Features of LPC2148

The main features of LPC2148 include the following.

- The LPC2148 is a 16 bit or 32 bit ARM7 family based microcontroller and available in a small LQFP64 package.
- ISP (in system programming) or IAP (in application programming) using on-chip boot loader software.
- On-chip static RAM is 8 kB-40 kB, on-chip flash memory is 32 kB-512 kB, the wide interface is 128 bit, or accelerator allows 60 MHz high-speed operation.
- It takes 400 milliseconds time for erasing the data in full chip and 1 millisecond time for 256 bytes of programming.
- Embedded Trace interfaces and Embedded ICE RT offers real-time debugging with high-speed tracing of instruction execution and on-chip Real Monitor software.
- It has 2 kB of endpoint RAM and USB 2.0 full speed device controller. Furthermore, this microcontroller offers 8kB on-chip RAM nearby to USB with DMA.
- One or two 10-bit ADCs offer 6 or 14 analogs i/ps with low conversion time as 2.44 μs/ channel.
- Only 10 bit DAC offers changeable analog o/p.
- External event counter/32 bit timers-2, PWM unit, & watchdog.
- Low power RTC (real time clock) & 32 kHz clock input.
- Several serial interfaces like two 16C550 UARTs, two I2C-buses with 400 kbit/s speed.
- 5 volts tolerant quick general purpose Input/output pins in a small LQFP64 package.
- Outside interrupt pins-21.
- 60 MHz of utmost CPU CLK-clock obtainable from the programmable-on-chip phase locked loop by resolving time is 100 μs.
- The incorporated oscillator on the chip will work by an exterior crystal that ranges from 1 MHz-25 MHz
- The modes for power-conserving mainly comprise idle & power down.
- For extra power optimization, there are individual enable or disable of peripheral functions and peripheral CLK scaling.