

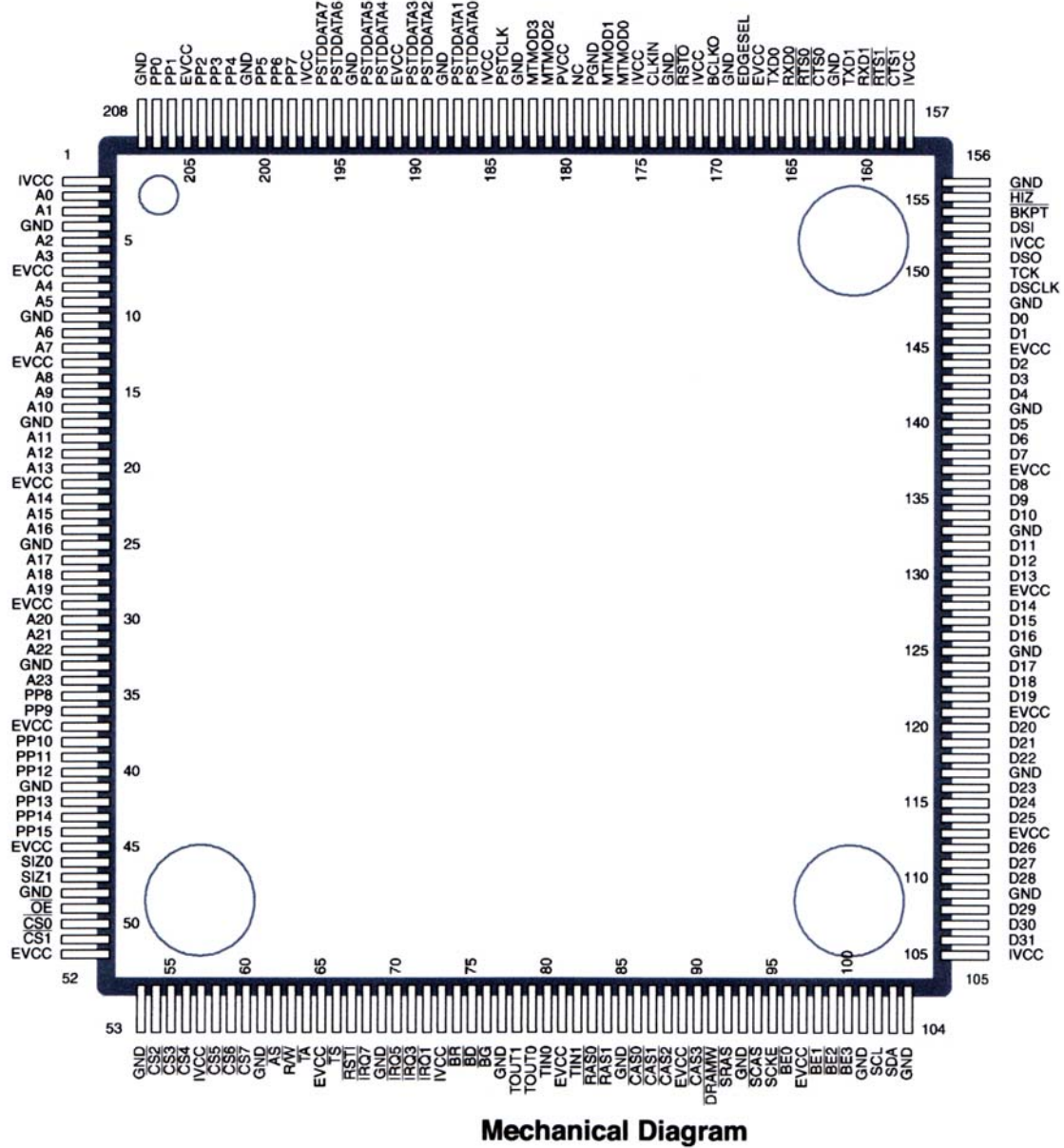


**Le microprocesseur Cold FIRE 5307**

**C. GUIRAUDIE**

**6.1 - brochage du composant MCF5307.**

Brochage 5307 == 5407. Ici Brochage du 5407 avec les broches IVCC @1,8 volts.  
Ces broches sont à 3,3 Volts dans la version 5307.

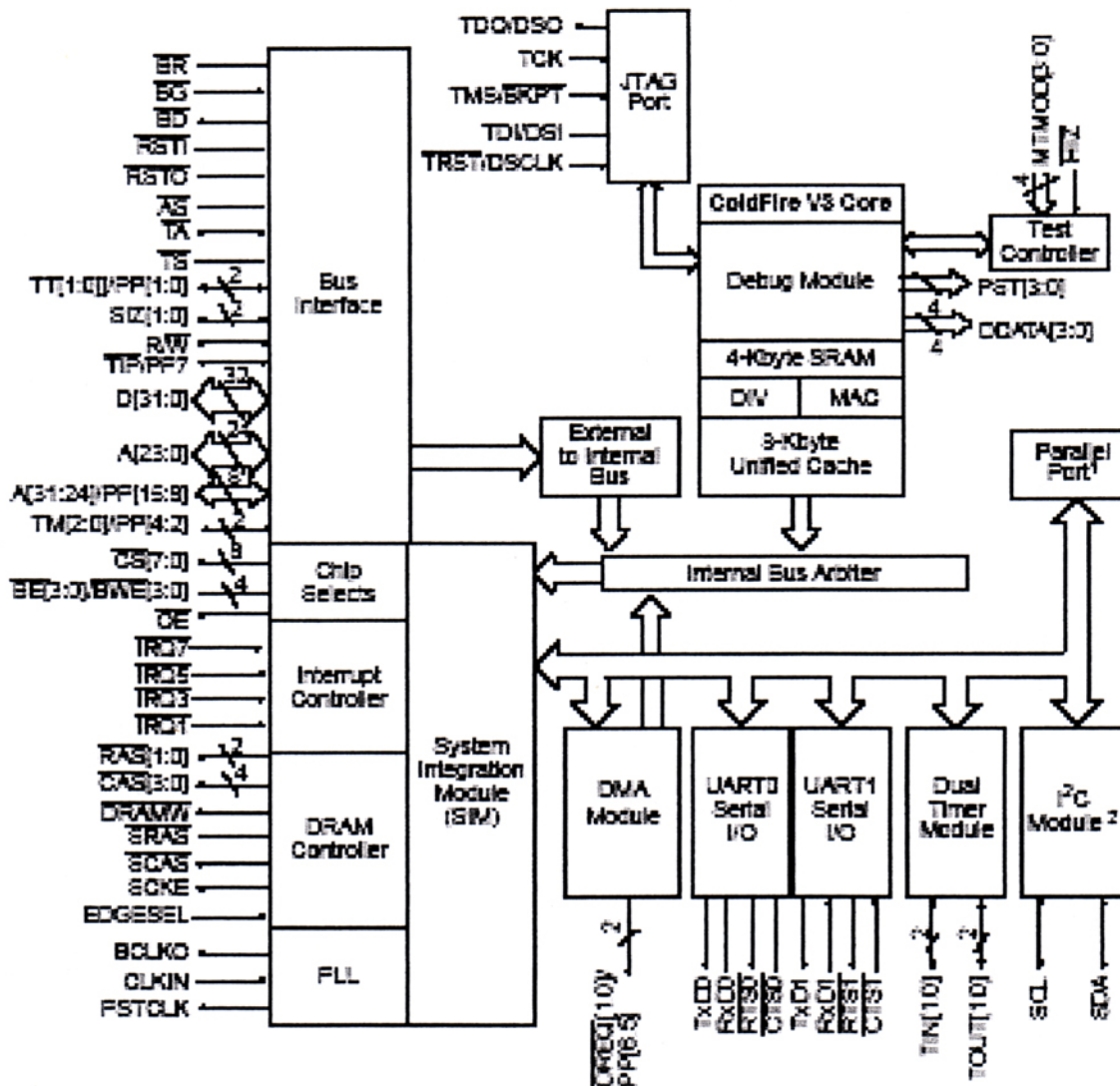




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6.2 - Brochage fonctionnel associé



<sup>1</sup> Note: Parallel port pins (PPn) are multiplexed with other bus functions as shown.

<sup>2</sup> PC is a Philips proprietary interface



**7.1 - Mapping des registres qui n'appartiennent pas au modèle de programmation**

**Table B-1. SIM Registers**

| MBAR offset   | [31:24]                                  | [23:16]                                     | [15:8]  | [7:0]                                     |
|---------------|--|---|---|---|
| 0x000         | Reset status register (RSR)              | System protection control register (SYPCR)I | Software watchdog interrupt vector register (SWIVR) | Software watchdog service register (SWSR) |
| 0x004         | Pin assignment register (PAR)            |   | Interrupt port assignment register (IRQPAR)         | Reserved                                  |
| 0x008         | PILL control (PLLCR)                     | Reserved                                    |   |   |
| 0X00C         | Default bus master park register (MPARK) | Reserved                                    |   |   |
| 0X010 - 0x03C | Reserved                                 |   |   |   |

**Table B-2. Interrupt Controller Registers**

| MBAR offset                               | [31:24]                          | [23:16]        | [15:8]         | [7:0]                     |
|---|----------------------------------|----------------|----------------|---------------------------|
| <b>Interrupt Registers</b>                |                                  |                |                |                           |
| 0x040                                     | Interrupt pending register (IPR) |                |                |                           |
| 0x044                                     | Interrupt mask register IMR      |                |                |                           |
| 0x048                                     | Reserved                         |                |                | Autovector register (AVR) |
| <b>Interrupt Control Registers (ICRs)</b> |                                  |                |                |                           |
| 0x04C                                     | Software watchdog timer (ICR0)   | Timer 0 (ICR1) | Timer 1 (ICR2) | 12C (ICR3)                |
| 0x050                                     | UART0 (ICR4)                     | UART1 (ICR5)   | DMA0 (ICR6)    | DMA1 (ICR7)               |
| 0x054                                     | DMA2 (ICR8)                      | DIVIA3 (ICR9)  | Reserved       |                           |



Table B3 -Chip-select registers

| MBAR Offset | [31:24]                                      | [23:16] | [15:8]                                       | [7:0] |
|-------------|--|---------|--|-------|
| 0X080       | Chip-select address register-bank 0 (CSAR0)  |         | Reserved                                     |       |
| 0x084       | Chip-select mask register-bank 0 (CSMR0)     |         |  |       |
| 0x088       | Reserved                                     |         | Chip-select control register-bank 0 (CSCR0)  |       |
| 0x08C       | Chip-select address register-bank 1 (CSAR1)  |         | Reserved                                     |       |
| 0X090       | Chip-select mask register-bank 1 (CSMR1)     |         |  |       |
| 0x094       | Reserved                                     |         | Chip-select control register-bank I (CSCR1)  |       |
| 0x098       | Chip-select address register-bank 2 (CSAR2)  |         | Reserved                                     |       |
| 0X09C       | Chip-select mask register--bank 2 (CSMR2)    |         |  |       |
| 0x0A0       | Reserved                                     |         | Chip-select control register--bank 2 (CSCR2) |       |
| 0x0A4       | Chip-select address register-bank 3 (CSAR3)  |         | Reserved                                     |       |
| 0x0A8       | Chip-select mask register-bank 3 (CSMR3)     |         |  |       |
| 0x0AC       | Reserved                                     |         | Chip-select control register-bank 3 (CSCR3)  |       |
| 0x0B0       | Chip-select address register-bank 4 (CSAR4)  |         | Reserved'                                    |       |
| 0x0B4       | Chip-select mask register-bank 4 (CSMR4)     |         |  |       |
| 0x0B8       | Reserved                                     |         | Chip-select control register-bank 4 (CSCR4)  |       |
| 0x0BC       | Chip-select address register-bank 5 (CSAR5)  |         | Reservedl                                    |       |
| 0xDC0       | Chip-select mask register-bank 5 (CSMR5)     |         |  |       |
| 0x0C4       | Reserved                                     |         | Chip-select control register-bank 5 (CSCR5)  |       |
| 0x0C8       | Chip-select address register--bank 6 (CSAR6) |         | Reserved'                                    |       |
| 0X0CC       | Chip-select mask register-bank 6 (CSMR6)     |         |  |       |
| 0x0D0       | Reserved                                     |         | Chip-select control register-bank 6 (CSCR6)  |       |
| 0x0D4       | Chip-select address register-bank 7 (CSAR7)  |         | Reserved'                                    |       |
| 0x0D8       | Chip-select mask register-bank 7 (CSMR7)     |         |  |       |
| 0x0DC       | Reserved                                     |         | Chip-select control register-bank 7 (CSCR7)  |       |



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**Table B-3. –Chip-Select Registers, (Continued)**

| MBAR Offset | [31:24]                                     | 123:16] | [15:8]                                       | [7:0] |
|-------------|---|---------|--|-------|
| MBAR Offset | [31:24]                                     | [23:16] | [15:8]                                       | [7:0] |
| 0X080       | Chip-select address register-bank 0 (CSAR0) |         | Reserved                                     |       |
| 0x084       | Chip-select mask register--bank 0 (CSMR0)   |         |  |       |
| 0x088       | Reserved                                    |         | Chip-select control register-bank 0 (CSCR0)  |       |
| 0x08C       | Chip-select address register-bank 1 (CSAR1) |         | Reserved                                     |       |
| 0X090       | Chip-select mask register-bank 1 (CSMR1)    |         |  |       |
| 0x094       | Reserved                                    |         | Chip-select control register-bank 1 (CSCR1)  |       |
| 0x098       | Chip-select address register-bank 2 (CSAR2) |         | Reserved                                     |       |
| 0X09C       | Chip-select mask register-bank 2 (CSMR2)    |         |  |       |
| 0x0A0       | Reserved                                    |         | Chip-select control register-bank 2 (CSCR2)  |       |
| 0x0A4       | Chip-select address register-bank 3 (CSAR3) |         | Reserved                                     |       |
| 0x0A8       | Chip-select mask register-bank 3 (CSMR3)    |         |  |       |
| 0x0AC       | Reserved                                    |         | Chip-select control register-bank 3 (CSCR3)  |       |
| 0x0B0       | Chip-select address register-bank 4 (CSAR4) |         | Reserved                                     |       |
| 0x0B4       | Chip-select mask register-bank 4 (CSMR4)    |         |  |       |
| 0x0B8       | Reserved                                    |         | Chip-select control register--bank 4 (CSCR4) |       |

**Table B-4. DRAM Controller Registers**

| MBAR Offset | [31:24]                                     | 123:161 | [15:8]   | [7:0] |
|-------------|---|---------|----------|-------|
| 0X100       | DRAM control register (DCR)                 |         | Reserved |       |
| 0x104       | Reserved                                    |         |          |       |
| 0x108       | DRAM address and control register 0 (DACR0) |         |          |       |
| 0X10C       | DRAM mask register block 0 (DM R0)          |         |          |       |
| 0X110       | DRAM address and control register 1 (DACR1) |         |          |       |
| 0x114       | DRAM mask register block 1 (DMR1)           |         |          |       |



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**Table B-5. General-Purpose Timer Registers**

| MBAR offset | [31:24]                                     | 123:16] | [15:8]   | [7:0] |
|-------------|---|---------|----------|-------|
| 0x140       | Timer 0 mode register (TIVIR0) [p. 13-3]    |         | Reserved |       |
| 0x144       | Timer 0 reference register (TRR0) [p. 13-4] |         | Reserved |       |
| 0x148       | Timer 0 capture register (TCR0) [p. 13-4]   |         | Reserved |       |
| 0x14C       | Timer 0 counter (TCN0) [p. 13-5]            |         | Reserved |       |
| 0x150       | Reserved Timer 0 event register (TER0)      |         | Reserved |       |
| 0x180       | Timer 1 mode register (TIVIR1) [p. 13-3]    |         | Reserved |       |
| 0x184       | Timer 1 reference register (TRR1) [p. 13-4] |         | Reserved |       |
| 0x188       | Timer 1 capture register (TCR1) [p. 13-4]   |         | Reserved |       |
| 0x18C       | Timer 1 counter (TCN1) [p. 13-5]            |         | Reserved |       |
| 0X190       | Reserved Timer 1 event register             |         | Reserved |       |

**Table B-6. UART0 Control Registers**

| MBAR Offset                    | [31:24]                                     | [23:16] | [15:8] | 17:01 |
|--------------------------------|---|---------|--------|-------|
| <b>UART0 Control Registers</b> |   |         |        |       |
| 0X1C0                          | UART mode registers' (UM R1 n) , (UMR2n)    |         |        |       |
| 0x1C4                          | (Read) UART status registers-(USRn)         |         |        |       |
|                                | (Write) UART clock-select register'-(UCSRn) |         |        |       |
| 0x1C8                          | (Read) Do not access2 -                     |         |        |       |
|                                | (Write) UART command -registers,-(UCRn)     |         |        |       |
| 0X1CC                          | (Read) UART receiver - buffers--(URBn)      |         |        |       |
|                                | (Write) UART transmitter -buffers--(UTBn) ] |         |        |       |



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**Table B-6. UART0 Control Registers (Continued)**

| MBAR Offset                  | [31:24]   | [23:16] | [15:8] | [7:01] |
|------------------------------|---|---------|--------|--------|
| <b>0x1D0</b>                 | (Read) UART input port - change registers-(UIPCRn)            |         |        |        |
|                              | (Write) UART auxiliary -control registers--(UACRn)            |         |        |        |
| <b>0x1D4</b>                 | (Read) UART interrupt - status registers-(UISRn)              |         |        |        |
|                              | (Write) UART interrupt -mask registers-(UIMRn)                |         |        |        |
| <b>0x1D8</b>                 | UART divider upper registers-(UDUn)                           |         |        |        |
| <b>0x1DC</b>                 | UART divider lower registers-(UDLn)                           |         |        |        |
| <b>0x1E0</b><br><b>0x1EC</b> | Do not access <sup>2</sup>                                    |         |        |        |
| <b>0x1F0</b>                 | UART interrupt vector register--(UIVRn)                       |         |        |        |
| <b>0x1F4</b>                 | (Read) UART input port registers-(UIPn)                       |         |        |        |
|                              | (Write) Do not access   |         |        |        |
| <b>0x1F8</b>                 | (Read) Do not access 2 -                                      |         |        |        |
|                              | (Write) UART output port bit set command registers-(UOP10)    |         |        |        |
| <b>0x1FC</b>                 | (Read) Do not access 2 -                                      |         |        |        |
|                              | (Write) UART output port bit reset command registers-(UOP0n3) |         |        |        |

<sup>1</sup>

UIVIR1 n, UIVIR2n, UCSRn, and UACRn[BRG] should be changed only after the receiver/transmitter is issued a software reset command. That is, if channel operation is not disabled, undesirable results may occur.

<sup>2</sup> This address is for factory testing. Reading this location results in undesired effects and possible incorrect transmission or reception of characters. Register contents may also be changed.



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**Table B-7. UART1 Control Registers**

| MBAR offset                     | [31:24]  | [23:16]                            | [15:8]                                       | [7:0]                                     |
|---------------------------------|--|------------------------------------|--|---|
| <b>UAFTT1 Control Registers</b> |  |                                    |  |   |
| 0x200                           | UART mode registers'--<br>(UMR1 n),<br>(LIMR2n)    | Rx FIFO threshold register-(RXLVL) | Modem control register--(MODCTL)             | Tx FIFO threshold register--(TXLVL)       |
| 0x204                           | (Read) UART status registers-(USRn)                | -                                  | (Read) Rx samples available register--(RSMP) | (Read) Tx space available register-(TSPC) |
|                                 | (Write) UART clock-select register-(UCSRn)         |                                    |  |   |
| 0x208                           | (Read) Do not access <sup>2</sup>                  |                                    |  |   |
|                                 | (Write) UART command - registers-(UCRn)            |                                    |  |   |
| 0x20C                           | (Read) UART receiver buffers--(URBn)               |                                    |  |   |
|                                 | (Write) UART transmitter buffers--(UTBn)           |                                    |  |   |
| 0x210                           | (Read) UART input port -change registers-(UIPCRn)  |                                    |  |   |
|                                 | (Write) UART auxiliary -control registers--(UACRn) |                                    |  |   |
| 0x214                           | (Read) UART interrupt status registers-(UISRn)     |                                    |  |   |
|                                 | (Write) UART interrupt -mask registers-(UIMRn)     |                                    |  |   |
| 0x218                           | UART divider upper registers-(UDUn)                |                                    |  |   |
| 0x21C                           | UART divider lower registers-(UDLn)                |                                    |  |   |
| 0x220-0x22C                     | Do not access <sup>2</sup>                         |                                    |  |   |





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**Table B-7. UART1 Control Registers (Continued)**

| MBAR offset | [31:24]   | [23:16]   | [5:8]   | [7:0]  |
|-------------|---|---|---|--|
| 0x230       | UART interrupt vector register--(UIVRn)                       |   |   |  |
| 0x234       | (Read) UART input port registers-(UIPn)                       |   |   |  |
|             | (Write) Do not access   |   |   |  |
| 0x238       | (Read) Do not access  |   |   |  |
|             | (Write) UART output port bit set command registers-(UOPIn3)   |   |   |  |
| 0x23C       | (Read) Do not access 2  |   |   |  |
|             | (Write) UART output port bit reset command registers-(UOPon3) |   |   |  |
| 0x200       | UART mode registerM4--(UMR1n), (UMR2n)                        | Rx FIFO threshold register-(RXLVL) (UART1 only) | Modem control register--(MODCTL) (UART1 only) | Tx FIFO threshold register--(TXLVL) (UART1 only) |
| 0x204       | (Read) UART status register--(USRn)                           |   |   |  |
|             | (Write) UART clock-select register'-(UCSRn)                   |   |   |  |

1 UMR1 n, UMR2n, UCSRn, and UACRn[BRG] should be changed only after the receiver/transmitter is issued a software reset command. That is, if channel operation is not disabled, undesirable results may occur.

2 This address is for factory testing. Reading this location results in undesired effects and possible incorrect transmission or reception of characters. Register contents may also be changed.

3 Address-triggered commands

4 UMR1 n, UMR2n, UCSRn, and UACRn[BRG] should be changed only after the receiver/transmitter is issued a software reset command. That is, if channel operation is not disabled, undesirable results may occur.

**Table B-8. Parallel Port Memory Map**

| MBAR Offset | [31:24]                                       | [23:16] | [15:8]   | [7:0] |
|-------------|---|---------|----------|-------|
| 0x244       | Parallel port data direction register (PADDR) |         | Reserved |       |
| 0x248       | Parallel port data register (PADAT)           |         | Reserved |       |



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**Table B-9. I<sup>2</sup>C Interface Memory Map**

| MBAR Offset | [31:24]  | [23:16]  | [15:8] | [7:0] |
|-------------|--|----------|--------|-------|
| 0x280       | I <sup>2</sup> C address register (IADR)           | Reserved |        |       |
| 0x284       | I <sup>2</sup> C frequency divider register (IFDR) | Reserved |        |       |
| 0x288       | I <sup>2</sup> C control register (I2CR)           | Reserved |        |       |
| 0x28C       | I <sup>2</sup> C status register (I2SR)            | Reserved |        |       |
| 0x290       | I <sup>2</sup> C data I/O register (I2DR)          | Reserved |        |       |

**Table B-10. DMA Controller Registers**

| MBAR offset | [31:24]                                | [23:16]                      | [15:8] | [7:0] |
|-------------|--|------------------------------|--------|-------|
| 0X300       | Source address register 0 (SAR0)       |                              |        |       |
| 0x304       | Destination address register 0 (DAR0)  |                              |        |       |
| 0x308       | DMA control register 0 (DCR0)          |                              |        |       |
| 0x30C       | Reserved                               | Byte count register 0 (BCR0) |        |       |
| 0x310       | DMA status register 0 (DSR0)           | Reserved                     |        |       |
| 0x314       | DMA interrupt vector register 0 (DSR0) | Reserved                     |        |       |
| 0x340       | Source address register I (SAR1)       |                              |        |       |
| 0x344 I     | Destination address register 1 (DAR1)  |                              |        |       |
| 0x348       | DMA control register 1 (DCR1)          |                              |        |       |
| 0x34C       | Reserved                               | Byte count register 1 (BCR1) |        |       |
| 0x350       | DMA status register 1 (DSR1)           | Reserved                     |        |       |
| 0x354       | DMA interrupt vector register 1 (DSR1) | Reserved                     |        |       |
| 0x380       | Source address register 2 (SAR2)       |                              |        |       |
| 0x384       | Destination address register 2 (DAR2)  |                              |        |       |
| 0x388       | DMA control register 2 (DCR2)          |                              |        |       |
| 0x38C       | Reserved                               | Byte count register 2 (BCR2) |        |       |
| 0X390       | DMA status register 2 (DSR2)           | Reserved                     |        |       |



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**Table B-10. DMA Controller Registers (Continued)**

| <b>MBAR<br/>Offset</b> | <b>[31:24]</b>   | <b>[23:16]</b>                      | <b>115:8]</b> | <b>[7:0]</b> |
|------------------------|--|-------------------------------------|---------------|--------------|
| <b>0X394</b>           | <b>DMA interrupt<br/>vector<br/>register 2<br/>(DIVR2)</b> | <b>Reserved</b>                     |               |              |
| <b>0x3C0</b>           | <b>Source address register 3 (SAR3)</b>                    |                                     |               |              |
| <b>0x3C4</b>           | <b>Destination address register 3 (DAR3)</b>               |                                     |               |              |
| <b>0x3C8</b>           | <b>DMA control register 3 (DCR3)</b>                       |                                     |               |              |
| <b>0x3CC</b>           | <b>Reserved</b>  | <b>Byte count register 3 (BCR3)</b> |               |              |
| <b>0x3D0</b>           | <b>DMA status<br/>register 3<br/>(DSR3)</b>                | <b>Reserved</b>                     |               |              |
| <b>0x3D4</b>           | <b>DMA interrupt<br/>vector<br/>register 3<br/>(DIVR3)</b> | <b>Reserved</b>                     |               |              |