# 1.0 Description

The M30245 group is a 16-bit microcomputer based on the M16C family core technology that uses the high performance silicon gate CMOS process with an M16C/62 Series CPU core, and is packaged in a 100-pin, molded plastic QFP. They are single-chip USB peripheral microcontrollers meeting the Universal Serial Bus (USB) Version 1.1 specification. These microcontrollers operate using sophisticated instructions featuring a high level of instruction efficiency, making them capable of executing instructions at high speed.

## 1.1 Features

- Number of instructions ..... 91
- Shortest instruction execution time ..... 83ns f($X_{IN}$)=12MHz, Vcc=3V with no wait
- USB Features:..... 5 endpoint pairs (IN/OUT)
  3.25K FIFO
  Integrated transceiver
  Conforms to USB V1.1 Specification
- Frequency Synthesizer..... PLL for 48MHz clock
- Memory capacity..... 64K ROM / 5K RAM
  128K ROM / 10K RAM
  128K Flash /10K RAM
- Supply Voltage ..... 3.0 to 3.6V (f($X_{IN}$)=12MHz)
- Interrupts..... 21 internal and 5 external interrupt sources
  4 software interrupt sources
  7 levels (including key input interrupt X 8)
- Multifunction 16-bit timer..... 5 output timers+ 3 input timers
- UART..... 3 X 7/8/9, 2 X 7/8/9/16/24/32 bits;
  Configurable for synchronous or asynchronous mode, $I^2S$, $I^2C$
- DMAC..... 4 channels
- A-D Converter ..... 10 bits X 8 channels
- CRC calculation circuit..... 2 circuits with MSB/LSB selectable
- Watchdog timer ..... 1 line
- Key-on Wake up ..... 8 inputs
- Programmable I/O..... 84 lines (TBD)
- Clock-generating circuit..... 2 built-in clock generation circuit
  (built-in feedback resistor, and external ceramic or quartz oscillator)

## 1.2 Applications

USB peripherals, such as telephones, audio systems, office equipment, communications equipment, portable equipment, scanners, and digital cameras.

## 1.3 Pin Configuration

Figure 1.1 shows the pin configuration (top view).

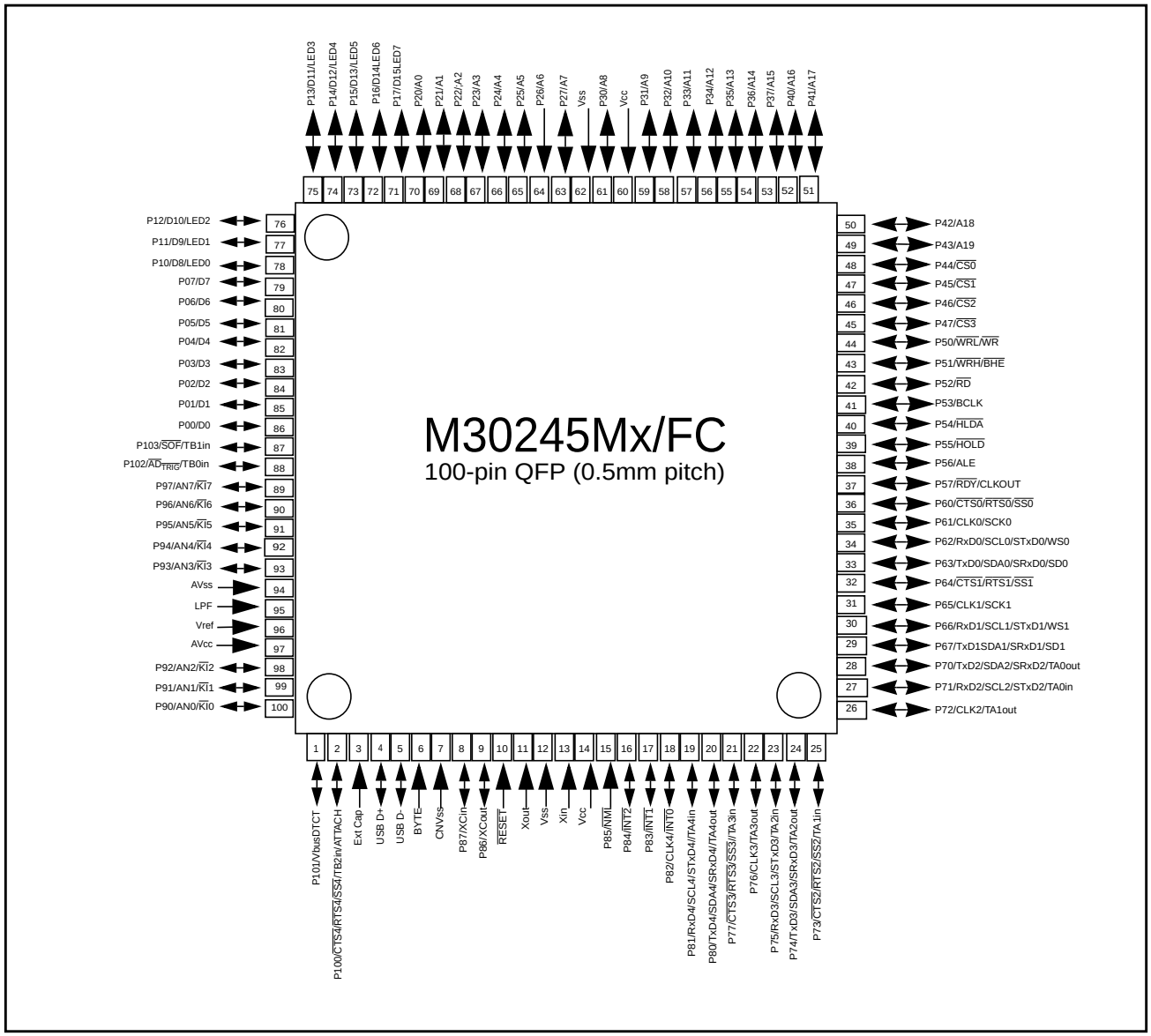



**Figure 1.1: Pin Configuration (top view)**

## 1.4 Block Diagram

Figure 1.2 is a block diagram of the M30245 group.

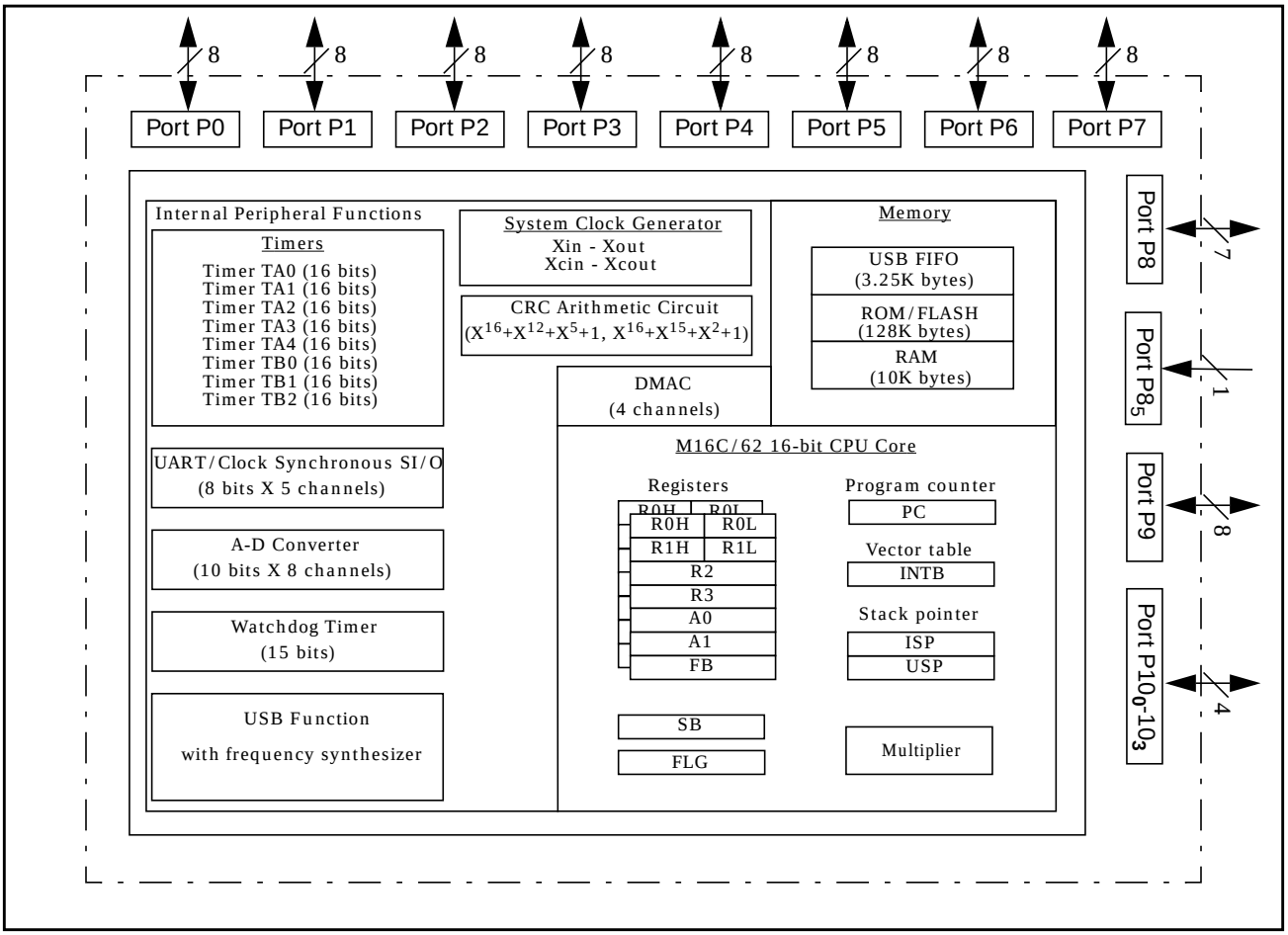



**Figure 1.2: Block diagram of M30245 group**

## 1.5 Performance outline

Table 1.1 is a performance outline of the M30245 group.

**Table 1.1: Performance outline of M16C/M30245 Group**

| Parameters | | | Function Description |
|---|---|---|---|
| Number of basic Instructions | | | 91 |
| Shortest Instruction execution time | | | 83 ns f(Xin)= 12 MHz, Vcc = 3V |
| Memory size | ROM | | 128/64 Kbytes |
| | RAM | | 10/5 Kbytes |
| Input/Output ports | P0~P9 | I/O | 8 bits x 10 |
| | P100~P101 | I/O | 2 bits x 1 |
| Multifunction timer | TA0, TA1, TA2, TA3, TA4 | | 16 bits x 5 |
| | TB0, TB1, TB2 | | 16 bits x 3 |
| Serial I/O | UART0~1 | | UART (or clock synchronous or IIS) x 2 |
| | UART2~4 | | UART (or clock synchronous) x 3 |
| A-D converter | | | 10 bits x 8 channels |
| DMAC | | | 4 channels |
| CRC calculation circuits | | | CRC-CCITT and CRC-16 |
| Watchdog timer | | | 15 bits x 1 (prescaler) |
| Interrupts | | | 21 internal, 4 external sources, 4 software, 7 levels |
| Clock-generating circuit | | | 2 built-in clock generating circuit |
| Supply voltage | | | 3.0 ~ 3.6V, f(XIN) = 12MHz |
| Power consumption | | | TBD |
| I/O characteristics | I/O withstand voltage | | 3V |
| | Output current | | 5mA (20mA available on P1, P70, P72, P74, P76, P80) |
| Operating temperature | | | -20 to 85 C |
| Device configuration | | | CMOS high performance silicon gate |
| Package | | | 100-pin plastic mold QFP |

Mitsubishi plans to release the following products in the M30245 group:

(1) Support for Flash memory version and mask ROM versions

(2) ROM capacity: 128 or 64 Kbytes

(3) Package

- 100P6Q-A: Plastic molded QFP

Figure 1.3 shows the type number, memory size and package for the M30245 group.

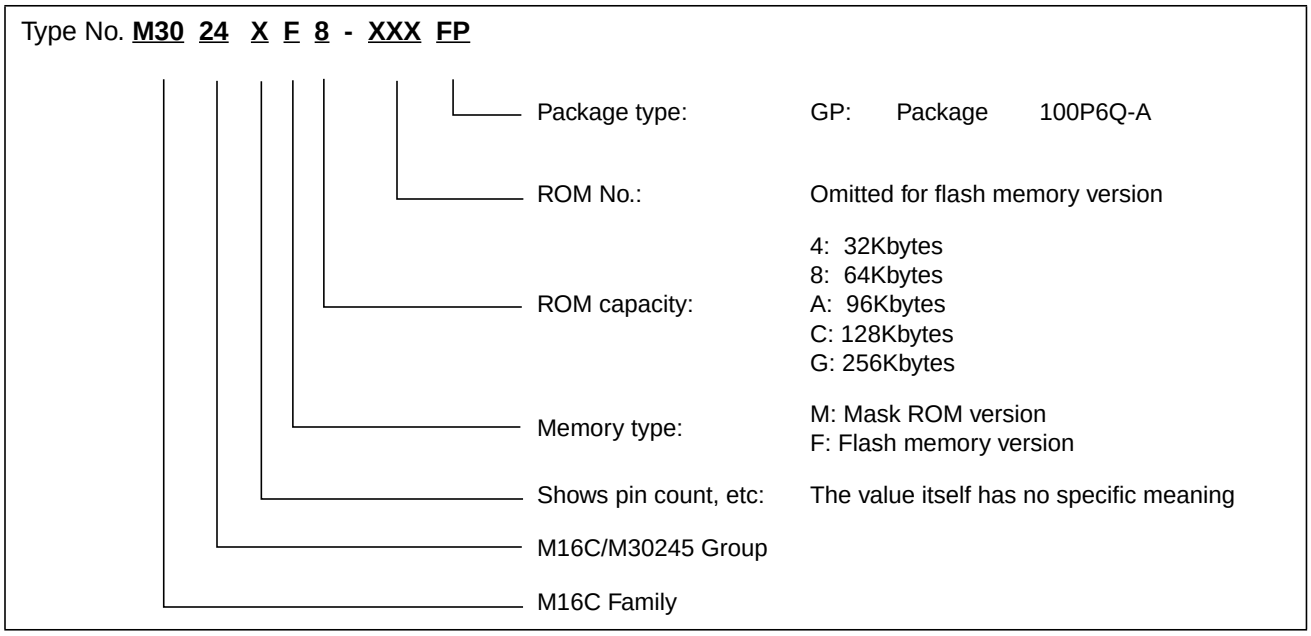



**Figure 1.3: Type number, memory size, and package**

Table 1.2 shows the package number, type, ROM and RAM capacity for M30245 Group.

**Table 1.2: M30245 Group**

| Type | ROM Capacity | RAM Capacity | Package Type | Remarks |
|---|---|---|---|---|
| M30245FCGP | 128K bytes | 10K bytes | 100P6Q-A | Flash ROM Version |
| M30245MCGP | 128K bytes | 10K bytes | 100P6Q-A | Mask ROM Version |
| M30245M8GP | 64K bytes | 5K bytes | 100P6Q-A | Mask ROM Version |

## 1.6 SFR MAP

The table below shows the peripheral control registers, their addresses, names, acronyms, and values after reset.

| Address | Register name | Acronym | Value after reset |
|---|---|---|---|
| $0000_{16}$ | | | |
| $0001_{16}$ | | | |
| $0002_{16}$ | | | |
| $0003_{16}$ | | | |
| $0004_{16}$ | Processor mode register 0 | PM0 | $00_{16}$ |
| $0005_{16}$ | Processor mode register 1 | PM1 | 0 0 0 |
| $0006_{16}$ | System clock control register 0 | CM0 | $48_{16}$ |
| $0007_{16}$ | System clock control register 1 | CM1 | $20_{16}$ |
| $0008_{16}$ | Chip select control register | CSR | 0 0 0 0 0 0 0 1 |
| $0009_{16}$ | Address match interrupt enable register | AIER | 0 0 |
| $000A_{16}$ | Protect register | PRCR | 0 0 0 |
| $000B_{16}$ | Data bank register | DBR | 1 1 1 0 |
| $000C_{16}$ | USB control register | USBC | $00_{16}$ |
| $000D_{16}$ | | | |
| $000E_{16}$ | Watchdog timer start register | WDTS | |
| $000F_{16}$ | Watchdog timer control register | WDC | 0 0 0 ? ? ? ? ? |
| $0010_{16}$ | Address match interrupt register 0 | RMAD0 | $00_{16}$ |
| $0011_{16}$ | | | $00_{16}$ |
| $0012_{16}$ | | | 0 0 0 0 |
| $0013_{16}$ | | | |
| $0014_{16}$ | Address match interrupt register 1 | RMAD1 | $00_{16}$ |
| $0015_{16}$ | | | $00_{16}$ |
| $0016_{16}$ | | | 0 0 0 0 |
| $0017_{16}$ | | | |
| $0018_{16}$ | | | |
| $0019_{16}$ | | | |
| $001A_{16}$ | | | |
| $001B_{16}$ | | | |
| $001C_{16}$ | | | |
| $001D_{16}$ | | | |
| $001E_{16}$ | Reserved | | |
| $001F_{16}$ | USB Attach/Detach register | | $00_{16}$ |
| $0020_{16}$ | DMA0 source pointer | SAR0 | |
| $0021_{16}$ | | | |
| $0022_{16}$ | | | |
| $0023_{16}$ | | | |
| $0024_{16}$ | DMA0 destination pointer | DAR0 | |
| $0025_{16}$ | | | |
| $0026_{16}$ | | | |
| $0027_{16}$ | | | |
| $0028_{16}$ | DMA0 transfer counter | TCR0 | |
| $0029_{16}$ | | | |
| $002A_{16}$ | | | |
| $002B_{16}$ | | | |
| $002C_{16}$ | DMA0 control register | DM0CON | 0 0 0 0 0 ? 0 0 |
| $002D_{16}$ | | | |
| $002E_{16}$ | | | |
| $002F_{16}$ | | | |
| $0030_{16}$ | DMA1 source pointer | SAR1 | |
| $0031_{16}$ | | | |
| $0032_{16}$ | | | |
| $0033_{16}$ | | | |
| $0034_{16}$ | DMA1 destination pointer | DAR1 | |
| $0035_{16}$ | | | |
| $0036_{16}$ | | | |
| $0037_{16}$ | | | |
| $0038_{16}$ | DMA1 transfer counter | TCR1 | |
| $0039_{16}$ | | | |
| $003A_{16}$ | | | |
| $003B_{16}$ | | | |
| $003C_{16}$ | DMA1 control register | DM1CON | 0 0 0 0 0 ? 0 0 |
| $003D_{16}$ | DMA2 interrupt control register | DM2IC | ? 0 0 0 |
| $003E_{16}$ | DMA3 interrupt control register | DM3IC | ? 0 0 0 |
| $003F_{16}$ | USB function interrupt control register | USBFIC | ? 0 0 0 |

| Address | Register name | Acronym | Value after reset |
|---|---|---|---|
| $0040_{16}$ | USB SOF interrupt control register | SOFIC | ? 0 0 0 |
| $0041_{16}$ | Suspend interrupt control register | SUSPIC | ? 0 0 0 |
| $0042_{16}$ | Reset interrupt control register | RSTIC | ? 0 0 0 |
| $0043_{16}$ | Resume interrupt control register | RSMIC | ? 0 0 0 |
| $0044_{16}$ | UART0/1 Bus collision interrupt control register | S01BCNIC | ? 0 0 0 |
| $0045_{16}$ | UART2 Bus collision interrupt control register | S2BCNIC | ? 0 0 0 |
| $0046_{16}$ | UART4 transmit interrupt control register | S4TIC | ? 0 0 0 |
| $0047_{16}$ | UART4 receive interrupt control register | S4RIC | ? 0 0 0 |
| $0048_{16}$ | UART3 transmit interrupt control register | S3TIC | ? 0 0 0 |
| $0049_{16}$ | UART3 receive interrupt control register | S3RIC | ? 0 0 0 |
| $004A_{16}$ | UART3/4 Bus collision interrupt control register | S34BCNIC | ? 0 0 0 |
| $004B_{16}$ | DMA0 interrupt control register | DM0IC | ? 0 0 0 |
| $004C_{16}$ | DMA1 interrupt conrol register | DM1IC | ? 0 0 0 |
| $004D_{16}$ | Key input interrupt control register | KUPIC | ? 0 0 0 |
| $004E_{16}$ | A-D conversion interrupt control register | ADIC | ? 0 0 0 |
| $004F_{16}$ | UART2 transmit interrupt control register | S2TIC | ? 0 0 0 |
| $0050_{16}$ | UART2 receive interrupt control register | S2RIC | ? 0 0 0 |
| $0051_{16}$ | UART0 transmit interrupt control register | S0TIC | ? 0 0 0 |
| $0052_{16}$ | UART0 receive interrupt control register | S0RIC | ? 0 0 0 |
| $0053_{16}$ | UART1 transmit interrupt control register | S1TIC | ? 0 0 0 |
| $0054_{16}$ | UART1 receive interrupt control register | S1RIC | ? 0 0 0 |
| $0055_{16}$ | TIMER A0 interrupt control register | TA0IC | ? 0 0 0 |
| $0056_{16}$ | TIMER A1 interrupt control register | TA1IC | ? 0 0 0 |
| $0057_{16}$ | TIMER A2 interrupt control register | TA2IC | ? 0 0 0 |
| $0058_{16}$ | TIMER A3 interrupt control register | TA3IC | ? 0 0 0 |
| $0059_{16}$ | TIMER A4 interrupt control register | TA4IC | ? 0 0 0 |
| $005A_{16}$ | TIMER B0 interrupt control register | TB0IC | ? 0 0 0 |
| $005B_{16}$ | TIMER B1 interrupt control register | TB1IC | ? 0 0 0 |
| $005C_{16}$ | TIMER B2 interrupt control register | TB2IC | ? 0 0 0 |
| $005D_{16}$ | INT0 interrupt control register | INT0IC | 0 0 ? 0 0 0 |
| $005E_{16}$ | INT1 interrupt control register | INT1IC | 0 0 ? 0 0 0 |
| $005F_{16}$ | INT2 interrupt control register | INT2IC | 0 0 ? 0 0 0 |
| $0060_{16}$ | DMA2 source pointer | SAR2 | |
| $0061_{16}$ | | | |
| $0062_{16}$ | | | |
| $0063_{16}$ | | | |
| $0064_{16}$ | DMA2 destination pointer | DAR2 | |
| $0065_{16}$ | | | |
| $0066_{16}$ | | | |
| $0067_{16}$ | | | |
| $0068_{16}$ | DMA2 transfer counter | TCR2 | |
| $0069_{16}$ | | | |
| $006A_{16}$ | | | |
| $006B_{16}$ | | | |
| $006C_{16}$ | DMA2 control register | DM2CON | 0 0 0 0 0 ? 0 0 |
| $006D_{16}$ | | | |
| $006E_{16}$ | | | |
| $006F_{16}$ | | | |
| $0070_{16}$ | DMA3 source pointer | SAR3 | |
| $0071_{16}$ | | | |
| $0072_{16}$ | | | |
| $0073_{16}$ | | | |
| $0074_{16}$ | DMA3 destination pointer | DAR3 | |
| $0075_{16}$ | | | |
| $0076_{16}$ | | | |
| $0077_{16}$ | | | |
| $0078_{16}$ | DMA3 transfer counter | TCR3 | |
| $0079_{16}$ | | | |
| $007A_{16}$ | | | |
| $007B_{16}$ | | | |
| $007C_{16}$ | DMA3 control register | DM3CON | 0 0 0 0 0 ? 0 0 |
| $007D_{16}$ | | | |
| $007E_{16}$ | | | |
| $007F_{16}$ | | | |

| Address | Register name | Acronym | Value after reset | |
|---|---|---|---|---|
| $0280_{16}$ | USB address register | USBA | $00_{16}$ | |
| $0281_{16}$ | | | | |
| $0282_{16}$ | USB poer management register | USBPM | $00_{16}$ | |
| $0283_{16}$ | | | | |
| $0284_{16}$ | USB interrupt status register 1 | USBIS0 | $00_{16}$ | |
| $0285_{16}$ | | | | |
| $0286_{16}$ | USB interrupt status register 1 | USBIS1 | $00_{16}$ | |
| $0287_{16}$ | | | | |
| $0288_{16}$ | USB interrupt enable register | USBER | $33FF_{16}$ | |
| $0289_{16}$ | | | | |
| $028A_{16}$ | USB frame number register low | USBSOF | $0000_{16}$ | |
| $028B_{16}$ | | | | |
| $028C_{16}$ | USB ISO control register | USBISOC | 0 0 | |
| $028D_{16}$ | | | | |
| $028E_{16}$ | USB endpoint enable | USBEPEN | ? 0 0 0 | |
| $028F_{16}$ | | | | |
| $0290_{16}$ | USB DMA0 source register | USBSAR0 | $00_{16}$ | |
| $0291_{16}$ | | | | |
| $0292_{16}$ | USB DMA1 source register | USBSAR1 | $00_{16}$ | |
| $0293_{16}$ | | | | |
| $0294_{16}$ | USB DMA2 source register | USBSAR2 | $00_{16}$ | |
| $0295_{16}$ | | | | |
| $0296_{16}$ | USB DMA3 source register | USBSAR3 | $00_{16}$ | |
| $0297_{16}$ | | | | |
| $0298_{16}$ | USB EP0 control/status register | | $00_{16}$ | |
| $0299_{16}$ | | | | |
| $029A_{16}$ | USB EP0 max packet size register | | $08_{16}$ | |
| $029B_{16}$ | | | | |
| $029C_{16}$ | USB EP0 write count register | | $00_{16}$ | |
| $029D_{16}$ | | | | |
| $029E_{16}$ | USB EP1 IN control/status register | | $00_{16}$ | |
| $029F_{16}$ | | | | |
| $02A0_{16}$ | USB EP1 IN max packet size register | | $00_{16}$ | |
| $02A1_{16}$ | | | | |
| $02A2_{16}$ | USB EP1 IN FIFO configuration register | | | |
| $02A3_{16}$ | | | | |
| $02A4_{16}$ | USB EP2 IN control/status register | | $00_{16}$ | |
| $02A5_{16}$ | | | | |
| $02A6_{16}$ | USB EP2 IN max packet size register | | $00_{16}$ | |
| $02A7_{16}$ | | | | |
| $02A8_{16}$ | USB EP2 IN FIFO configuration register | | | |
| $02A9_{16}$ | | | | |
| $02AA_{16}$ | USB EP3 IN control/status register | | $00_{16}$ | |
| $02AB_{16}$ | | | | |
| $02AC_{16}$ | USB EP3 IN max packet size register | | $00_{16}$ | |
| $02AD_{16}$ | | | | |
| $02AE_{16}$ | USB EP3 IN FIFO configuration register | | | |
| $02AF_{16}$ | | | | |
| $02B0_{16}$ | USB EP4 IN control/status register | | $00_{16}$ | |
| $02B1_{16}$ | | | | |
| $02B2_{16}$ | USB EP4 IN max packet size register | | $00_{16}$ | |
| $02B3_{16}$ | | | | |
| $02B4_{16}$ | USB EP4 IN FIFO configuration register | | | |
| $02B5_{16}$ | | | | |
| $02B6_{16}$ | USB EP1 OUT control/status register | | $00_{16}$ | |
| $02B7_{16}$ | | | | |
| $02B8_{16}$ | USB EP1 OUT max packet size register | | $00_{16}$ | |
| $02B9_{16}$ | | | | |
| $02BA_{16}$ | USB EP1 OUT write count register | | $00_{16}$ | |
| $02BB_{16}$ | | | | |
| $02BC_{16}$ | USB EP1 OUT FIFO configuration register | | $00_{16}$ | |
| $02BD_{16}$ | | | | |
| $02BE_{16}$ | USB reserved | | | |
| $02BF_{16}$ | USB reserved | | | |

| Address | Register name | Acronym | Value after reset | |
|---|---|---|---|---|
| $02C0_{16}$ | USB EP2 OUT control/status register | | $00_{16}$ | |
| $02C1_{16}$ | | | | |
| $02C2_{16}$ | USB EP2 OUT max packet size register | | $00_{16}$ | |
| $02C3_{16}$ | | | | |
| $02C4_{16}$ | USB EP2 OUT write count register | | $00_{16}$ | |
| $02C5_{16}$ | | | | |
| $02C6_{16}$ | USB EP2 OUT FIFO configuration register | | | |
| $02C7_{16}$ | | | | |
| $02C8_{16}$ | USB EP3 OUT control/status register | | $00_{16}$ | |
| $02C9_{16}$ | | | | |
| $02CA_{16}$ | USB EP3 OUT max packet size register | | $00_{16}$ | |
| $02CB_{16}$ | | | | |
| $02CC_{16}$ | USB EP3 OUT write count register | | $00_{16}$ | |
| $02CD_{16}$ | | | | |
| $02CE_{16}$ | USB EP3 OUT FIFO configuration register | | | |
| $02CF_{16}$ | | | | |
| $02D0_{16}$ | USB EP4 OUT control/status register | | $00_{16}$ | |
| $02D1_{16}$ | | | | |
| $02D2_{16}$ | USB EP4 OUT max packet size register | | $00_{16}$ | |
| $02D3_{16}$ | | | | |
| $02D4_{16}$ | USB EP4 OUT write count register | | $00_{16}$ | |
| $02D5_{16}$ | | | | |
| $02D6_{16}$ | USB EP4 OUT FIFO configuration register | | | |
| $02D7_{16}$ | | | | |
| $02D8_{16}$ | USB reserved | | | |
| $02D9_{16}$ | USB reserved | | | |
| $02DA_{16}$ | USB reserved | | | |
| $02DB_{16}$ | USB reserved | | | |
| $02DC_{16}$ | USB reserved | | | |
| $02DD_{16}$ | USB reserved | | | |
| $02DE_{16}$ | USB reserved | | | |
| $02DF_{16}$ | USB reserved | | | |
| $02E0_{16}$<br>$02E1_{16}$ | USB EP0 IN FIFO | | | |
| $02E2_{16}$<br>$02E3_{16}$ | USB EP0 OUT FIFO | | | |
| $02E4_{16}$<br>$02E5_{16}$ | USB EP1 IN FIFO | | | |
| $02E6_{16}$<br>$02E7_{16}$ | USB EP1 OUT FIFO | | | |
| $02E8_{16}$<br>$02E9_{16}$ | USB EP2 IN FIFO | | | |
| $02EA_{16}$<br>$02EB_{16}$ | USB EP2 OUT FIFO | | | |
| $02EC_{16}$<br>$02ED_{16}$ | USB EP3 IN FIFO | | | |
| $02EE_{16}$<br>$02EF_{16}$ | USB EP3 OUT FIFO | | | |
| $02F0_{16}$<br>$02F1_{16}$ | USB EP4 IN FIFO | | | |
| $02F2_{16}$<br>$02F3_{16}$ | USB EP4 OUT FIFO | | | |
| $02F4_{16}$ | | | | |
| $02F5_{16}$ | | | | |
| $02F6_{16}$ | | | | |
| $02F7_{16}$ | | | | |
| $02F8_{16}$ | | | | |
| $02F9_{16}$ | | | | |
| $02FA_{16}$ | | | | |
| $02FB_{16}$ | | | | |
| $02FC_{16}$ | | | | |
| $02FD_{16}$ | | | | |
| $02FE_{16}$ | | | | |
| $02FF_{16}$ | | | | |

| Address | Register name | Acronym | Value after reset | |
|---|---|---|---|---|
| $0300_{16}$ | | | | |
| $0301_{16}$ | | | | |
| $0302_{16}$ | | | | |
| $0303_{16}$ | | | | |
| $0304_{16}$ | | | | |
| $0305_{16}$ | | | | |
| $0306_{16}$ | | | | |
| $0307_{16}$ | | | | |
| $0308_{16}$ | | | | |
| $0309_{16}$ | | | | |
| $030A_{16}$ | | | | |
| $030B_{16}$ | | | | |
| $030C_{16}$ | | | | |
| $030D_{16}$ | | | | |
| $030E_{16}$ | | | | |
| $030F_{16}$ | | | | |
| $0310_{16}$ | | | | |
| $0311_{16}$ | | | | |
| $0312_{16}$ | | | | |
| $0313_{16}$ | | | | |
| $0314_{16}$ | UART4 special mode register 4 | U4SMR4 | $00_{16}$ | |
| $0315_{16}$ | UART4 special mode register 3 | U4SMR3 | $00_{16}$ | |
| $0316_{16}$ | UART4 special mode register 2 | U4SMR2 | $00_{16}$ | |
| $0317_{16}$ | UART4 special mode register | U4SMR | $00_{16}$ | |
| $0318_{16}$ | UART4 transmit / receive mode register | U4MR | $00_{16}$ | |
| $0319_{16}$ | UART4 bit rate generator | U4BRG | | |
| $031A_{16}$<br>$031B_{16}$ | UART4 transmit buffer register | U4TB | | |
| $031C_{16}$ | UART4 transmit / receive control register 0 | U4C0 | $08_{16}$ | |
| $031D_{16}$ | UART4 transmit / receive control register 1 | U4C1 | $02_{16}$ | |
| $031E_{16}$<br>$031F_{16}$ | UART4 receive buffer register | U4RB | | |
| $0320_{16}$ | | | | |
| $0321_{16}$ | | | | |
| $0322_{16}$ | | | | |
| $0323_{16}$ | | | | |
| $0324_{16}$ | UART3 special mode register 4 | U3SMR4 | $00_{16}$ | |
| $0325_{16}$ | UART3 special mode register 3 | U3SMR3 | $00_{16}$ | |
| $0326_{16}$ | UART3 special mode register 2 | U3SMR2 | $00_{16}$ | |
| $0327_{16}$ | UART3 special mode register | U3SMR | $00_{16}$ | |
| $0328_{16}$ | UART3 transmit / receive mode register | U3MR | $00_{16}$ | |
| $0329_{16}$ | UART3 bit rate generator | U3BRG | | |
| $032A_{16}$<br>$032B_{16}$ | UART3 transmit buffer register | U3TB | | |
| $032C_{16}$ | UART3 transmit / receive control register 0 | U3C0 | $08_{16}$ | |
| $032D_{16}$ | UART3 transmit / receive control register 1 | U3C1 | $02_{16}$ | |
| $032E_{16}$<br>$032F_{16}$ | UART3 receive buffer register | U3RB | | |
| $0330_{16}$ | | | | |
| $0331_{16}$ | | | | |
| $0332_{16}$ | | | | |
| $0333_{16}$ | | | | |
| $0334_{16}$ | UART2 special mode register 4 | U2SMR4 | $00_{16}$ | |
| $0335_{16}$ | UART2 special mode register 3 | U2SMR3 | $00_{16}$ | |
| $0336_{16}$ | UART2 special mode register 2 | U2SMR2 | $00_{16}$ | |
| $0337_{16}$ | UART2 special mode register | U2SMR | $00_{16}$ | |
| $0338_{16}$ | UART2 transmit / receive mode register | U2MR | $00_{16}$ | |
| $0339_{16}$ | UART2 bit rate generator | U2BRG | | |
| $033A_{16}$<br>$033B_{16}$ | UART2 transmit buffer register | U2TB | | |
| $033C_{16}$ | UART2 transmit / receive control register 0 | U2C0 | $08_{16}$ | |
| $033D_{16}$ | UART2 transmit / receive control register 1 | U2C1 | $02_{16}$ | |
| $033E_{16}$<br>$033F_{16}$ | UART2 receive buffer register | U2RB | | |

| Address | Register name | Acronym | Value after reset |
|---|---|---|---|
| $0340_{16}$ | | | |
| $0341_{16}$ | | | |
| $0342_{16}$ | Timer A1-1 register | TA11 | |
| $0343_{16}$ | | | |
| $0344_{16}$ | Timer A1-2 register | TA12 | |
| $0345_{16}$ | | | |
| $0346_{16}$ | Timer A1-3 register | TA13 | |
| $0347_{16}$ | | | |
| $0348_{16}$ | Three-phase PWM control register 0 | INVC0 | $00_{16}$ |
| $0349_{16}$ | Three-phase PWM control register 1 | INVC1 | 0 0 0 0 ? 0 0 0 |
| $034A_{16}$ | Three-phase output buffer register 0 | IDB0 | $00_{16}$ |
| $034B_{16}$ | Three-phase output buffer register 1 | IDB1 | $00_{16}$ |
| $034C_{16}$ | Dead time timer | DTT | |
| $034D_{16}$ | Timer B2 interrupt occurance frequency set counter | ICTB2 | |
| $034E_{16}$ | | | |
| $034F_{16}$ | | | |
| $0350_{16}$ | | | |
| $0351_{16}$ | | | |
| $0352_{16}$ | | | |
| $0353_{16}$ | | | |
| $0354_{16}$ | | | |
| $0355_{16}$ | | | |
| $0356_{16}$ | | | |
| $0357_{16}$ | | | |
| $0358_{16}$ | | | |
| $0359_{16}$ | | | |
| $035A_{16}$ | | | |
| $035B_{16}$ | | | |
| $035C_{16}$ | | | |
| $035D_{16}$ | | | |
| $035E_{16}$ | | | |
| $035F_{16}$ | Interrupt cause select register | IFSR | $00_{16}$ |
| $0360_{16}$ | | | |
| $0361_{16}$ | | | |
| $0362_{16}$ | | | |
| $0363_{16}$ | | | |
| $0364_{16}$ | UART1 special mode register 4 | U1SMR4 | $00_{16}$ |
| $0365_{16}$ | UART1 special mode register 3 | U1SMR3 | $00_{16}$ |
| $0366_{16}$ | UART1 special mode register 2 | U1SMR2 | $00_{16}$ |
| $0367_{16}$ | UART1 special mode register | U1SMR | $00_{16}$ |
| $0368_{16}$ | UART1 transmit / receive mode register | U1MR | $00_{16}$ |
| $0369_{16}$ | UART1 bit rate generator | U1BRG | |
| $036A_{16}$ | UART1 transmit buffer register | U1TB | |
| $036B_{16}$ | | | |
| $036C_{16}$ | UART1 transmit / receive control register 0 | U1C0 | $08_{16}$ |
| $036D_{16}$ | UART1 transmit / receive control register 1 | U1C1 | $02_{16}$ |
| $036E_{16}$ | UART1 receive buffer register | U1RB | |
| $036F_{16}$ | | | |
| $0370_{16}$ | | | |
| $0371_{16}$ | | | |
| $0372_{16}$ | | | |
| $0373_{16}$ | | | |
| $0374_{16}$ | | | |
| $0375_{16}$ | | | |
| $0376_{16}$ | | | |
| $0377_{16}$ | | | |
| $0378_{16}$ | | | |
| $0379_{16}$ | | | |
| $037A_{16}$ | | | |
| $037B_{16}$ | | | |
| $037C_{16}$ | | | |
| $037D_{16}$ | | | |
| $037E_{16}$ | | | |
| $037F_{16}$ | | | |

| Address | Register name | Acronym | Value after reset |
|---|---|---|---|
| $0380_{16}$ | Count start flag | TABSR | $00_{16}$ |
| $0381_{16}$ | Clock prescaler reset flag | CPSRF | 0 |
| $0382_{16}$ | One-shot start flag | ONSF | 0 0 0 0 0 0 0 0 |
| $0383_{16}$ | Trigger select register | TRGSR | $00_{16}$ |
| $0384_{16}$ | Up-down flag | UDF | $00_{16}$ |
| $0385_{16}$ | | | |
| $0386_{16}$ $0387_{16}$ | Timer A0 | TA0 | |
| $0388_{16}$ $0389_{16}$ | Timer A1 | TA1 | |
| $038A_{16}$ $038B_{16}$ | Timer A2 | TA2 | |
| $038C_{16}$ $038D_{16}$ | Timer A3 | TA3 | |
| $038E_{16}$ $038F_{16}$ | Timer A4 | TA4 | |
| $0390_{16}$ $0391_{16}$ | Timer B0 | TB0 | |
| $0392_{16}$ $0393_{16}$ | Timer B1 | TB1 | |
| $0394_{16}$ $0395_{16}$ | Timer B2 | TB2 | |
| $0396_{16}$ | Timer A0 mode register | TA0MR | $00_{16}$ |
| $0397_{16}$ | Timer A1 mode register | TA1MR | $00_{16}$ |
| $0398_{16}$ | Timer A2 mode register | TA2MR | $00_{16}$ |
| $0399_{16}$ | Timer A3 mode register | TA3MR | $00_{16}$ |
| $039A_{16}$ | Timer A4 mode register | TA4MR | $00_{16}$ |
| $039B_{16}$ | Timer B0 mode register | TB0MR | 0 0 ? 0 0 0 0 |
| $039C_{16}$ | Timer B1 mode register | TB1MR | 0 0 ? 0 0 0 0 |
| $039D_{16}$ | Timer B2 mode register | TB2MR | 0 0 ? 0 0 0 0 |
| $039E_{16}$ | Timer B2 special mode register | TB2SC | 0 |
| $039F_{16}$ | Timer count source prescaler | TCSPR | 0 ? ? ? ? |
| $03A0_{16}$ | | | |
| $03A1_{16}$ | | | |
| $03A2_{16}$ | | | |
| $03A3_{16}$ | | | |
| $03A4_{16}$ | UART0 special mode register 4 | U0SMR4 | $00_{16}$ |
| $03A5_{16}$ | UART0 special mode register 3 | U0SMR3 | $00_{16}$ |
| $03A6_{16}$ | UART0 special mode register 2 | U0SMR2 | $00_{16}$ |
| $03A7_{16}$ | UART0 special mode register | U0SMR | $00_{16}$ |
| $03A8_{16}$ | UART0 transmit / receive mode register | U0MR | $00_{16}$ |
| $03A9_{16}$ | UART0 bit rate generator | U0BRG | |
| $03AA_{16}$ $03AB_{16}$ | UART0 transmit buffer register | U0TB | |
| $03AC_{16}$ | UART0 transmit / receive control register 0 | U0C0 | $08_{16}$ |
| $03AD_{16}$ | UART0 transmit / receive control register 1 | U0C1 | $02_{16}$ |
| $03AE_{16}$ $03AF_{16}$ | UART0 receive buffer register | U0RB | |
| $03B0_{16}$ | DMA2 cause select register | DM2SL | $00_{16}$ |
| $03B1_{16}$ | | | |
| $03B2_{16}$ | DMA3 cause select register | DM3SL | $00_{16}$ |
| $03B3_{16}$ | | | |
| $03B4_{16}$ | | | |
| $03B5_{16}$ | | | |
| $03B6_{16}$ | | | |
| $03B7_{16}$ | | | |
| $03B8_{16}$ | DMA0 cause select register | DM0SL | $00_{16}$ |
| $03B9_{16}$ | | | |
| $03BA_{16}$ | DMA1 cause select register | DM1SL | $00_{16}$ |
| $03BB_{16}$ | CRC mode register | CRCMR | 0 0 |
| $03BC_{16}$ $03BD_{16}$ | CRC data register | CRCD | |
| $03BE_{16}$ | CRC input register | CRCIN | |
| $03BF_{16}$ | | | |

| Address | Register name | Acronym | Value after reset | |
|---|---|---|---|---|
| $03C0_{16}$ | A-D register 0 | AD0 | | |
| $03C1_{16}$ | | | | |
| $03C2_{16}$ | A-D register 1 | AD1 | | |
| $03C3_{16}$ | | | | |
| $03C4_{16}$ | A-D register 2 | AD2 | | |
| $03C5_{16}$ | | | | |
| $03C6_{16}$ | A-D register 3 | AD3 | | |
| $03C7_{16}$ | | | | |
| $03C8_{16}$ | A-D register 4 | AD4 | | |
| $03C9_{16}$ | | | | |
| $03CA_{16}$ | A-D register 5 | AD5 | | |
| $03CB_{16}$ | | | | |
| $03CC_{16}$ | A-D register 6 | AD6 | | |
| $03CD_{16}$ | | | | |
| $03CE_{16}$ | A-D register 7 | AD7 | | |
| $03CF_{16}$ | | | | |
| $03D0_{16}$ | | | | |
| $03D1_{16}$ | | | | |
| $03D2_{16}$ | | | | |
| $03D3_{16}$ | | | | |
| $03D4_{16}$ | A-D control register 2 | ADCON2 | 0 | |
| $03D5_{16}$ | | | | |
| $03D6_{16}$ | A-D control register 0 | ADCON0 | 0 0 0 0 0 ? ? ? | |
| $03D7_{16}$ | A-D conrol register 1 | ADCON1 | $00_{16}$ | |
| $03D8_{16}$ | | | | |
| $03D9_{16}$ | | | | |
| $03DA_{16}$ | | | | |
| $03DB_{16}$ | Frequency synthesizer clock control | FSCCR | $00_{16}$ | |
| $03DC_{16}$ | Frequency synthesizer control | FSC | $60_{16}$ | |
| $03DD_{16}$ | Frequency synthesizer multiplier control | FSM | $FF_{16}$ | |
| $03DE_{16}$ | Frequency synthesizer prescaler control | FSP | $FF_{16}$ | |
| $03DF_{16}$ | Frequency synthesizer divider | FSD | $FF_{16}$ | |
| $03E0_{16}$ | Port P0 | P0 | | |
| $03E1_{16}$ | Port P1 | P1 | | |
| $03E2_{16}$ | Port P0 direction register | PD0 | $00_{16}$ | |
| $03E3_{16}$ | Port P1 direction register | PD1 | $00_{16}$ | |
| $03E4_{16}$ | Port P2 | P2 | | |
| $03E5_{16}$ | Port P3 | P3 | | |
| $03E6_{16}$ | Port P2 direction register | PD2 | $00_{16}$ | |
| $03E7_{16}$ | Port P3 direction register | PD3 | $00_{16}$ | |
| $03E8_{16}$ | | | | |
| $03E9_{16}$ | | | | |
| $03EA_{16}$ | | | | |
| $03EB_{16}$ | | | | |
| $03EC_{16}$ | Port P6 | P6 | | |
| $03ED_{16}$ | Port P7 | P7 | | |
| $03EE_{16}$ | Port P6 direction register | PD6 | $00_{16}$ | |
| $03EF_{16}$ | Port P7 direction register | PD7 | $00_{16}$ | |
| $03F0_{16}$ | Port P8 | P8 | | |
| $03F1_{16}$ | | | | |
| $03F2_{16}$ | Port P8 direction register | PD8 | $00_{16}$ | |
| $03F3_{16}$ | | | | |
| $03F4_{16}$ | Port P10 | P10 | | |
| $03F5_{16}$ | | | | |
| $03F6_{16}$ | Port P10 direction register | PD10 | $00_{16}$ | |
| $03F7_{16}$ | | | | |
| $03F8_{16}$ | | | | |
| $03F9_{16}$ | | | | |
| $03FA_{16}$ | P2 drive capacity | P2DR | | |
| $03FB_{16}$ | PWM drive capacity | PWMDR | | |
| $03FC_{16}$ | Pull-up control register 0 | PUR0 | $00_{16}$ | |
| $03FD_{16}$ | Pull-up control register 1 | PUR1 | $00_{16}$ | |
| $03FE_{16}$ | | | | |
| $03FF_{16}$ | | | | |