC.

Microprocessor	Microcontroller	ARM	PIC
<ul style="list-style-type: none"> * The microprocessor is designed to be general purpose. * It is used used to perform a certain task. * It is a silicon chip. * Power Consumption is high. * Its size is large. * It requires a combination of timers, controllers, memory chip. * Its processing power is higher. * It has available in 16 bit processor. 	<ul style="list-style-type: none"> * A microcontroller is designed for the general purpose a specialized form of a microprocessor. * It is very cost effective. * It is a self sufficient. * Power Consumption is low. * Its size is smaller. * It contains CPU, RAM, ROM, Registers, Timers, controller and i/p/o ports. * Its microprocessor processing power is lower than microprocessor. * Microcontroller is a 8 bit processor. 	<ul style="list-style-type: none"> * It is based on some feature of RISC. * It is based on Harvard memory architecture. * ARM microcontroller refers to Advanced machine. * Available 32 bit mostly also available in 64 bit. * It uses Flash, SRAM, EEPROM memory. * It has an effective instruction rate of 1 clock cycle per instruction. * ARM microcontroller family includes ARMV4, 5, 6, 7 and series. * It has vast community. * Its manufactures are Apple, Nvidia, Qualcomm, Samsung, Electronics and TI etc. 	<ul style="list-style-type: none"> * It is based on RISC instruction set architecture. * It is based on modified Harvard architecture. * PIC microcontroller refers to peripheral Interface Controller. * Available 8, 16, 32 bit. * It uses SRAM, Flash memory. * It has an effective instruction rate of 4 clock cycles per instruction. * PIC microcontroller family includes PIC16, PIC17, PIC18, PIC24, PIC32. * It has a very good community support. * Its manufacture a micro chip.

Microprocessor ::

* It is a Controlling Unit of a Microcomputer fabricated on a small chip capable of performing ALU (Arithmetic Logical Unit) operation and communicating with other devices connected to it.

Microcontroller ::

* It is a small and low cost microcomputer which is designed to perform the specific tasks of embedded system like displaying microwave's information, receiving remote signal etc.

Difference blw MP and MC

MC	MP
Used to execute a single task within within an application	Used for big application
It designing and hardware cost is low	Cost is high
Easy to replace	Not so so so easy to replace