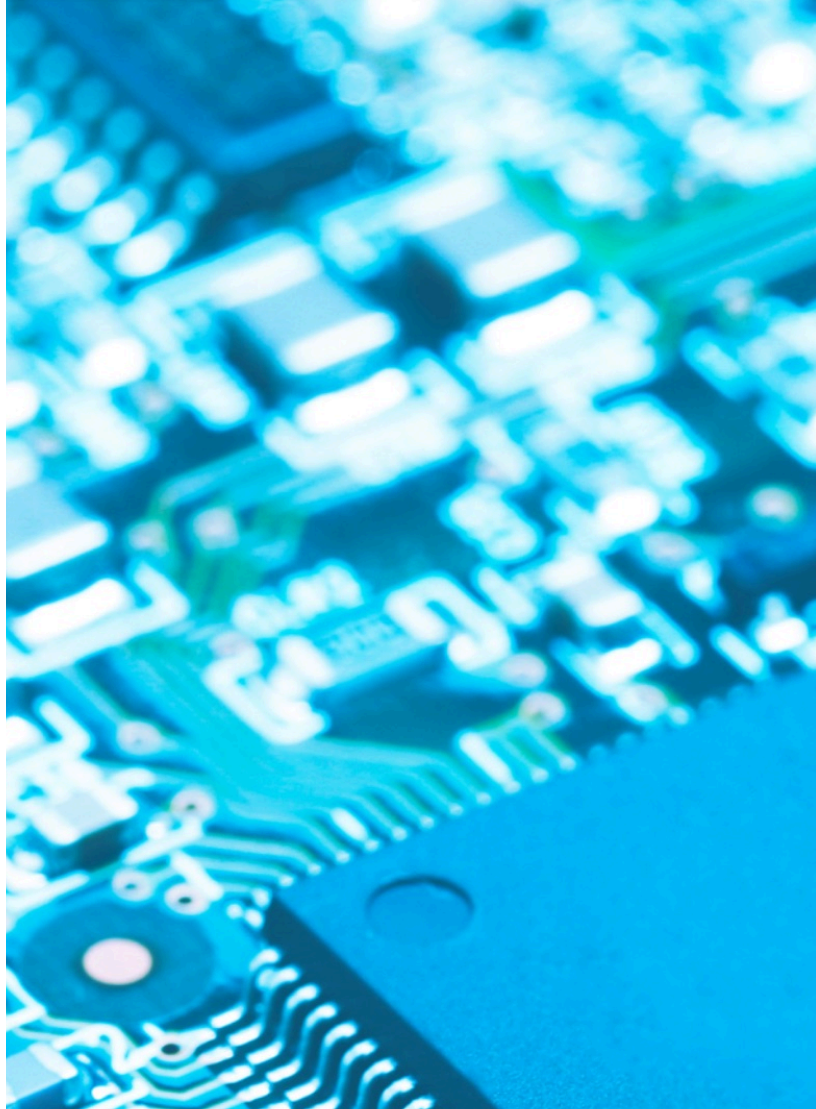
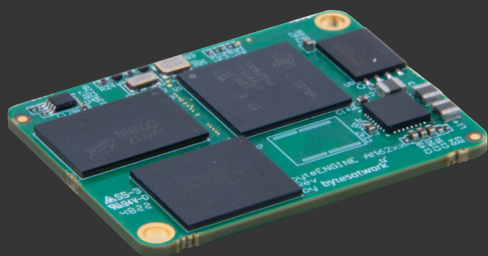


bytes**at**work

# DataSheet

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industrial computing module

byteENGINE AM62x



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## 1. Revision History

| Hardware Revision | Marking on PCB           | Release Date | Info                              |
|-------------------|--------------------------|--------------|-----------------------------------|
| 1.1               | byteENGINE AM62x Rev.1.1 | 2023         | First version available for sales |
| 1.0               | byteENGINE AM62x Rev.1.0 | 2022         | Prototypes                        |



### NOTICE

This document refers to  
byteENGINE AM62x Rev.1.1

## 2. Overview

### 2.1. General Information

**The byteENGINE AM62x** System-on-Module (SoM) is powered by Texas Instruments' heterogeneous Sitara™ processor family, engineered specifically for next-generation industrial automation, edge computing, and automotive applications. Its scalable architecture integrates up to four 64-bit Arm® Cortex®-A53 application cores operating at up to 1.4 GHz, backed by an isolated Arm® Cortex®-M4F MCU subsystem and a dedicated Cortex®-R5F device manager for deterministic low-power processing and system safety.

Designed for modern Human-Machine Interface (HMI) solutions, the module incorporates an Imagination Technologies IMG AXE1-16 3D graphics accelerator with hardware-accelerated Qt support and dual-display capabilities up to 2K (2048×1080) at 60 fps across OLDI/LVDS and parallel RGB interfaces. The software ecosystem provides standard and Real-Time (RT) Linux distributions maintained on the latest Long-Term Support (LTS) kernels, modern U-Boot implementations, and a dedicated Yocto Project BSP layer.

For industrial communication and Industry 4.0 connectivity, the byteENGINE AM62x features an integrated 2-port Gigabit Ethernet switch with Time-Sensitive Networking (TSN) support, complemented by a programmable real-time unit (PRU) for custom protocols and low-latency I/O control. Comprehensive peripheral options—including CAN-FD, USB 2.0, OSPI, a 4-lane MIPI CSI-2 camera input, multi-channel serial buses, and a General-Purpose Memory Controller (GPMC) for high-speed parallel FPGA/ASIC expansion—allow straightforward carrier board integration.

Integrated security mechanisms, managed via an on-chip Hardware Security Module (HSM), deliver secure boot capabilities, cryptographic acceleration, and IP protection. Combined with advanced power management across multiple operating states, the byteENGINE AM62x delivers high processing efficiency within a compact 30 × 40 mm form factor.

## 2.2. Technical Data

### Feature

### Details

|                 |                                                         |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU             | Architecture                                            | Up to Quad core 64-bit Arm® Cortex®-A53 processors                                                                                                                                                                                                                                                                                                                                          |
|                 | CPU                                                     | See Link for further information: <a href="#">Block diagram of AM62x</a><br>See TI Homepage for further Information: <a href="#">AM62x</a>                                                                                                                                                                                                                                                  |
|                 | Cache                                                   | <ul style="list-style-type: none"> <li>&gt; 32KB L1 instruction Cache for each Core</li> <li>&gt; 32KB L1 Data Cache for each Core</li> <li>&gt; 512 kB shared L2 Cache</li> </ul>                                                                                                                                                                                                          |
|                 | Frequency (max.)                                        | Up to 1.4 GHz                                                                                                                                                                                                                                                                                                                                                                               |
|                 | Co-Processors                                           | 1x Cortex®-M4F MCU 400 MHz single core processor<br>1x Dual-Core programmable RTU with up to 333 MHz                                                                                                                                                                                                                                                                                        |
|                 | Security                                                | Hardware security module: <ul style="list-style-type: none"> <li>&gt; Secure boot supported</li> <li>&gt; Cryptographic acceleration supported</li> <li>&gt; Trusted Execution Environment (TEE) supported</li> <li>&gt; Secure storage support</li> </ul>                                                                                                                                  |
| GPU             |                                                         | IMG AXE1-16                                                                                                                                                                                                                                                                                                                                                                                 |
| Memory on Chip  | RAM                                                     | Up to 816 KB OCSRAM                                                                                                                                                                                                                                                                                                                                                                         |
| Memory External | DRAM                                                    | Up to 2 GB LPDDR4                                                                                                                                                                                                                                                                                                                                                                           |
|                 | Flash                                                   | Up to 128 GB eMMC                                                                                                                                                                                                                                                                                                                                                                           |
|                 | EEPROM                                                  | 32 kB EEPROM                                                                                                                                                                                                                                                                                                                                                                                |
|                 | GPMC                                                    | 8 to 16 bit and up to 133 MHz                                                                                                                                                                                                                                                                                                                                                               |
| Ethernet        | Speed                                                   | 2x 10/100/1000 Mbps<br>IEEE 1588                                                                                                                                                                                                                                                                                                                                                            |
| Multimedia      | Display Subsystem                                       | <ul style="list-style-type: none"> <li>&gt; Dual display support</li> <li>&gt; 1920x1080 @ 60fps for each display</li> <li>&gt; OLDI/LVDS (4 lanes - 2x)</li> <li>&gt; 24-bit RGB parallel interface</li> </ul>                                                                                                                                                                             |
|                 | 2D/3D Graphic Processing Unit                           | <ul style="list-style-type: none"> <li>&gt; Fillrate greater than 500 Mpixels/sec</li> <li>&gt; 500 MTexels/s, &gt;8 GFLOPs</li> <li>&gt; Supports at least 2 composition layers</li> <li>&gt; Supports up to 2048x1080 @60fps</li> <li>&gt; Supports ARGB32, RGB565 and YUV formats</li> <li>&gt; 2D graphics capable</li> <li>&gt; OpenGL 3.x/2.0/1.1 + Extensions, Vulkan 1.2</li> </ul> |
|                 | One Camera Serial interface (CSI-Rx) - 4 Lane with DPHY | <ul style="list-style-type: none"> <li>&gt; MIPI CSI 1.3 Compliant + MIPI-DPHY 1.2</li> <li>&gt; Support for 1,2,3 or 4 data lane mode up to 2.5Gbps</li> <li>&gt; ECC verification/correction with CRC check + ECC on RAM</li> </ul>                                                                                                                                                       |

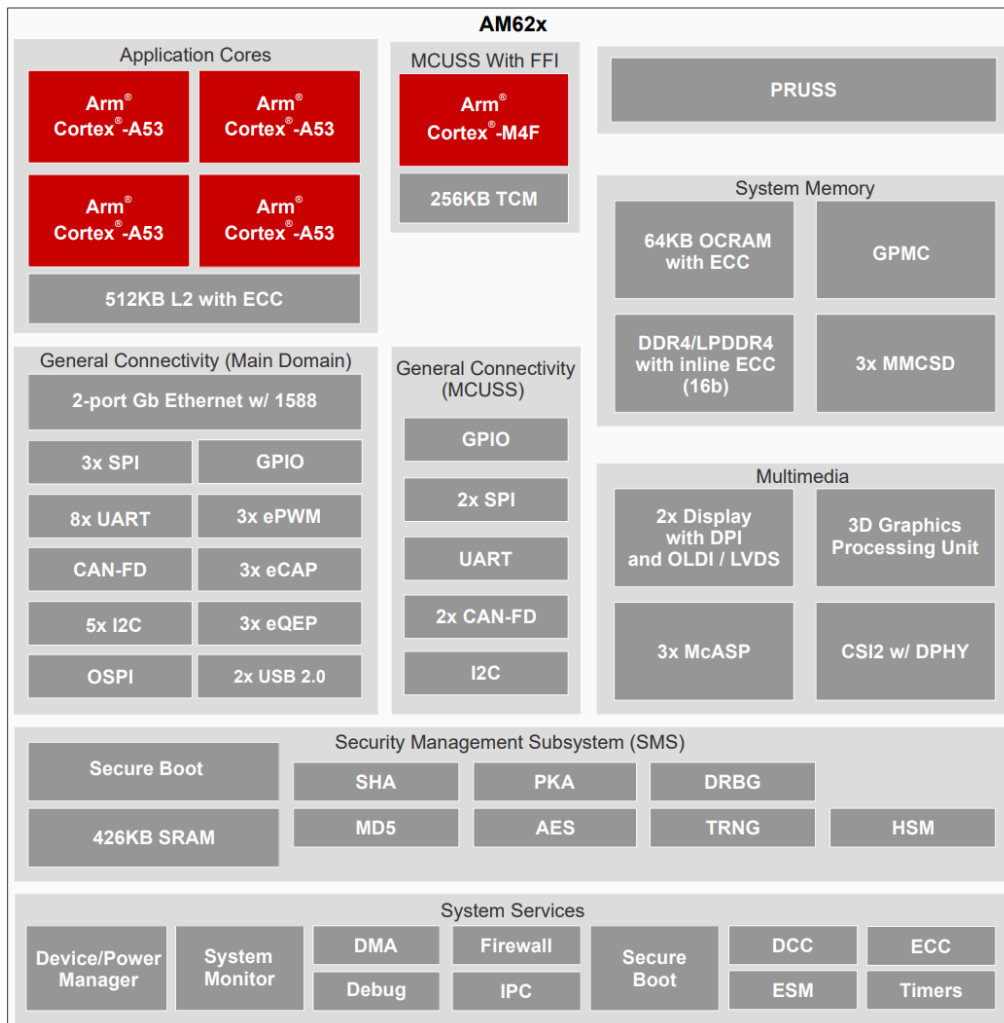
|                               |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                              | <ul style="list-style-type: none"> <li>&gt; Virtual Channel support (up to 16)</li> <li>&gt; Ability to write stream data directly to DDR via DMA</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | <b>Audio</b>                 | <ul style="list-style-type: none"> <li>&gt; Transmit and Receive Clocks up to 50 MHz</li> <li>&gt; Up to 16/10/6 Serial Data Pins across 3x</li> <li>&gt; McASP with Independent TX and RX Clocks</li> <li>&gt; Supports Time Division Multiplexing (TDM),</li> <li>&gt; Inter-IC Sound (I2S), and Similar Formats</li> <li>&gt; Supports Digital Audio Interface Transmission (SPDIF, IEC60958-1, and AES-3 Formats)</li> <li>&gt; FIFO Buffers for Transmit and Receive (256 Bytes)</li> <li>&gt; Support for audio reference output clock</li> </ul> |
| <b>Expansion</b>              | <b>SD/SDIO, MMC, SDXC</b>    | 2 x SD/SDIO (4-bits)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Functional Safety</b>      |                              | <ul style="list-style-type: none"> <li>&gt; Developed for functional safety applications</li> <li>&gt; Documentation will be available to aid IEC 61508 functional safety system design</li> <li>&gt; Systematic capability up to SIL 3</li> <li>&gt; Hardware Integrity up to SIL 2</li> <li>&gt; Safety-related certification</li> <li>&gt; IEC 61508 certification by TÜV SÜD planned</li> </ul>                                                                                                                                                     |
| <b>USB</b>                    |                              | 2x USB 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Serial</b>                 | <b>SPI</b>                   | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <b>I2C</b>                   | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <b>UART</b>                  | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <b>QSPI</b>                  | 1 (2x CS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               | <b>QEP</b>                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <b>CAN-FD</b>                | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Miscellaneous</b>          | <b>Watchdog</b>              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | <b>JTAG</b>                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | <b>GPIO</b>                  | Up to 198                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               | <b>PWM</b>                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <b>Timer</b>                 | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | <b>Boot Mode</b>             | Secure boot supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Mechanical information</b> | <b>Input Voltage</b>         | 5.0 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                               | <b>Power Consumption</b>     | 4 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | <b>Dimensions</b>            | 30 x 40 x 4 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | <b>Operating Temperature</b> | <ul style="list-style-type: none"> <li>&gt; Industrial temperature range: -40 to +85° C</li> <li>&gt; Consumer temperature range: 0 to +85° C</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Operating System</b>       | <b>Linux</b>                 | <a href="#">meta-bytesatwork available on github</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## 2.3. Block diagram of AM62x

The AM62x from Texas Instruments is the industry's first multiprotocol gigabit (Gb) time-sensitive networking (TSN)-enabled processor family. The new, highly integrated Sitara AM62x processor provides industrial-grade reliability, with dual and quad Arm® Cortex®-A53 core variants built to meet the rapidly evolving needs of Industry 4.0 in factory automation, motor drives and grid infrastructure. The inclusion of an on-chip isolated dual-core microcontroller (MCU) subsystem enables designers to use the AM62x to create more dependable and functional safety-certifiable products while reducing overall system-level complexity.

### Key features of AM62x

- > Quad Arm® Cortex®-A53 core, up to 1.4 GHz
- > Cortex®-M4 400 MHz processor
- > Imagination Technology IMG AXE1-16
- > Dual Display supported
- > Secure boot supported
- > Prepared for functional safety applications





For further information regarding the AM62x CPU, please visit the homepage of Texas Instruments:  
[TI AM62x Family](#)

## 2.4. Decision guidance byteENGINE AM62x

**The following five steps** help identifying the suitable byteENGINE for the specific customer application.

> **Step 1:** Select the needed CPU

> **Choose Quad/Dual or Single Arm<sup>®</sup> Cortex<sup>®</sup>-A53**

Quad Core: AM62x**4**

Dual Core: AM62x**2**

Single Core: AM62x**1**

> **Choose with or without 3D-Graphics Engine**

With 3D-Graphics Engine: AM62**5**x

Without 3D-Graphics Engine: AM62**3**x

> **Step 2:** Select the needed CPU speed

> **Choose 1.0 GHz / 1.4 GHz**

> **Step 3:** Select the needed flash memory capacity

> **Choose eMMC 8 / 16 / 32 / 64 / 128 GB**

> **Step 4:** Select the needed RAM capacity

> **Choose 512 / 1024 / 1536 / 2048 MB**

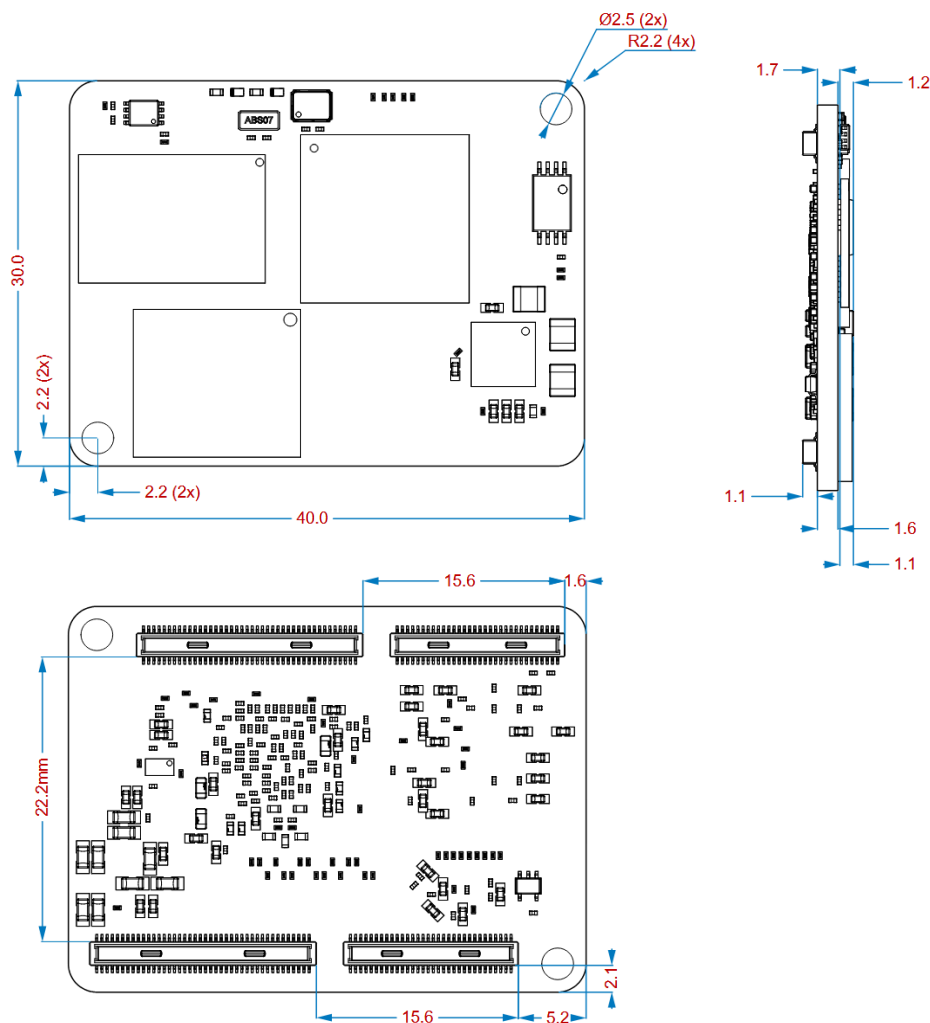
> **Step 5:** Select the needed temperature range

> **Choose consumer or industrial**

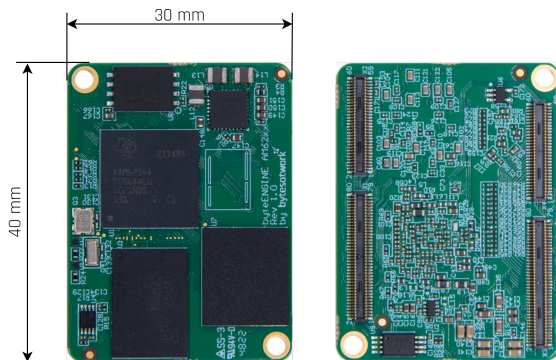
## 2.5. Dimensions of byteENGINE AM62x

The following illustration shows all important dimensions for mounting and installation of the industrial computing module byteENGINE AM62x.

> All dimensions are indicated in millimetres (mm)

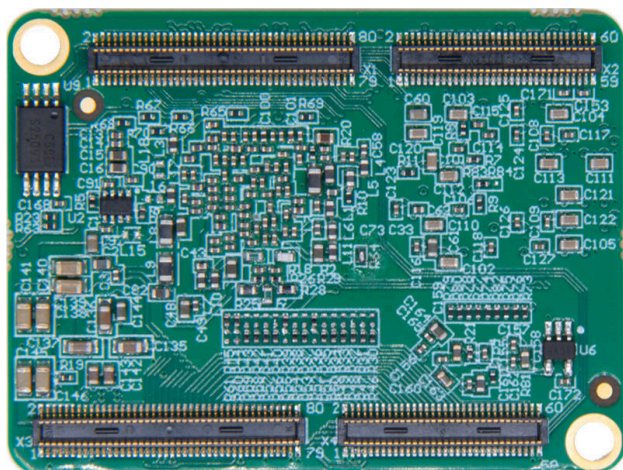


> Module design in scale 1:1:



## 2.6. byteENGINE AM62x connectors layout

The AM62x is connected to the carrier board with 2x 80 and 2x 60 pins on four module connectors. The following picture shows the location of the connectors on the bottom side of the SOM byteENGINE



## Connectors

|           |                                                            |
|-----------|------------------------------------------------------------|
| <b>X1</b> | Power, LVDS1, LVDS0, OSPI, CS1, RGMII2                     |
| <b>X2</b> | UART0, USB1, MCU_MCAN0, MCU_MCAN1, MCAN0, JTAG, USB0, WKUP |
| <b>X3</b> | MMC1, MCU_UART0, MMC2, MDIO, RGMII1, SPI0, MCASP0          |
| <b>X4</b> | LCD, GPMC, I2C1, MCU_I2C0                                  |



### Schematic of the connectors X1, X2, X3 and X4

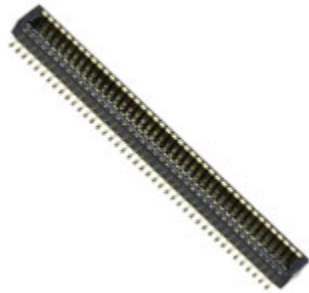


## NOTICE

The module is held in the connectors with a considerable retention force. To avoid damaging the modules' connectors as well as the carrier board connectors while removing the module the use of an extraction tool is strongly recommended.

## 2.7. Connectors - DF40C-80DP and DF40C-60DP

The byteENGINE uses four Hirose 0,4mm Board to Board Plug connectors. For more specific information about the connectors used, please consult the datasheet of the manufacturer.



### Connectors

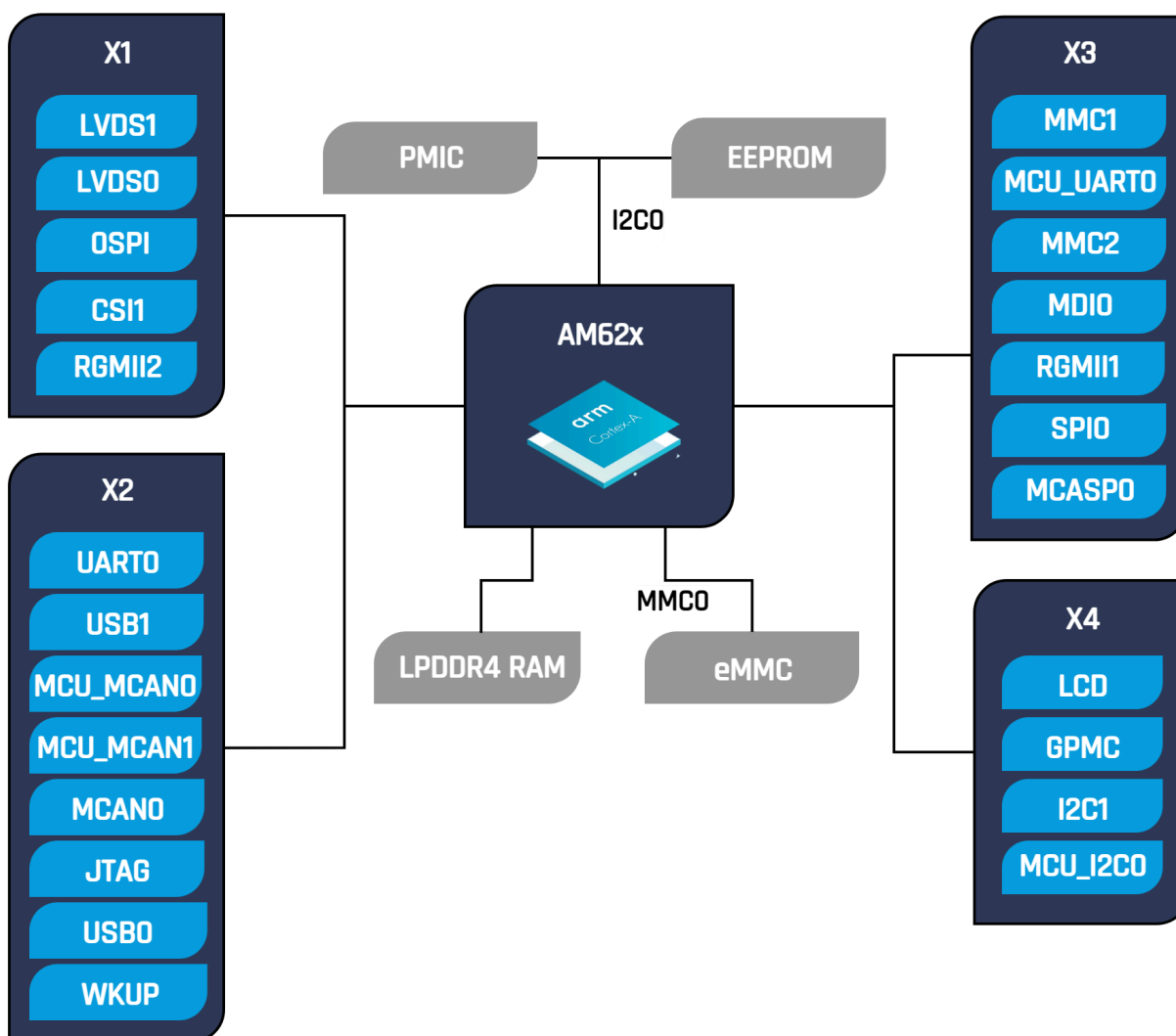
|               |                           |
|---------------|---------------------------|
| <b>X1, X3</b> | DF40HC(3.0)-80DS-0.4V(51) |
| <b>X2, X4</b> | DF40HC(3.0)-60DS-0.4V(51) |



[Hirose DF40-Series Connectors](#)

## 2.8. byteENGINE AM62x Connectors Overview

The following illustration shows the „default configuration“ of the byteENGINE AM62x. The function of the components shown in gray squares cannot be changed. The blue squares show the module connectors X1, X2, X3 and X4. The functions of X1, X2, X3 and X4 can be adapted and each connector module serves multiple functions. The detailed pinout functions are shown in chapter [3. Pinout functions](#).



## 3. Pinout functions

This chapter provides all relevant information for connecting and configuring the byteENGINE AM62x on a carrier board, including pin functions, available alternatives, restrictions, signal propagation delay, power supply and boot modes.

### 3.1. Restrictions

The following peripherals are internally connected to components on the module. They must not be used for external functions on the carrier board when the corresponding on-module components are populated and in use.



#### WARNING:

EEPROM: Production data storage. Do not use for application, readonly usage.

#### Restricted peripherals

**I2C0** PMIC and EEPROM

**MMC0** eMMC

| Ball | Pin Name   | Used for    |
|------|------------|-------------|
| B16  | I2C0_SCL   | PMIC/EEPROM |
| A16  | I2C0_SDA   | PMIC/EEPROM |
| AB1  | MMC0_CLK   | eMMC        |
| Y3   | MMC0_CMD   | eMMC        |
| AA2  | MMC0_DAT0  | eMMC        |
| AA1  | MMC0_DAT1  | eMMC        |
| AA3  | MMC0_DAT2  | eMMC        |
| Y4   | MMC0_DAT3  | eMMC        |
| AB2  | MMC0_DAT4  | eMMC        |
| AC1  | MMC0_DAT5  | eMMC        |
| AD2  | MMC0_DAT6  | eMMC        |
| AC2  | MMC0_DAT7  | eMMC        |
| E24  | OSPI0_CSn3 | VSEL_SD     |

## 3.2. Carrier board connectors X1

| Con | Pin | Signal Name | Mode 0      | Alternative Modes on Pin |   |   |   |   |   |   |   |   |
|-----|-----|-------------|-------------|--------------------------|---|---|---|---|---|---|---|---|
|     |     |             |             | 1                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| X1  | 1   | GND         |             |                          |   |   |   |   |   |   |   |   |
| X1  | 2   | GND         |             |                          |   |   |   |   |   |   |   |   |
| X1  | 3   | PowerButton |             |                          |   |   |   |   |   |   |   |   |
| X1  | 4   | OLDI0_A7P   | OLDI0_A7P   |                          |   |   |   |   |   |   |   |   |
| X1  | 5   |             |             |                          |   |   |   |   |   |   |   |   |
| X1  | 6   | OLDI0_A7N   | OLDI0_A7N   |                          |   |   |   |   |   |   |   |   |
| X1  | 7   |             |             |                          |   |   |   |   |   |   |   |   |
| X1  | 8   | OLDI0_A6P   | OLDI0_A6P   |                          |   |   |   |   |   |   |   |   |
| X1  | 9   |             |             |                          |   |   |   |   |   |   |   |   |
| X1  | 10  | OLDI0_A6N   | OLDI0_A6N   |                          |   |   |   |   |   |   |   |   |
| X1  | 11  |             |             |                          |   |   |   |   |   |   |   |   |
| X1  | 12  | OLDI0_CLK1P | OLDI0_CLK1P |                          |   |   |   |   |   |   |   |   |
| X1  | 13  | GND         |             |                          |   |   |   |   |   |   |   |   |
| X1  | 14  | OLDI0_CLK1N | OLDI0_CLK1N |                          |   |   |   |   |   |   |   |   |
| X1  | 15  | OLDI0_A3P   | OLDI0_A3P   |                          |   |   |   |   |   |   |   |   |
| X1  | 16  | OLDI0_A4P   | OLDI0_A4P   |                          |   |   |   |   |   |   |   |   |
| X1  | 17  | OLDI0_A3N   | OLDI0_A3N   |                          |   |   |   |   |   |   |   |   |
| X1  | 18  | OLDI0_A4N   | OLDI0_A4N   |                          |   |   |   |   |   |   |   |   |
| X1  | 19  | OLDI0_A2P   | OLDI0_A2P   |                          |   |   |   |   |   |   |   |   |
| X1  | 20  | OLDI0_A5P   | OLDI0_A5P   |                          |   |   |   |   |   |   |   |   |
| X1  | 21  | OLDI0_A2N   | OLDI0_A2N   |                          |   |   |   |   |   |   |   |   |
| X1  | 22  | OLDI0_A5N   | OLDI0_A5N   |                          |   |   |   |   |   |   |   |   |
| X1  | 23  | OLDI0_CLK0P | OLDI0_CLK0P |                          |   |   |   |   |   |   |   |   |
| X1  | 24  | GND         |             |                          |   |   |   |   |   |   |   |   |
| X1  | 25  | OLDI0_CLK0N | OLDI0_CLK0N |                          |   |   |   |   |   |   |   |   |

| Con | Pin | Signal Name   | Mode 0       | Alternative Modes on Pin |                  |             |             |            |                        |          |                   |   |
|-----|-----|---------------|--------------|--------------------------|------------------|-------------|-------------|------------|------------------------|----------|-------------------|---|
|     |     |               |              | 1                        | 2                | 3           | 4           | 5          | 6                      | 7        | 8                 | 9 |
| X1  | 26  | OSPI0_CLK     | OSPI0_CLK    |                          |                  |             |             |            |                        | GPIO0_0  |                   |   |
| X1  | 27  | OLDIO_A1P     | OLDIO_A1P    |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 28  | OSPI0_D0      | OSPI0_D0     |                          |                  |             |             |            |                        | GPIO0_3  |                   |   |
| X1  | 29  | OLDIO_A1N     | OLDIO_A1N    |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 30  | OSPI0_D1      | OSPI0_D1     |                          |                  |             |             |            |                        | GPIO0_4  |                   |   |
| X1  | 31  | OLDIO_A0P     | OLDIO_A0P    |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 32  | OSPI0_D2      | OSPI0_D2     |                          |                  |             |             |            |                        | GPIO0_5  |                   |   |
| X1  | 33  | OLDIO_A0N     | OLDIO_A0N    |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 34  | OSPI0_D3      | OSPI0_D3     |                          |                  |             |             |            |                        | GPIO0_6  |                   |   |
| X1  | 35  | GND           |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 36  | OSPI0_D4      | OSPI0_D4     | SPI1_CS0                 | MCASP1_AXR1      | UART6_RXD   |             |            |                        | GPIO0_7  |                   |   |
| X1  | 37  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 38  | OSPI0_D5      | OSPI0_D5     | SPI1_CLK                 | MCASP1_AXR0      | UART6_TXD   |             |            |                        | GPIO0_8  |                   |   |
| X1  | 39  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 40  | OSPI0_D6      | OSPI0_D6     | SPI1_D0                  | MCASP1_ACLKX     | UART6_RTSn  |             |            |                        | GPIO0_9  |                   |   |
| X1  | 41  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 42  | OSPI0_D7      | OSPI0_D7     | SPI1_D1                  | MCASP1_AFSX      | UART6_CTSn  |             |            |                        | GPIO0_10 |                   |   |
| X1  | 43  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 44  | OSPI0_CSn1    | OSPI0_CSn1   |                          |                  |             |             |            |                        | GPIO0_12 |                   |   |
| X1  | 45  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 46  | OSPI0_CSn2    | OSPI0_CSn2   | SPI1_CS1                 | OSPI0_RESET_OUT1 | MCASP1_AFSR | MCASP1_AXR2 | UART5_RXD  |                        | GPIO0_13 |                   |   |
| X1  | 47  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 48  | OSPI0_DQS     | OSPI0_DQS    |                          |                  |             |             | UART5_CTSn |                        | GPIO0_2  |                   |   |
| X1  | 49  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 50  | GND           |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 51  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 52  | OSPI0_LBCLK0  | OSPI0_LBCLK0 |                          |                  |             |             | UART5_RTSn |                        | GPIO0_1  |                   |   |
| X1  | 53  |               |              |                          |                  |             |             |            |                        |          |                   |   |
| X1  | 54  | EXT_REFCLK1   | EXT_REFCLK1  | SYNC1_OUT                | SPI2_CS3         | SYSCLKOUT0  | TIMER_I04   | CLKOUT0    | CP_GEMAC_CPTS0_RFT_CLK | GPIO1_30 | ECAP0_IN_APWM_OUT |   |
| X1  | 55  | WKUP_CL-KOUT0 | WKUP_CLKOUT0 |                          |                  |             |             |            |                        |          |                   |   |

| Con | Pin | Signal Name   | Mode 0        | Alternative Modes on Pin |                    |                |                |                        |                 |          |         |   |
|-----|-----|---------------|---------------|--------------------------|--------------------|----------------|----------------|------------------------|-----------------|----------|---------|---|
|     |     |               |               | 1                        | 2                  | 3              | 4              | 5                      | 6               | 7        | 8       | 9 |
| X1  | 56  | GND           |               |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 57  | GND           |               |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 58  | RGMII2_TX_CTL | RGMII2_TX_CTL | RMII2_TX_EN              | MCASP2_AXR4        | PR0_PRU1_GPO0  | PR0_PRU1_GPI0  |                        |                 | GPIO0_87 |         |   |
| X1  | 59  | CSI0_RXP3     | CSI0_RXP3     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 60  | RGMII2_TXC    | RGMII2_TXC    | RMII2_CRS_DV             | MCASP2_AXR5        | PR0_PRU1_GPO1  | PR0_PRU1_GPI1  |                        |                 | GPIO0_88 |         |   |
| X1  | 61  | CSI0_RXN3     | CSI0_RXN3     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 62  | RGMII2_TD0    | RGMII2_TD0    | RMII2_TXD0               | MCASP2_AXR6        | PR0_PRU1_GPO2  | PR0_PRU1_GPI2  |                        |                 |          |         |   |
| X1  | 63  | CSI0_RXP2     | CSI0_RXP2     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 64  | RGMII2_TD1    | GMII2_TD1     | RMII2_TXD1               | MCASP2_ACLKR       | PR0_PRU1_GPO3  | PR0_PRU1_GPI3  | MCASP2_AXR8            |                 | GPIO0_90 |         |   |
| X1  | 65  | CSI0_RXN2     | CSI0_RXN2     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 66  | RGMII2_TD2    | RGMII2_TD2    |                          | MCASP2_AFSX        | PR0_PRU1_GPO4  | PR0_PRU1_GPI4  | PR0_ECAP0_IN_ APWM_OUT |                 | GPIO0_91 | EQEP2_I |   |
| X1  | 67  | CSI0_RXCLKP   | CSI0_RXCLKP   |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 68  | RGMII2_TD3    | RGMII2_TD3    |                          | MCASP2_ACLKX       | PR0_PRU1_GPO16 | PR0_PRU1_GPI16 | PR0_ECAP0_SY NC_OUT    | PR0_UART0_CTS n | GPIO1_0  | EQEP2_S |   |
| X1  | 69  | CSI0_RXCLKN   | CSI0_RXCLKN   |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 70  | RGMII2_RX_CTL | MII2_RX_CTL   | RMII2_RX_ER              | MCASP2_AXR3        | PR0_PRU0_GPO0  | PR0_PRU0_GPI0  |                        |                 | GPIO1_1  |         |   |
| X1  | 71  | CSI0_RXP1     | CSI0_RXP1     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 72  | RGMII2_RXC    | RGMII2_RXC    | RMII2_REF_CLK            | MCASP2_AXR1        | PR0_PRU0_GPO1  | PR0_PRU0_GPI1  | PR0_ECAP0_SYNC_I       |                 | GPIO1_2  |         |   |
| X1  | 73  | CSI0_RXN1     | CSI0_RXN1     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 74  | RGMII2_RD0    | RGMII2_RD0    | RMII2_RXD0               | MCASP2_AXR2        | PR0_PRU0_GPO2  | PR0_PRU0_GPI2  |                        | PR0_UART0_RTSn  | GPIO1_3  |         |   |
| X1  | 75  | CSI0_RXP0     | CSI0_RXP0     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 76  | RGMII2_RD1    | RGMII2_RD1    | RMII2_RXD1               | MCASP2_AFSR        | PR0_PRU0_GPO3  | PR0_PRU0_GPI3  | MCASP2_AXR7            |                 | GPIO1_4  |         |   |
| X1  | 77  | CSI0_RXN0     | CSI0_RXN0     |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 78  | RGMII2_RD2    | RGMII2_RD2    |                          | MCASP2_AXR0        | PR0_PRU0_GPO4  | PR0_PRU0_GPI4  | PR0_UART0_RXD          |                 | GPIO1_5  | EQEP2_A |   |
| X1  | 79  | GND           |               |                          |                    |                |                |                        |                 |          |         |   |
| X1  | 80  | RGMII2_RD3    | RGMII2_RD3    |                          | AUDIO_EXT_REFC LK0 | PR0_PRU0_GPO16 | PR0_PRU0_GPI16 | PR0_UART0_TXD          |                 | GPIO1_6  | EQEP2_B |   |

### 3.3. Carrier board connectors X2

| Con | Pin | Signal_Name  | Mode 0       | Alternative Modes on Pin |              |              |                 |                   |                       |              |              |           |
|-----|-----|--------------|--------------|--------------------------|--------------|--------------|-----------------|-------------------|-----------------------|--------------|--------------|-----------|
|     |     |              |              | 1                        | 2            | 3            | 4               | 5                 | 6                     | 7            | 8            | 9         |
| X2  | 1   | GND          |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 2   | GND          |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 3   | UART0_RXD    | UART0_RXD    | ECAP1_IN_APWM_OUT        | SPI2_D0      | EHRPWM2_A    |                 |                   |                       | GPIO1_20     |              |           |
| X2  | 4   | USB1_VBUS    | USB1_VBUS    |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 5   | UART0_TXD    | UART0_TXD    | ECAP2_IN_APWM_OUT        | SPI2_D1      | EHRPWM2_B    |                 |                   |                       | GPIO1_21     |              |           |
| X2  | 6   |              |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 7   | UART0_CTSn   | UART0_CTSn   | SPI0_CS2                 | I2C3_SCL     | UART2_RXD    | TIMER_I06       | AUDIO_EXT_REFCLK0 | PR0_ECAP0_SYNC_OUT    | GPIO1_22     | MCASP2_AFSX  | MMC2_SDCD |
| X2  | 8   | USB1_DRVVBUS | USB1_DRVVBUS |                          |              |              |                 |                   |                       | GPIO1_51     |              |           |
| X2  | 9   | UART0_RTSn   | UART0_RTSn   | SPI0_CS3                 | I2C3_SDA     | UART2_TXD    | TIMER_I07       | AUDIO_EXT_REFCLK1 | PR0_ECAP0_IN_APWM_OUT | GPIO1_23     | MCASP2_ACLKX | MMC2_SDWP |
| X2  | 10  |              |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 11  | GND          |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 12  | GND          |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 13  | MCU_MCAN0_RX | MCU_MCAN0_RX | MCU_TIMER_I00            | MCU_SPI1_CS3 |              |                 |                   |                       | MCU_GPIO0_14 |              |           |
| X2  | 14  | USB1_DM      | USB1_DM      |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 15  | MCU_MCAN0_TX | MCU_MCAN0_TX | WKUP_TIMER_I00           | MCU_SPI0_CS3 |              |                 |                   |                       | MCU_GPIO0_13 |              |           |
| X2  | 16  | USB1_DP      | USB1_DP      |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 17  | MCU_MCAN1_RX | MCU_MCAN1_RX | MCU_TIMER_I03            | MCU_SPI0_CS2 | MCU_SPI1_CS2 | MCU_SPI1_CLK    |                   |                       | MCU_GPIO0_16 |              |           |
| X2  | 18  | GND          |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 19  | MCU_MCAN1_TX | MCU_MCAN1_TX | MCU_TIMER_I02            |              | MCU_SPI1_CS1 | MCU_EXT_REFCLK0 |                   |                       | MCU_GPIO0_15 |              |           |
| X2  | 20  |              |              |                          |              |              |                 |                   |                       |              |              |           |
| X2  | 21  | GND          |              |                          |              |              |                 |                   |                       |              |              |           |

| Con | Pin | Signal_Name   | Mode 0        | Alternative Modes on Pin |           |           |            |         |               |              |             |                |
|-----|-----|---------------|---------------|--------------------------|-----------|-----------|------------|---------|---------------|--------------|-------------|----------------|
|     |     |               |               | 1                        | 2         | 3         | 4          | 5       | 6             | 7            | 8           | 9              |
| X2  | 22  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 23  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 24  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 25  | MCAN0_RX      | MCAN0_RX      | UART5_TXD                | TIMER_IO3 | SYNC3_OUT | UART1_RIn  | EQEP2_S | PR0_UART0_TXD | GPIO1_25     | MCASP2_AXR1 | EHRPWM_TZn_IN4 |
| X2  | 26  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 27  | MCAN0_TX      | MCAN0_TX      | UART5_RXD                | TIMER_IO2 | SYNC2_OUT | UART1_DTRn | EQEP2_I | PR0_UART0_RXD | GPIO1_24     | MCASP2_AXR0 | EHRPWM_TZn_IN3 |
| X2  | 28  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 29  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 30  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 31  | TCK           | TCK           |                          |           |           |            |         |               |              |             |                |
| X2  | 32  | USB0_VBUS     | USB0_VBUS     |                          |           |           |            |         |               |              |             |                |
| X2  | 33  | TMS           | TMS           |                          |           |           |            |         |               |              |             |                |
| X2  | 34  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 35  | TDI           | TDI           |                          |           |           |            |         |               |              |             |                |
| X2  | 36  | USB0_DRVVBUS  | USB0_DRVVBUS  |                          |           |           |            |         |               | GPIO1_50     |             |                |
| X2  | 37  | TDO           | TDO           |                          |           |           |            |         |               |              |             |                |
| X2  | 38  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 39  |               |               |                          |           |           |            |         |               |              |             |                |
| X2  | 40  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 41  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 42  | USB0_DM       | USB0_DM       |                          |           |           |            |         |               |              |             |                |
| X2  | 43  | TRSTn         | TRSTn         |                          |           |           |            |         |               |              |             |                |
| X2  | 44  | USB0_DP       | USB0_DP       |                          |           |           |            |         |               |              |             |                |
| X2  | 45  | EMU0          | EMU0          |                          |           |           |            |         |               |              |             |                |
| X2  | 46  | GND           |               |                          |           |           |            |         |               |              |             |                |
| X2  | 47  | EMU1          | EMU1          |                          |           |           |            |         |               |              |             |                |
| X2  | 48  | WKUP_I2C0_SCL | WKUP_I2C0_SCL |                          |           |           |            |         |               | MCU_GPIO0_19 |             |                |

| Con | Pin | Signal_Name     | Mode 0          | Alternative Modes on Pin |              |              |   |   |   |              |   |   |
|-----|-----|-----------------|-----------------|--------------------------|--------------|--------------|---|---|---|--------------|---|---|
|     |     |                 |                 | 1                        | 2            | 3            | 4 | 5 | 6 | 7            | 8 | 9 |
| X2  | 49  | MCU_ERRORn      | MCU_ERRORn      |                          |              |              |   |   |   |              |   |   |
| X2  | 50  | WKUP_I2C0_SDA   | WKUP_I2C0_SDA   |                          |              |              |   |   |   | MCU_GPIO0_20 |   |   |
| X2  | 51  | MCU_RESETSTATz  | MCU_RESETSTATz  |                          |              |              |   |   |   | MCU_GPIO0_21 |   |   |
| X2  | 52  | WKUP_UART0_RXD  | WKUP_UART0_RXD  |                          | MCU_SPI0_CS2 |              |   |   |   | MCU_GPIO0_9  |   |   |
| X2  | 53  | MCU_RESETz      | MCU_RESETz      |                          |              |              |   |   |   |              |   |   |
| X2  | 54  | WKUP_UART0_TXD  | WKUP_UART0_TXD  |                          | MCU_SPI1_CS2 |              |   |   |   | MCU_GPIO0_10 |   |   |
| X2  | 55  | PORz_OUT        | PORz_OUT        |                          |              |              |   |   |   |              |   |   |
| X2  | 56  | WKUP_UART0_RTSn | WKUP_UART0_RTSn | WKUP_TIMER_IO1           |              | MCU_SPI1_CLK |   |   |   | MCU_GPIO0_12 |   |   |
| X2  | 57  | RESET_REQz      | RESET_REQz      |                          |              |              |   |   |   |              |   |   |
| X2  | 58  | WKUP_UART0_CTSn | WKUP_UART0_CTSn | WKUP_TIMER_IO0           |              | MCU_SPI1_CS0 |   |   |   | MCU_GPIO0_11 |   |   |
| X2  | 59  | GND             |                 |                          |              |              |   |   |   |              |   |   |
| X2  | 60  | GND             |                 |                          |              |              |   |   |   |              |   |   |

## 3.4. Carrier board connectors X3

| Con | Pin | Signal_Name   | Mode 0        | Alternative Modes on Pin     |           |            |                       |   |   |          |   |   |
|-----|-----|---------------|---------------|------------------------------|-----------|------------|-----------------------|---|---|----------|---|---|
|     |     |               |               | 1                            | 2         | 3          | 4                     | 5 | 6 | 7        | 8 | 9 |
| X3  | 1   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 2   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 3   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 4   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 5   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 6   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 7   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 8   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 9   | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 10  | VSYS          |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 11  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 12  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 13  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 14  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 15  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 16  | GND           |               |                              |           |            |                       |   |   |          |   |   |
| X3  | 17  | MMC1_CLK      | MMC1_CLK      |                              | TIMER_I04 | UART3_RXD  |                       |   |   | GPIO1_46 |   |   |
| X3  | 18  | MDIO0_MDC     | MDIO0_MDC     |                              |           |            |                       |   |   | GPIO0_86 |   |   |
| X3  | 19  | MMC1_CMD      | MMC1_CMD      |                              | TIMER_I05 | UART3_TXD  |                       |   |   | GPIO1_47 |   |   |
| X3  | 20  | MDIO0_MDIO    | MDIO0_MDIO    |                              |           |            |                       |   |   | GPIO0_85 |   |   |
| X3  | 21  | MMC1_DAT0     | MMC1_DAT0     | CP_GEMAC_CPTS0<br>_HW2TSPUSH | TIMER_I03 | UART2_CTSn | ECAP2_IN_APW<br>M_OUT |   |   | GPIO1_45 |   |   |
| X3  | 22  | RGMII1_TX_CTL | RGMII1_TX_CTL | RMII1_TX_EN                  |           |            |                       |   |   | GPIO0_73 |   |   |

| Con | Pin | Signal_Name    | Mode 0         | Alternative Modes on Pin |                |                   |                   |   |   |             |   |                |
|-----|-----|----------------|----------------|--------------------------|----------------|-------------------|-------------------|---|---|-------------|---|----------------|
|     |     |                |                | 1                        | 2              | 3                 | 4                 | 5 | 6 | 7           | 8 | 9              |
| X3  | 23  | MMC1_DAT1      | MMC1_DAT1      | CP_GEMAC_CPTS0_HW1TSPUSH | TIMER_IO2      | UART2_RTSn        | ECAP1_IN_APWM_OUT |   |   | GPIO1_44    |   |                |
| X3  | 24  | RGMII1_TXC     | RGMII1_TXC     | RMII1_CRSDV              |                |                   |                   |   |   | GPIO0_74    |   |                |
| X3  | 25  | MMC1_DAT2      | MMC1_DAT2      | CP_GEMAC_CPTS0_TS_SYNC   | TIMER_IO1      | UART2_TXD         |                   |   |   | GPIO1_43    |   |                |
| X3  | 26  | RGMII1_TD0     | RGMII1_TD0     | RMII1_TXD0               |                |                   |                   |   |   | GPIO0_75    |   |                |
| X3  | 27  | MMC1_DAT3      | MMC1_DAT3      | CP_GEMAC_CPTS0_TS_COMP   | TIMER_IO0      | UART2_RXD         |                   |   |   | GPIO1_42    |   |                |
| X3  | 28  | RGMII1_TD1     | RGMII1_TD1     | RMII1_TXD1               |                |                   |                   |   |   | GPIO0_76    |   |                |
| X3  | 29  | MMC1_SDCD      | MMC1_SDCD      | UART6_RXD                | TIMER_IO6      | UART3_RTSn        |                   |   |   | GPIO1_48    |   |                |
| X3  | 30  | RGMII1_TD2     | RGMII1_TD2     |                          | PR0_UART0_RXD  |                   |                   |   |   | GPIO0_77    |   |                |
| X3  | 31  | MMC1_SDWP      | MMC1_SDWP      | UART6_TXD                | TIMER_IO7      | UART3_CTSn        |                   |   |   | GPIO1_49    |   |                |
| X3  | 32  | RGMII1_TD3     | RGMII1_TD3     |                          | PR0_UART0_TXD  |                   |                   |   |   | GPIO0_78    |   |                |
| X3  | 33  | MCU_UART0_RXD  | MCU_UART0_RXD  |                          |                |                   |                   |   |   | MCU_GPIO0_5 |   |                |
| X3  | 34  | RGMII1_RX_CTL  | RGMII1_RX_CTL  | RMII1_RX_ER              |                |                   |                   |   |   | GPIO0_79    |   |                |
| X3  | 35  | MCU_UART0_TXD  | MCU_UART0_TXD  |                          |                |                   |                   |   |   | MCU_GPIO0_6 |   |                |
| X3  | 36  | RGMII1_RXC     | RGMII1_RXC     | RMII1_REF_CLK            | PR0_UART0_CTSn |                   |                   |   |   | GPIO0_80    |   |                |
| X3  | 37  | MCU_UART0_CTSn | MCU_UART0_CTSn | MCU_TIMER_IO0            |                | MCU_SPI1_D0       |                   |   |   | MCU_GPIO0_7 |   |                |
| X3  | 38  | RGMII1_RD0     | RGMII1_RD0     | RMII1_RXD0               |                |                   |                   |   |   | GPIO0_81    |   |                |
| X3  | 39  | MCU_UART0_RTSn | MCU_UART0_RTSn | MCU_TIMER_IO1            |                | MCU_SPI1_D1       |                   |   |   | MCU_GPIO0_8 |   |                |
| X3  | 40  | RGMII1_RD1     | RGMII1_RD1     | RMII1_RXD1               |                |                   |                   |   |   | GPIO0_82    |   |                |
| X3  | 41  | GND            |                |                          |                |                   |                   |   |   |             |   |                |
| X3  | 42  | RGMII1_RD2     | RGMII1_RD2     |                          | PR0_UART0_RTSn |                   |                   |   |   | GPIO0_83    |   |                |
| X3  | 43  | MMC2_CLK       | MMC2_CLK       | MCASP1_ACLKR             | MCASP1_AXR5    | UART6_RXD         |                   |   |   | GPIO0_69    |   |                |
| X3  | 44  | RGMII1_RD3     | RGMII1_RD3     |                          |                |                   |                   |   |   | GPIO0_84    |   |                |
| X3  | 45  | MMC2_CMD       | MMC2_CMD       | MCASP1_AFSR              | MCASP1_AXR4    | UART6_TXD         |                   |   |   | GPIO0_70    |   |                |
| X3  | 46  | SPI0_CS1       | SPI0_CS1       | CP_GEMAC_CPTS0_TS_COMP   | EHRPWM0_B      | ECAP0_IN_APWM_OUT |                   |   |   | GPIO1_16    |   | EHRPWM_TZn_IN5 |

| Con | Pin | Signal_Name  | Mode 0       | Alternative Modes on Pin |                |                 |                             |                   |                   |             |         |   |
|-----|-----|--------------|--------------|--------------------------|----------------|-----------------|-----------------------------|-------------------|-------------------|-------------|---------|---|
|     |     |              |              | 1                        | 2              | 3               | 4                           | 5                 | 6                 | 7           | 8       | 9 |
| X3  | 47  | MMC2_DAT0    | MMC2_DAT0    | MCASP1_AXR0              |                |                 |                             |                   |                   | GPIO0_68    |         |   |
| X3  | 48  | SPI0_CS0     | SPI0_CS0     |                          | EHRPWM0_A      |                 |                             |                   | PR0_ECAP0_SYNC_IN | GPIO1_15    |         |   |
| X3  | 49  | MMC2_DAT1    | MMC2_DAT1    | MCASP1_AXR1              |                |                 |                             |                   |                   | GPIO0_67    |         |   |
| X3  | 50  | SPI0_D0      | SPI0_D0      | CP_GEMAC_CPTS0_HW1TSPUSH | EHRPWM1_B      |                 |                             |                   |                   | GPIO1_18    |         |   |
| X3  | 51  | MMC2_DAT2    | MMC2_DAT2    | MCASP1_AXR2              |                | UART5_TXD       |                             |                   |                   | GPIO0_66    |         |   |
| X3  | 52  | SPI0_D1      | SPI0_D1      | CP_GEMAC_CPTS0_HW2TSPUSH | EHRPWM_TZn_IN0 |                 |                             |                   |                   | GPIO1_19    |         |   |
| X3  | 53  | MMC2_DAT3    | MMC2_DAT3    | MCASP1_AXR3              |                | UART5_RXD       |                             |                   |                   | GPIO0_65    |         |   |
| X3  | 54  | SPI0_CLK     | SPI0_CLK     | CP_GEMAC_CPTS0_TS_SYNC   | EHRPWM1_A      |                 |                             |                   |                   | GPIO1_17    |         |   |
| X3  | 55  | MMC2_SDCD    | MMC2_SDCD    | MCASP1_ACLKX             |                | UART4_RXD       |                             |                   |                   | GPIO0_71    |         |   |
| X3  | 56  | MCU_SPI0_CS1 | MCU_SPI0_CS1 | MCU_OBSCLK0              | MCU_SYSCLKOUT0 | MCU_EXT_REFCLK0 | MCU_TIMER_IO1               |                   |                   | MCU_GPIO0_1 |         |   |
| X3  | 57  | MMC2_SDWP    | MMC2_SDWP    | MCASP1_AFSX              |                | UART4_TXD       |                             |                   |                   | GPIO0_72    |         |   |
| X3  | 58  | MCU_SPI0_CS0 | MCU_SPI0_CS0 |                          |                |                 | WKUP_TIMER_I01              |                   |                   | MCU_GPIO0_0 |         |   |
| X3  | 59  |              |              |                          |                |                 |                             |                   |                   |             |         |   |
| X3  | 60  | MCU_SPI0_D1  | MCU_SPI0_D1  |                          |                |                 |                             |                   |                   | MCU_GPIO0_4 |         |   |
| X3  | 61  | VSELECT      |              |                          |                |                 |                             |                   |                   |             |         |   |
| X3  | 62  | MCU_SPI0_D0  | MCU_SPI0_D0  |                          |                |                 |                             |                   |                   | MCU_GPIO0_3 |         |   |
| X3  | 63  | VDD_3V3      |              |                          |                |                 |                             |                   |                   |             |         |   |
| X3  | 64  | MCU_SPI0_CLK | MCU_SPI0_CLK |                          |                |                 |                             |                   |                   | MCU_GPIO0_2 |         |   |
| X3  | 65  | VDD_IO       |              |                          |                |                 |                             |                   |                   |             |         |   |
| X3  | 66  | MCASP0_AXR2  | MCASP0_AXR2  | SPI2_D1                  | UART1_RTSn     | UART6_TXD       | PR0_IEP0_EDIO_DATA_IN_OUT29 | ECAP2_IN_APWM_OUT | PR0_UART0_TXD     | GPIO1_8     | EQEP0_B |   |
| X3  | 67  | VMMC_IO      |              |                          |                |                 |                             |                   |                   |             |         |   |
| X3  | 68  | MCASP0_AXR3  | MCASP0_AXR3  | SPI2_D0                  | UART1_CTSn     | UART6_RXD       | PR0_IEP0_EDIO_DATA_IN_OUT28 | ECAP1_IN_APWM_OUT | PR0_UART0_RXD     | GPIO1_7     | EQEP0_A |   |
| X3  | 69  | VPP          |              |                          |                |                 |                             |                   |                   |             |         |   |

| Con       | Pin       | Signal_Name  | Mode 0       | Alternative Modes on Pin  |                       |   |   |               |           |          |         |   |
|-----------|-----------|--------------|--------------|---------------------------|-----------------------|---|---|---------------|-----------|----------|---------|---|
|           |           |              |              | 1                         | 2                     | 3 | 4 | 5             | 6         | 7        | 8       | 9 |
| <b>X3</b> | <b>70</b> | MCASP0_AFSX  | MCASP0_AFSX  | SPI2_CS3                  | AUDIO_EXT_REFC<br>LK1 |   |   |               |           | GPIO1_12 | EQEP1_B |   |
| <b>X3</b> | <b>71</b> | GND          |              |                           |                       |   |   |               |           |          |         |   |
| <b>X3</b> | <b>72</b> | MCASP0_ACLKX | MCASP0_ACLKX | SPI2_CS1                  | ECAP2_IN_AP<br>WM_OUT |   |   |               |           | GPIO1_11 | EQEP1_A |   |
| <b>X3</b> | <b>73</b> |              |              |                           |                       |   |   |               |           |          |         |   |
| <b>X3</b> | <b>74</b> | MCASP0_AXR1  | MCASP0_AXR1  | SPI2_CS2                  | ECAP1_IN_AP<br>WM_OUT |   |   | PR0_UART0_RXD | EHRPWM1_A | GPIO1_9  | EQEP0_S |   |
| <b>X3</b> | <b>75</b> |              |              |                           |                       |   |   |               |           |          |         |   |
| <b>X3</b> | <b>76</b> | MCASP0_AFSR  | MCASP0_AFSR  | SPI2_CS0                  | UART1_RXD             |   |   |               | EHRPWM0_A | GPIO1_13 | EQEP1_S |   |
| <b>X3</b> | <b>77</b> |              |              |                           |                       |   |   |               |           |          |         |   |
| <b>X3</b> | <b>78</b> | MCASP0_ACLKR | MCASP0_ACLKR | SPI2_CLK                  | UART1_TXD             |   |   |               | EHRPWM0_B | GPIO1_14 | EQEP1_I |   |
| <b>X3</b> | <b>79</b> | GND          |              |                           |                       |   |   |               |           |          |         |   |
| <b>X3</b> | <b>80</b> | MCASP0_AXR0  | MCASP0_AXR0  | PR0_ECAP0_IN_AP<br>WM_OUT | AUDIO_EXT_REFC<br>LK0 |   |   | PR0_UART0_TXD | EHRPWM1_B | GPIO1_10 | EQEP0_I |   |

## 3.5. Carrier board connectors X4

| Con | Pin | Signal_Name  | Mode 0       | Alternative Modes on Pin |                |                |               |                |                |          |   |   |
|-----|-----|--------------|--------------|--------------------------|----------------|----------------|---------------|----------------|----------------|----------|---|---|
|     |     |              |              | 1                        | 2              | 3              | 4             | 5              | 6              | 7        | 8 | 9 |
| X4  | 1   | GND          |              |                          |                |                |               |                |                |          |   |   |
| X4  | 2   | GPMC0_CLK    | GPMC0_CLK    |                          | MCASP1_AXR3    | GPMC0_FCLK_MUX | PR0_PRU0_GPO8 | PR0_PRU0_GPI8  | TRC_DATA6      | GPIO0_31 |   |   |
| X4  | 3   | VOUT0_DATA0  | VOUT0_DATA0  | GPMC0_A0                 | PR0_PRU1_GPO0  | PR0_PRU1_GPI0  | UART2_RXD     | PR0_PRU0_GPO8  | PR0_PRU0_GPI8  | GPIO0_45 |   |   |
| X4  | 4   | GPMC0_AD0    | GPMC0_AD0    | PR0_PRU1_GPO8            | PR0_PRU1_GPI8  | MCASP2_AXR4    | PR0_PRU0_GPO0 | PR0_PRU0_GPI0  | TRC_CLK        | GPIO0_15 |   |   |
| X4  | 5   | VOUT0_DATA1  | VOUT0_DATA1  | GPMC0_A1                 | PR0_PRU1_GPO1  | PR0_PRU1_GPI1  | UART2_TXD     | PR0_PRU0_GPO9  | PR0_PRU0_GPI9  | GPIO0_46 |   |   |
| X4  | 6   | GPMC0_AD1    | GPMC0_AD1    | PR0_PRU1_GPO9            | PR0_PRU1_GPI9  | MCASP2_AXR5    | PR0_PRU0_GPO1 | PR0_PRU0_GPI1  | TRC_CTL        | GPIO0_16 |   |   |
| X4  | 7   | VOUT0_DATA2  | VOUT0_DATA2  | GPMC0_A2                 | PR0_PRU1_GPO2  | PR0_PRU1_GPI2  | UART3_RXD     | PR0_PRU0_GPO10 | PR0_PRU0_GPI10 | GPIO0_47 |   |   |
| X4  | 8   | GPMC0_AD2    | GPMC0_AD2    | PR0_PRU1_GPO10           | PR0_PRU1_GPI10 | MCASP2_AXR6    | PR0_PRU0_GPO2 | PR0_PRU0_GPI2  | TRC_DATA0      | GPIO0_17 |   |   |
| X4  | 9   | VOUT0_DATA3  | VOUT0_DATA3  | GPMC0_A3                 | PR0_PRU1_GPO3  | PR0_PRU1_GPI3  | UART3_TXD     | PR0_PRU0_GPO11 | PR0_PRU0_GPI11 | GPIO0_48 |   |   |
| X4  | 10  | GPMC0_AD3    | GPMC0_AD3    | PR0_PRU1_GPO11           | PR0_PRU1_GPI11 | MCASP2_AXR7    | PR0_PRU0_GPO3 | PR0_PRU0_GPI3  | TRC_DATA1      | GPIO0_18 |   |   |
| X4  | 11  | VOUT0_DATA4  | VOUT0_DATA4  | GPMC0_A4                 | PR0_PRU1_GPO4  | PR0_PRU1_GPI4  | UART4_RXD     | PR0_PRU0_GPO12 | PR0_PRU0_GPI12 | GPIO0_49 |   |   |
| X4  | 12  | GPMC0_AD4    | GPMC0_AD4    | PR0_PRU1_GPO12           | PR0_PRU1_GPI12 | MCASP2_AXR8    | PR0_PRU0_GPO4 | PR0_PRU0_GPI4  | TRC_DATA2      | GPIO0_19 |   |   |
| X4  | 13  | VOUT0_DATA5  | VOUT0_DATA5  | GPMC0_A5                 | PR0_PRU1_GPO5  | PR0_PRU1_GPI5  | UART4_TXD     | PR0_PRU0_GPO13 | PR0_PRU0_GPI13 | GPIO0_50 |   |   |
| X4  | 14  | GPMC0_AD5    | GPMC0_AD5    | PR0_PRU1_GPO13           | PR0_PRU1_GPI13 | MCASP2_AXR9    | PR0_PRU0_GPO5 | PR0_PRU0_GPI5  | TRC_DATA3      | GPIO0_20 |   |   |
| X4  | 15  | VOUT0_DATA6  | VOUT0_DATA6  | GPMC0_A6                 | PR0_PRU1_GPO6  | PR0_PRU1_GPI6  | UART5_RXD     | PR0_PRU0_GPO14 | PR0_PRU0_GPI14 | GPIO0_51 |   |   |
| X4  | 16  | GND          |              |                          |                |                |               |                |                |          |   |   |
| X4  | 17  | VOUT0_DATA7  | VOUT0_DATA7  | GPMC0_A7                 | PR0_PRU1_GPO7  | PR0_PRU1_GPI7  | UART5_TXD     | PR0_PRU0_GPO15 | PR0_PRU0_GPI15 | GPIO0_52 |   |   |
| X4  | 18  | GPMC0_AD6    | GPMC0_AD6    | PR0_PRU1_GPO14           | PR0_PRU1_GPI14 | MCASP2_AXR10   | PR0_PRU0_GPO6 | PR0_PRU0_GPI6  | TRC_DATA4      | GPIO0_21 |   |   |
| X4  | 19  | VOUT0_DATA8  | VOUT0_DATA8  | GPMC0_A8                 | PR0_PRU1_GPO16 | PR0_PRU1_GPI16 | UART6_RXD     | PR0_PRU0_GPO17 | PR0_PRU0_GPI17 | GPIO0_53 |   |   |
| X4  | 20  | GPMC0_AD7    | GPMC0_AD7    | PR0_PRU1_GPO15           | PR0_PRU1_GPI15 | MCASP2_AXR11   | PR0_PRU0_GPO7 | PR0_PRU0_GPI7  | TRC_DATA5      | GPIO0_22 |   |   |
| X4  | 21  | VOUT0_DATA9  | VOUT0_DATA9  | GPMC0_A9                 | PR0_PRU1_GPO8  | PR0_PRU1_GPI8  | UART6_TXD     | PR0_PRU0_GPO16 | PR0_PRU0_GPI16 | GPIO0_54 |   |   |
| X4  | 22  | GPMC0_AD8    | GPMC0_AD8    | VOUT0_DATA16             | UART2_RXD      | MCASP2_AXR0    | PR0_PRU1_GPO0 | PR0_PRU1_GPI0  |                | GPIO0_23 |   |   |
| X4  | 23  | VOUT0_DATA10 | VOUT0_DATA10 | GPMC0_A10                | PR0_PRU1_GPO9  | PR0_PRU1_GPI9  | UART6_RTSn    | PR0_PRU0_GPO0  | PR0_PRU0_GPI0  | GPIO0_55 |   |   |

| Con | Pin | Signal_Name     | Mode 0          | Alternative Modes on Pin |                |                |                |                |                |          |                        |           |
|-----|-----|-----------------|-----------------|--------------------------|----------------|----------------|----------------|----------------|----------------|----------|------------------------|-----------|
|     |     |                 |                 | 1                        | 2              | 3              | 4              | 5              | 6              | 7        | 8                      | 9         |
| X4  | 24  | GPMC0_AD9       | GPMC0_AD9       | VOUT0_DATA17             | UART2_TXD      | MCASP2_AXR1    | PR0_PRU1_GPO1  | PR0_PRU1_GPI1  |                | GPIO0_24 |                        |           |
| X4  | 25  | VOUT0_DATA11    | VOUT0_DATA11    | GPMC0_A11                | PR0_PRU1_GPO10 | PR0_PRU1_GPI10 | UART6_CTSn     | PR0_PRU0_GPO1  | PR0_PRU0_GPI1  | GPIO0_56 |                        |           |
| X4  | 26  | GPMC0_AD10      | GPMC0_AD10      | VOUT0_DATA18             | UART3_RXD      | MCASP2_AXR2    | PR0_PRU1_GPO2  | PR0_PRU1_GPI2  |                | GPIO0_25 | OBSCLK0                |           |
| X4  | 27  | VOUT0_DATA12    | VOUT0_DATA12    | GPMC0_A12                | PR0_PRU1_GPO11 | PR0_PRU1_GPI11 | UART5_RTSn     | PR0_PRU0_GPO2  | PR0_PRU0_GPI2  | GPIO0_57 |                        |           |
| X4  | 28  | GPMC0_AD11      | GPMC0_AD11      | VOUT0_DATA19             | UART3_TXD      | MCASP2_AXR3    | PR0_PRU1_GPO3  | PR0_PRU1_GPI3  | TRC_DATA23     | GPIO0_26 |                        |           |
| X4  | 29  | VOUT0_DATA13    | VOUT0_DATA13    | GPMC0_A13                | PR0_PRU1_GPO12 | PR0_PRU1_GPI12 | UART5_CTSn     | PR0_PRU0_GPO3  | PR0_PRU0_GPI3  | GPIO0_58 |                        |           |
| X4  | 30  | GPMC0_AD12      | GPMC0_AD12      | VOUT0_DATA20             | UART4_RXD      | MCASP2_AFSX    | PR0_PRU0_GPO0  | PR0_PRU0_GPI0  | TRC_DATA22     | GPIO0_27 |                        |           |
| X4  | 31  | VOUT0_DATA14    | VOUT0_DATA14    | GPMC0_A14                | PR0_PRU1_GPO13 | PR0_PRU1_GPI13 | UART4_RTSn     | PR0_PRU0_GPO4  | PR0_PRU0_GPI4  | GPIO0_59 |                        |           |
| X4  | 32  | GPMC0_AD13      | GPMC0_AD13      | VOUT0_DATA21             | UART4_TXD      | MCASP2_ACLKX   | PR0_PRU0_GPO1  | PR0_PRU0_GPI1  | TRC_DATA21     | GPIO0_28 |                        |           |
| X4  | 33  | VOUT0_DATA15    | VOUT0_DATA15    | GPMC0_A15                | PR0_PRU1_GPO14 | PR0_PRU1_GPI14 | UART4_CTSn     | PR0_PRU0_GPO5  | PR0_PRU0_GPI5  | GPIO0_60 |                        |           |
| X4  | 34  | GPMC0_AD14      | GPMC0_AD14      | VOUT0_DATA22             | UART5_RXD      | MCASP2_AFSR    | PR0_PRU0_GPO2  | PR0_PRU0_GPI2  | TRC_DATA20     | GPIO0_29 | UART2_CTSn             |           |
| X4  | 35  | VOUT0_PCLK      | VOUT0_PCLK      | GPMC0_A19                | PR0_PRU1_GPO19 | PR0_PRU1_GPI19 | UART2_CTSn     | PR0_PRU0_GPO19 | PR0_PRU0_GPI19 | GPIO0_64 | PR0_ECAP0_I_N_APWM_OUT |           |
| X4  | 36  | GPMC0_AD15      | GPMC0_AD15      | VOUT0_DATA23             | UART5_TXD      | MCASP2_ACLKR   | PR0_PRU0_GPO3  | PR0_PRU0_GPI3  | TRC_DATA19     | GPIO0_30 | UART2_RTSn             |           |
| X4  | 37  | VOUT0_DE        | VOUT0_PCLK      | GPMC0_A19                | PR0_PRU1_GPO19 | PR0_PRU1_GPI19 | UART2_CTSn     | PR0_PRU0_GPO19 | PR0_PRU0_GPI19 | GPIO0_64 | PR0_ECAP0_I_N_APWM_OUT |           |
| X4  | 38  | GPMC0_CSn0      | GPMC0_CSn0      |                          |                | MCASP2_AXR14   | PR0_PRU0_GPO17 | PR0_PRU0_GPI17 | TRC_DATA15     | GPIO0_88 |                        |           |
| X4  | 39  | VOUT0_VSYNC     | VOUT0_VSYNC     | GPMC0_A18                | PR0_PRU1_GPO18 | PR0_PRU1_GPI18 | UART2_RTSn     | PR0_PRU0_GPO18 | PR0_PRU0_GPI18 | GPIO0_63 |                        |           |
| X4  | 40  | GPMC0_CSn1      | GPMC0_CSn1      | PR0_PRU1_GPO16           | PR0_PRU1_GPI16 | MCASP2_AXR15   | PR0_PRU0_GPO18 | PR0_PRU0_GPI18 | TRC_DATA16     | GPIO0_42 |                        |           |
| X4  | 41  | VOUT0_HSYNC     | VOUT0_HSYNC     | GPMC0_A16                | PR0_PRU1_GPO15 | PR0_PRU1_GPI15 | UART3_RTSn     | PR0_PRU0_GPO6  | PR0_PRU0_GPI6  | GPIO0_61 |                        |           |
| X4  | 42  | GPMC0_CSn2      | GPMC0_CSn2      | I2C2_SCL                 | MCASP1_AXR4    | UART4_RXD      | PR0_PRU0_GPO19 | PR0_PRU0_GPI19 | TRC_DATA17     | GPIO0_43 | MCASP1_AF              |           |
| X4  | 43  |                 |                 |                          |                |                |                |                |                |          |                        |           |
| X4  | 44  | GPMC0_CSn3      | GPMC0_CSn3      | I2C2_SDA                 | GPMC0_A20      | UART4_TXD      | MCASP1_AXR5    |                | TRC_DATA18     | GPIO0_44 | MCASP1_ACLKR           |           |
| X4  | 45  | GND             |                 |                          |                |                |                |                |                |          |                        |           |
| X4  | 46  | GPMC0_ADVn_AL_E | GPMC0_ADVn_AL_E |                          | MCASP1_AXR2    |                | PR0_PRU0_GPO9  | PR0_PRU0_GPI9  | TRC_DATA7      | GPIO0_32 |                        |           |
| X4  | 47  | I2C1_SCL        | I2C1_SCL        | UART1_RXD                | TIMER_IO0      | SPI2_CS1       | EHRPWM0_SYNCI  |                |                | GPIO1_28 | EHRPWM2_A              | MMC2_SDCD |
| X4  | 48  | GPMC0_BE0n_CL   | GPMC0_BE0n_CL   |                          | MCASP1_ACLKX   |                | PR0_PRU0_GPO12 | PR0_PRU0_GPI12 | TRC_DATA10     | GPIO0_35 |                        |           |

| Con       | Pin       | Signal_Name   | Mode 0        | Alternative Modes on Pin  |             |              |                   |                |            |                  |               |               |
|-----------|-----------|---------------|---------------|---------------------------|-------------|--------------|-------------------|----------------|------------|------------------|---------------|---------------|
|           |           |               |               | 1                         | 2           | 3            | 4                 | 5              | 6          | 7                | 8             | 9             |
|           |           | E             | E             |                           |             |              |                   |                |            |                  |               |               |
| <b>X4</b> | <b>49</b> | I2C1_SDA      | I2C1_SDA      | UART1_TXD                 | TIMER_I01   | SPI2_CLK     | EHRPWM0_SYNC<br>O |                |            | GPIO1_29         | EHRPWM2_<br>B | MMC2_<br>SDWP |
| <b>X4</b> | <b>50</b> | GPMC0_BE1n    | GPMC0_BE1n    |                           |             | MCASP2_AXR12 | PR0_PRU0_GP013    | PR0_PRU0_GPI13 | TRC_DATA11 | GPIO0_36         |               |               |
| <b>X4</b> | <b>51</b> | MCU_I2C0_SCL  | MCU_I2C0_SCL  |                           |             |              |                   |                |            | MCU_GPIO0_1<br>7 |               |               |
| <b>X4</b> | <b>52</b> | GPMC0_DIR     | GPMC0_DIR     | PR0_ECAP0_IN_AP<br>WM_OUT |             | MCASP2_AXR13 | PR0_PRU0_GP016    | PR0_PRU0_GPI16 | TRC_DATA14 | GPIO0_40         | EQEP2_S       |               |
| <b>X4</b> | <b>53</b> | MCU_I2C0_SDA  | MCU_I2C0_SDA  |                           |             |              |                   |                |            | MCU_GPIO0_1<br>8 |               |               |
| <b>X4</b> | <b>54</b> | GPMC0_WAIT0   | GPMC0_WAIT0   |                           | MCASP1_AFSX |              | PR0_PRU0_GP014    | PR0_PRU0_GPI14 | TRC_DATA12 | GPIO0_37         |               |               |
| <b>X4</b> | <b>55</b> | GPMC0_WEn     | GPMC0_WEn     |                           | MCASP1_AXR0 |              | PR0_PRU0_GP011    | PR0_PRU0_GPI11 | TRC_DATA9  | GPIO0_34         |               |               |
| <b>X4</b> | <b>56</b> | GPMC0_WAIT1   | GPMC0_WAIT1   | VOUT0_EXTPCLKIN           | GPMC0_A21   | UART6_RXD    |                   |                |            | GPIO0_38         | EQEP2_I       |               |
| <b>X4</b> | <b>57</b> | GPMC0_OEn_REn | GPMC0_OEn_REn |                           | MCASP1_AXR1 |              | PR0_PRU0_GP010    | PR0_PRU0_GPI10 | TRC_DATA8  | GPIO0_33         |               |               |
| <b>X4</b> | <b>58</b> | GPMC0_WPn     | GPMC0_WPn     | AUDIO_EXT_REFCL<br>K1     | GPMC0_A22   | UART6_TXD    | PR0_PRU0_GP015    | PR0_PRU0_GPI15 | TRC_DATA13 | GPIO0_39         |               |               |
| <b>X4</b> | <b>59</b> | GND           |               |                           |             |              |                   |                |            |                  |               |               |
| <b>X4</b> | <b>60</b> | GND           |               |                           |             |              |                   |                |            |                  |               |               |

## 3.6. Signal Propagation Delay

The signal propagation delay table provides the relevant propagation delay values for module signals and supports timing analysis and carrier board design. For detailed signal propagation delay values, refer to the Signal Propagation Delay Table. These values should be considered when performing timing analysis and designing the carrier board.



[Signal Propagation Delay Table for byteENGINE AM62x](#)

## 3.7. Power Supply

- > The byteENGINE can be powered with 3.3V to 5.5V.
- > The recommended power supply is 5V.

## 3.8. Boot Modes byteENGINE AM62x

> Bootmode Pins B15 - B0 are GPMC0\_AD[0...15]

| 2.2x2BOOTMODE Pin Mapping |     |                         |                  |     |     |                          |    |    |                   |    |    |    |                                   |    |    |
|---------------------------|-----|-------------------------|------------------|-----|-----|--------------------------|----|----|-------------------|----|----|----|-----------------------------------|----|----|
| B15                       | B14 | B13                     | B12              | B11 | B10 | B9                       | B8 | B7 | B6                | B5 | B4 | B3 | B2                                | B1 | B0 |
| Reserved                  |     | Backup Boot Mode Config | Backup Boot Mode |     |     | Primary Boot Mode Config |    |    | Primary Boot mode |    |    |    | PLL Config (b011 → 25 MHz on SOM) |    |    |



See chapter 5.3.1 of the Technical Reference Manual for more Details:

[Technical Reference Manual](#)

| Primary Boot Mode | B9 | B8 | B7 | B6 | B5 | B4 | B3 |
|-------------------|----|----|----|----|----|----|----|
| MMCSD             | 1  | 0  | 0  | 1  | 0  | 0  | 0  |
| QSPI              | 0  | 1  | 0  | 0  | 0  | 1  | 0  |
| UART              | 0  | 0  | 0  | 0  | 1  | 1  | 1  |
| Ethernet RMII     | 0  | 0  | 0  | 0  | 1  | 0  | 1  |
| eMMC              | 0  | 0  | 0  | 1  | 0  | 0  | 1  |
| USB               | 0  | 0  | 0  | 1  | 0  | 1  | 0  |

| Backup BootMode | B13 | B12 | B11 | B10 |
|-----------------|-----|-----|-----|-----|
| MMCSD           | 1   | 1   | 0   | 1   |
| UART            | 0   | 0   | 1   | 1   |
| USB DFU         | 0   | 0   | 0   | 1   |

B3 - B0 are set on CPU Module and should not be strapped.

## 4. Ordering info

The Order Code allows customers to easily recognize the detailed specification of the ordered SOM. Please refer to chapter [Decision guidance byteENGINE AM62x](#) for further information.

### byteENGINE-AM62[TYPE]-[SPEED]-[RAM]-[FLASH]-[temp-range]-[revision]

|              |                   |                                                             |
|--------------|-------------------|-------------------------------------------------------------|
| [TYPE]       | CPU type          | AM6231 / AM6232 / AM6234 / AM6251 / AM6252 / AM6254         |
| [SPEED]      | Clock speed       | 1.0 GHz / 1.4 GHz                                           |
| [RAM]        | RAM size          | 512 / 768 / 1024 / 1536 / 2048 MB                           |
| [FLASH]      | eMMC flash size   | 8 / 16 / 32 / 64 / 128 GB                                   |
| [temp-range] | Temperature range | [C] Consumer 0° to +85° C<br>[I] Industrial -40°C to +85 °C |
| [revision]   | Revision          | 1.1                                                         |

## 5. References



### Notice

Files can only be downloaded with login credentials. Please request your download credentials via [support@bytesatwork.ch](mailto:support@bytesatwork.ch) or contact your sales representative



### Links

#### Hardware Design

[Schematic of the connectors X1, X2, X3, X4](#)

[Altium Schematic of the connectors X1, X2, X3, X4](#)

[Altium Library](#)

[STEP Model](#)

[Detailed Pinout of byteENGINE AM62x](#)

[Signal Propagation Delay Table for byteENGINE AM62x](#)

#### Component Documentation

[Hirose DF40-Series Connectors](#)

[TI AM62x Family](#)

#### Software & Configuration

[meta-bytesatwork on github](#)

[byteWIKI](#)



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## Product Information

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## Help

[bytewiki.readthedocs.io](http://bytewiki.readthedocs.io)

