

Preliminary Specification

Specifications in this manual are tentative and subject to change

Mitsubishi microcomputers

M30245 Group



Features

SINGLE-CHIP 16-BIT CMOS MICROCOMPUTER

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 ($f(X_{IN})=12\text{MHz}$, $V_{CC}=3\text{V}$ 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 ($f(X_{IN})=12\text{MHz}$)
- 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, I²S, I²C
- 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.

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Pin Configuration

SINGLE-CHIP 16-BIT CMOS MICROCOMPUTER

1.3 Pin Configuration

Figure 1.1 shows the pin configuration (top view).

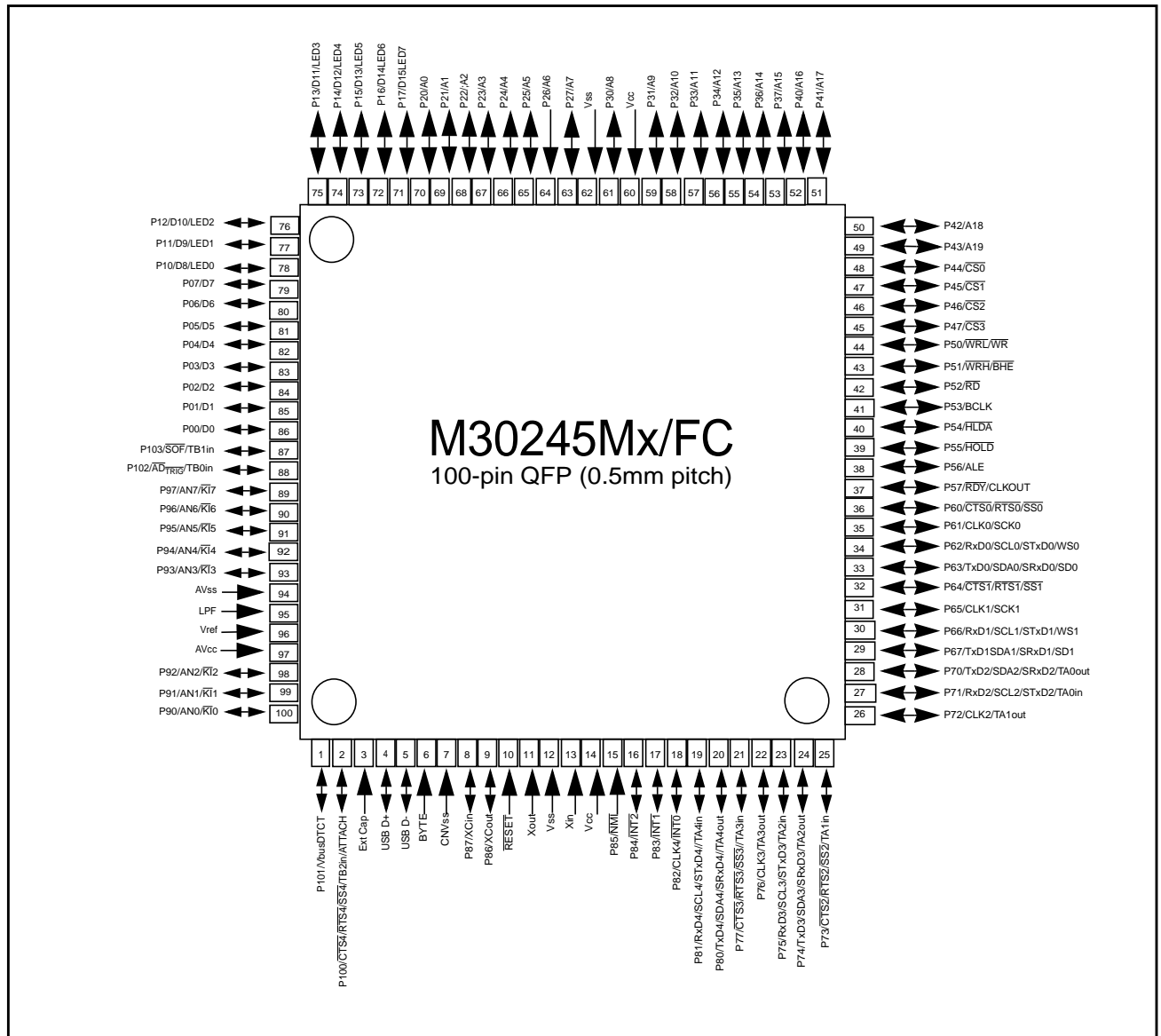


Figure 1.1: Pin Configuration (top view)

Block Diagram

1.4 Block Diagram

Figure 1.2 is a block diagram of the M30245 group.

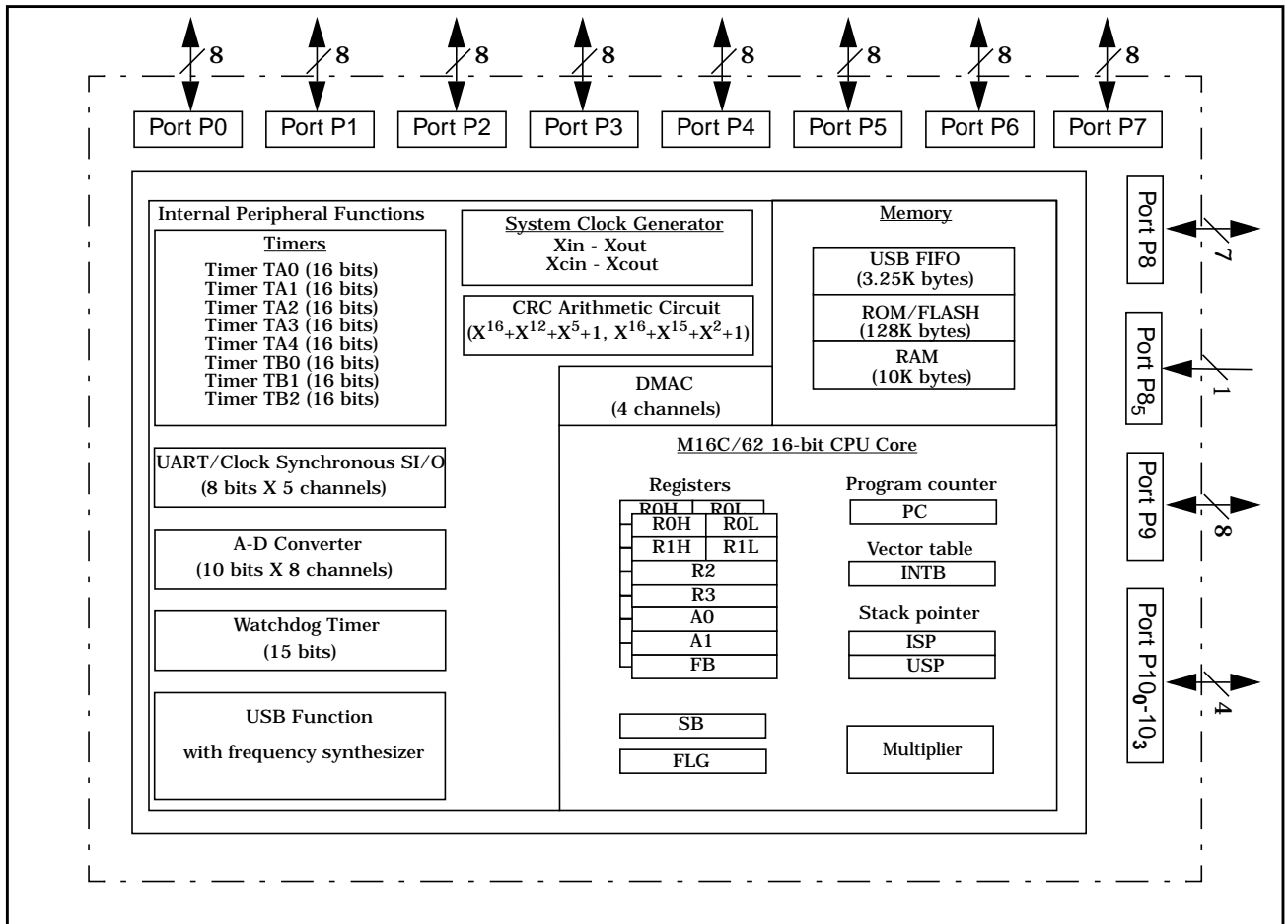


Figure 1.2: Block diagram of M30245 group

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Performance outline

SINGLE-CHIP 16-BIT CMOS MICROCOMPUTER

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 $f(X_{in})= 12$ MHz, $V_{cc} = 3V$
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, $f(X_{IN}) = 12$ MHz
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

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Performance outline

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.

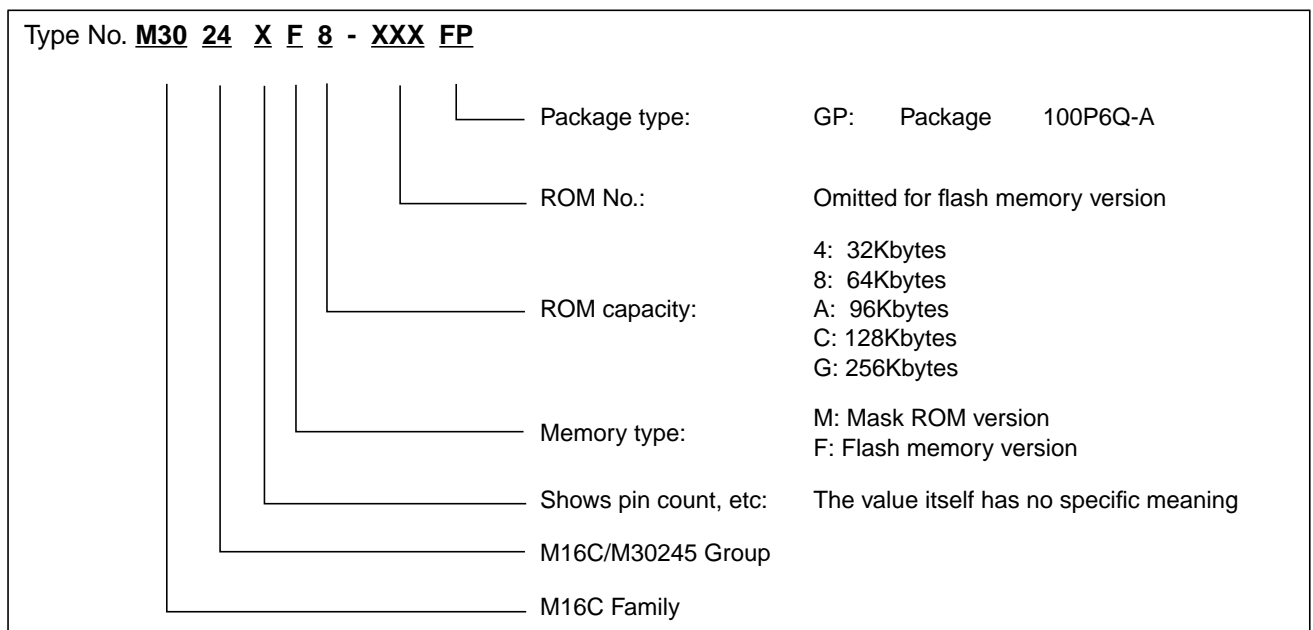


Figure 1.3: Type number, memory size, and package

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

SFR MAP

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 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 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			
0011 ₁₆	Address match interrupt register 0	RMAD0	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			
0021 ₁₆	DMA0 source pointer	SAR0	
0022 ₁₆			
0023 ₁₆			
0024 ₁₆			
0025 ₁₆	DMA0 destination pointer	DAR0	
0026 ₁₆			
0027 ₁₆			
0028 ₁₆			
0029 ₁₆	DMA0 transfer counter	TCR0	
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			
0031 ₁₆	DMA1 source pointer	SAR1	
0032 ₁₆			
0033 ₁₆			
0034 ₁₆			
0035 ₁₆	DMA1 destination pointer	DAR1	
0036 ₁₆			
0037 ₁₆			
0038 ₁₆			
0039 ₁₆	DMA1 transfer counter	TCR1	
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

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SFR MAP

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 control 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
005E ₁₆	INT1 interrupt control register	INT1IC	0	0	?	0
005F ₁₆	INT2 interrupt control register	INT2IC	0	0	?	0
0060 ₁₆						
0061 ₁₆	DMA2 source pointer	SAR2				
0062 ₁₆						
0063 ₁₆						
0064 ₁₆						
0065 ₁₆	DMA2 destination pointer	DAR2				
0066 ₁₆						
0067 ₁₆						
0068 ₁₆						
0069 ₁₆	DMA2 transfer counter	TCR2				
006A ₁₆						
006B ₁₆						
006C ₁₆	DMA2 control register	DM2CON	0	0	0	0
006D ₁₆						
006E ₁₆						
006F ₁₆						
0070 ₁₆						
0071 ₁₆	DMA3 source pointer	SAR3				
0072 ₁₆						
0073 ₁₆						
0074 ₁₆						
0075 ₁₆	DMA3 destination pointer	DAR3				
0076 ₁₆						
0077 ₁₆						
0078 ₁₆						
0079 ₁₆	DMA3 transfer counter	TCR3				
007A ₁₆						
007B ₁₆						
007C ₁₆	DMA3 control register	DM3CON	0	0	0	0
007D ₁₆						
007E ₁₆						
007F ₁₆						

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SFR MAP

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		

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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	USB EP0 IN FIFO		
02E1 ₁₆			
02E2 ₁₆	USB EP0 OUT FIFO		
02E3 ₁₆			
02E4 ₁₆	USB EP1 IN FIFO		
02E5 ₁₆			
02E6 ₁₆	USB EP1 OUT FIFO		
02E7 ₁₆			
02E8 ₁₆	USB EP2 IN FIFO		
02E9 ₁₆			
02EA ₁₆	USB EP2 OUT FIFO		
02EB ₁₆			
02EC ₁₆	USB EP3 IN FIFO		
02ED ₁₆			
02EE ₁₆	USB EP3 OUT FIFO		
02EF ₁₆			
02F0 ₁₆	USB EP4 IN FIFO		
02F1 ₁₆			
02F2 ₁₆	USB EP4 OUT FIFO		
02F3 ₁₆			
02F4 ₁₆			
02F5 ₁₆			
02F6 ₁₆			
02F7 ₁₆			
02F8 ₁₆			
02F9 ₁₆			
02FA ₁₆			
02FB ₁₆			
02FC ₁₆			
02FD ₁₆			
02FE ₁₆			
02FF ₁₆			

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SFR MAP

SINGLE-CHIP 16-BIT CMOS MICROCOMPUTER

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	UART4 transmit buffer register	U4TB		
031B ₁₆				
031C ₁₆	UART4 transmit / receive control register 0	U4C0	08 ₁₆	
031D ₁₆	UART4 transmit / receive control register 1	U4C1	02 ₁₆	
031E ₁₆	UART4 receive buffer register	U4RB		
031F ₁₆				
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	UART3 transmit buffer register	U3TB		
032B ₁₆				
032C ₁₆	UART3 transmit / receive control register 0	U3C0	08 ₁₆	
032D ₁₆	UART3 transmit / receive control register 1	U3C1	02 ₁₆	
032E ₁₆	UART3 receive buffer register	U3RB		
032F ₁₆				
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	UART2 transmit buffer register	U2TB		
033B ₁₆				
033C ₁₆	UART2 transmit / receive control register 0	U2C0	08 ₁₆	
033D ₁₆	UART2 transmit / receive control register 1	U2C1	02 ₁₆	
033E ₁₆	UART2 receive buffer register	U2RB		
033F ₁₆				

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SFR MAP

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 occurrence 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				
036B ₁₆	UART1 transmit buffer register	U1TB		
036C ₁₆	UART1 transmit / receive control register 0	U1C0	08 ₁₆	
036D ₁₆	UART1 transmit / receive control register 1	U1C1	02 ₁₆	
036E ₁₆				
036F ₁₆	UART1 receive buffer register	U1RB		
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				

Preliminary Specification

Specifications in this manual are tentative and subject to change

Mitsubishi microcomputers

M30245 Group



SFR MAP

SINGLE-CHIP 16-BIT CMOS MICROCOMPUTER

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	Timer A0	TA0	
0387 ₁₆			
0388 ₁₆	Timer A1	TA1	
0389 ₁₆			
038A ₁₆	Timer A2	TA2	
038B ₁₆			
038C ₁₆	Timer A3	TA3	
038D ₁₆			
038E ₁₆	Timer A4	TA4	
038F ₁₆			
0390 ₁₆	Timer B0	TB0	
0391 ₁₆			
0392 ₁₆	Timer B1	TB1	
0393 ₁₆			
0394 ₁₆	Timer B2	TB2	
0395 ₁₆			
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	UART0 transmit buffer register	U0TB	
03AB ₁₆			
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	CRC data register	CRCD	
03BD ₁₆			
03BE ₁₆	CRC input register	CRCIN	
03BF ₁₆			

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SFR MAP

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 0 ? ? ?	
03D7 ₁₆	A-D control 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				