# phyCORE-i.MX6 EIM

- 
- EIM
- 

- EIM Asynchronous Timing Parameters https://www.nxp.com/docs/en/application-note/AN2680.pdf
- i.MX6 reference manual
- 104MHz

- 
  - 
  - 
- 
  - 
  - 
  - Burst

**/**

- 
  - 
- 
  - WR
  - 

- page4~32word
- Burst

**Burst**

blocked URL

https://slideplayer.com/slide/3893463/

/

## EIM

| | |
|---|---|
| D[31:0] | |
| AD[15:0] | / |
| ADDR[25:16] | |
| CS#[5:0] | |
| EB#[3:0] | 32 |
| OE | |
| RW | |
| BCLK | |
| LBA | burst |
| WAIT/DTACK_B | DTACK<br>burstWAIT |
| CRE | CellularRam |

**Table 22-1. EIM multiplexing**

| Setup | Non Multiplexed Address/Data Mode | | | | | | | Multiplexed Address/ Data mode | |
|---|---|---|---|---|---|---|---|---|---|
| | 8 Bit | | | | 16 Bit | | 32 Bit | 16 Bit | 32 Bit |
| | MUM = 0, DSZ = 100 | MUM = 0, DSZ = 101 | MUM = 0, DSZ = 110 | MUM = 0, DSZ = 111 | MUM = 0, DSZ = 001 | MUM = 0, DSZ = 010 | MUM = 0, DSZ = 011 | MUM = 1, DSZ = 001 | MUM = 1, DSZ = 011 |
| A[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] | EIM_DA[15:0] |
| A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_A[25:16] | EIM_D[9:0] |
| D[7:0], EIM_EB0 | EIM_D[7:0] | - | - | - | EIM_D[7:0] | - | EIM_D[7:0] | EIM_DA[7:0] | EIM_DA[7:0] |
| D[15:8], EIM_EB1 | - | EIM_D[15:8] | - | - | EIM_D[15:8] | - | EIM_D[15:8] | EIM_DA[15:8] | EIM_DA[15:8] |
| D[23:16], EIM_EB2 | - | - | EIM_D[23:16] | - | - | EIM_D[23:16] | EIM_D[23:16] | - | EIM_D[7:0] |
| D[31:24], EIM_EB3 | - | - | - | EIM_D[31:24] | - | EIM_D[31:24] | EIM_D[31:24] | - | EIM_D[15:8] |

phyCORE i.MX6EIM_D[15:0]EIM_DA[15:0]EIM_A[25:16]

EIM_WAIT

phyFLEX i.MX6

| SOM Pin | SOM Pin name | CPU Pin | CPU Pin name | EIM |
|---|---|---|---|---|
| X1A17 | X_UART2_RX_DATA | E25 | EIM_D27 | EIM_DATA27(EIM,weim_d,27) |
| X1A18 | X_UART3_RX_DATA | G22 | EIM_D25 | EIM_DATA25(EIM,weim_d,25) |
| X1A19 | X_UART3_CTS_B | D25 | EIM_D23 | EIM_DATA23(EIM,weim_d,23) |
| X1A20 | X_UART3_RTS_B | F23 | EIM_EB3 | EIM_EB3_B(EIM,weim_eb,3) |
| X1A22 | X_ECSPI1_SCLK | C25 | EIM_D16 | EIM_DATA16(EIM,weim_d,16) |
| X1A23 | X_ECSPI1_MOSI | D24 | EIM_D18 | EIM_DATA18(EIM,weim_d,18) |
| X1A24 | X_ECSPI1_SS0 | E22 | EIM_EB2 | EIM_EB2_B(EIM,weim_eb,2) |
| X1A25 | X_EIM_DA13 | M23 | EIM_DA13 | EIM_AD13(EIM,weim_da_a,13) |
| X1A27 | X_CSI1_DATA12 | G24 | EIM_A17 | EIM_ADDR17(EIM,weim_a,17) |
| X1A28 | X_CSI1_DATA11 | K21 | EIM_EB0 | EIM_EB0_B(EIM,weim_eb,0) |
| X1A29 | X_CSI1_DATA10 | E23 | EIM_D22 | EIM_DATA22(EIM,weim_d,22) |
| X1A30 | X_CSI1_DATA09 | L20 | EIM_DA0 | EIM_AD00(EIM,weim_da_a,0) |
| X1A32 | X_CSI1_DATA08 | J25 | EIM_DA1 | EIM_AD01(EIM,weim_da_a,1) |
| X1A33 | X_CSI1_DATA03 | K25 | EIM_DA6 | EIM_AD06(EIM,weim_da_a,6) |
| X1A34 | X_CSI1_DATA02 | L25 | EIM_DA7 | EIM_AD07(EIM,weim_da_a,7) |
| X1A35 | X_CSI1_DATA_EN | M22 | EIM_DA10 | EIM_AD10(EIM,weim_da_a,10) |
| X1A37 | X_CSI1_DATA01 | L24 | EIM_DA8 | EIM_AD08(EIM,weim_da_a,8) |
| X1A38 | X_CSI1_DATA00 | M21 | EIM_DA9 | EIM_AD09(EIM,weim_da_a,9) |
| X1A39 | X_CSI1_VSYNC | M24 | EIM_DA12 | EIM_AD12(EIM,weim_da_a,12) |
| X1A40 | X_CSI1_HSYNC | M20 | EIM_DA11 | EIM_AD11(EIM,weim_da_a,11) |
| X1A42 | X_EIM_BCLK | N22 | EIM_BCLK | EIM_BCLK(EIM,weim_bclk) |
| X1A43 | X_ECSPI2_MISO | J24 | EIM_OE | EIM_OE_B(EIM,weim_oe) |
| X1A44 | X_ECSPI2_SS1 | K22 | EIM_LBA | EIM_LBA_B(EIM,weim_lba) |
| X1A45 | X_ECSPI2_SS0 | K20 | EIM_RW | EIM_RW(EIM,weim_rw) |
| X1A49 | X_LCD_DATA19 | U23 | DISP0_DAT19 | EIM_CS3_B(EIM,weim_cs,3) |
| X1B18 | X_UART3_TX_DATA | F22 | EIM_D24 | EIM_DATA24(EIM,weim_d,24) |

| | | | | |
|---|---|---|---|---|
| X1B21 | X_UART2_TX_DATA | E24 | EIM_D26 | EIM_DATA26(EIM,weim_d,26) |
| X1B23 | X_I2C1_SCL | H20 | EIM_D21 | EIM_DATA21(EIM,weim_d,21) |
| X1B24 | X_I2C1_SDA | G23 | EIM_D28 | EIM_DATA28(EIM,weim_d,28) |
| X1B25 | X_ECSPI1_MISO | F21 | EIM_D17 | EIM_DATA17(EIM,weim_d,17) |
| X1B26 | X_EIM_DA14 | N23 | EIM_DA14 | EIM_AD14(EIM,weim_da_a,14) |
| X1B27 | X_EIM_DA15 | N24 | EIM_DA15 | EIM_AD15(EIM,weim_da_a,15) |
| X1B29 | X_CSI1_DATA19 | F25 | EIM_A24 | EIM_ADDR24(EIM,weim_a,24) |
| X1B30 | X_CSI1_DATA18 | J21 | EIM_A23 | EIM_ADDR23(EIM,weim_a,23) |
| X1B31 | X_CSI1_DATA17 | F24 | EIM_A22 | EIM_ADDR22(EIM,weim_a,22) |
| X1B32 | X_CSI1_DATA16 | H23 | EIM_A21 | EIM_ADDR21(EIM,weim_a,21) |
| X1B34 | X_CSI1_DATA15 | H22 | EIM_A20 | EIM_ADDR20(EIM,weim_a,20) |
| X1B35 | X_CSI1_DATA14 | G25 | EIM_A19 | EIM_ADDR19(EIM,weim_a,19) |
| X1B36 | X_CSI1_PIXCLK | H25 | EIM_A16 | EIM_ADDR16(EIM,weim_a,16) |
| X1B37 | X_CSI1_DATA13 | J22 | EIM_A18 | EIM_ADDR18(EIM,weim_a,18) |
| X1B39 | X_CSI1_DATA07 | L21 | EIM_DA2 | EIM_AD02(EIM,weim_da_a,2) |
| X1B40 | X_CSI1_DATA06 | K24 | EIM_DA3 | EIM_AD03(EIM,weim_da_a,3) |
| X1B41 | X_CSI1_DATA05 | L22 | EIM_DA4 | EIM_AD04(EIM,weim_da_a,4) |
| X1B42 | X_CSI1_DATA04 | L23 | EIM_DA5 | EIM_AD05(EIM,weim_da_a,5) |
| X1B44 | X_EIM_EB1 | K23 | EIM_EB1 | EIM_EB1_B(EIM,weim_eb,1) |
| X1B45 | X_ECSPI2_SCLK | H24 | EIM_CS0 | EIM_CS0_B(EIM,weim_cs,0) |
| X1B46 | X_ECSPI2_RDY | H19 | EIM_A25 | EIM_ADDR25(EIM,weim_a,25) |
| X1B47 | X_ECSPI2_MOSI | J23 | EIM_CS1 | EIM_CS1_B(EIM,weim_cs,1) |
| X1B51 | X_LCD_DATA18 | V25 | DISP0_DAT18 | EIM_CS2_B(EIM,weim_cs,2) |
| X1C45 | X_CSI0_DAT18 | M6 | CSI0_DAT18 | EIM_DATA14(EIM,weim_d,14) |
| X1C46 | X_CSI0_DAT16 | L4 | CSI0_DAT16 | EIM_DATA12(EIM,weim_d,12) |
| X1C47 | X_CSI0_DAT14 | M4 | CSI0_DAT14 | EIM_DATA10(EIM,weim_d,10) |
| X1C49 | X_CSI0_DAT12 | M2 | CSI0_DAT12 | EIM_DATA08(EIM,weim_d,8) |
| X1C51 | X_CSI0_DAT08 | N6 | CSI0_DAT8 | EIM_DATA06(EIM,weim_d,6) |
| X1C52 | X_CSI0_DAT06 | N4 | CSI0_DAT6 | EIM_DATA04(EIM,weim_d,4) |
| X1C53 | X_CSI0_DAT05 | P2 | CSI0_DAT5 | EIM_DATA03(EIM,weim_d,3) |
| X1C55 | X_CSI0_DAT04 | N1 | CSI0_DAT4 | EIM_DATA02(EIM,weim_d,2) |
| X1D40 | X_CSI0_DAT19 | L6 | CSI0_DAT19 | EIM_DATA15(EIM,weim_d,15) |
| X1D41 | X_CSI0_DAT17 | L3 | CSI0_DAT17 | EIM_DATA13(EIM,weim_d,13) |
| X1D43 | X_CSI0_DAT15 | M5 | CSI0_DAT15 | EIM_DATA11(EIM,weim_d,11) |
| X1D44 | X_CSI0_DAT13 | L1 | CSI0_DAT13 | EIM_DATA09(EIM,weim_d,9) |
| X1D46 | X_CSI0_DAT09 | N5 | CSI0_DAT9 | EIM_DATA07(EIM,weim_d,7) |
| X1D47 | X_CSI0_DAT07 | N3 | CSI0_DAT7 | EIM_DATA05(EIM,weim_d,5) |
| X1D48 | X_CSI0_VSYNC | N2 | CSI0_VSYNC | EIM_DATA01(EIM,weim_d,1) |
| X1D50 | X_CSI0_DATA_EN | P3 | CSI0_DATA_EN | EIM_DATA00(EIM,weim_d,0) |
| | | G21 | EIM_D19 | EIM_DATA19(EIM,weim_d,19) |
| | | G20 | EIM_D20 | EIM_DATA20(EIM,weim_d,20) |
| | | J19 | EIM_D29 | EIM_DATA29(EIM,weim_d,29) |
| | | J20 | EIM_D30 | EIM_DATA30(EIM,weim_d,30) |
| | | H21 | EIM_D31 | EIM_DATA31(EIM,weim_d,31) |
| | | M25 | EIM_WAIT | EIM_WAIT_B(EIM,weim_wait) /EIM_DTACK_B(EIM,weim_dtack_b) |
| | | A17 | NANDF_CS2 | EIM_CRE(EIM,weim_cre) |

| | | | | |
|---|---|---|---|---|
| | | D16 | NANDF_CS3 | EIM_ADDR26(EIM,weim_a,26) |
| | | E20 | SD2_DAT1 | EIM_CS2_B(EIM,weim_cs,2) |
| | | A23 | SD2_DAT2 | EIM_CS3_B(EIM,weim_cs,3) |