# BSP-RTOS-TI-AM57x-PD17.1.0 Release Notes

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|---|---|
| **Operating System** | TI-RTOS |
| **BSP Release Status** | RELEASED |
| **Release Date** | 01 Dec 2017 |
| **Repository** | PHYTEC Public Repos |
| **Binaries** | |
| **Source Archive** | |
| **Release Notes** | |


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## Introduction

This BSP provides a basis for development, deployment and execution of TI-RTOS based applications on the phyCORE-AM57x System on Module (SOM). For detailed information on the various software components included in the release and how to use them, please refer to the Quickstart.

## Versioning

### Software

**Components**

| Component Name | Component Version |
|---|---|
| CG_XML | 2.41.0 |
| CTOOLSLIB | 2.2.0.0 |
| DSPLIB | 3.4.0.0 |
| EDMA3 LLD | 2.12.5.29 |
| FC | 3.40.2.7 |
| IMGLIB | 3.1.1.0 |
| IPC | 3.46.2.4 |
| MATHLIB | 3.1.1.0 |
| NDK | 2.25.1.11 |
| OPENCL | 1.1.14.1 |
| OPENMP | 2.6.2.0 |
| PDK | 1.0.8 |

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|---|---|
| SYS/BIOS | 6.46.5.55 |
| UIA | 2.0.6.52 |
| XDAIS | 7.24.0.4 |
| XDCTOOLS | 3.32.1.22 |

**Compilers**

| Compiler Name | Compiler Version |
|---|---|
| GNU ARM Embedded | 4.9-2015q3 |
| TI ARM CGT | 16.9.3 |
| TI C6000 CGT | 8.1.3 |
| TI PRU CGT | 2.1.5 |

## Compatible Hardware

**Supported Hardware Versions**

| Hardware Description | PCB Version |
|---|---|
| phyCORE-AM57x SOM | 1428.3 |
| phyCORE-AM57x Carrier Board | 1435.2 |

# BSP Download

Prebuilt images of BSP-RTOS-TI-AM57x-PD17.1.0 can be downloaded from the link below:

BSP-RTOS-TI-AM57x-PD17.1.0 Release

# Quickstart

Quickstarts for BSP-RTOS-TI-AM57x-PD17.1.0:

**Content by label**

There is no content with the specified labels

# BSP Features

| Interface | Detail | Tested | Notes |
|---|---|---|---|
| UART | uart3 | Yes | Connector X18 (default serial console) |
| | uart4 | No | |
| | uart5 | Yes | Connector X17 |
| | uart6 | No | |
| | uart7 | No | |
| | uart8 | No | |
| | uart9 | No | |
| | uart10 | No | |
| I2C | i2c1 | Yes | Available on expansion Connector X28 |
| | i2c2 | Yes | Connected to HDMI1_DDC |
| | i2c3 | No | |

| | | | |
|---|---|---|---|
| | i2c4 | No | Used for Audio Codec - available on expansion Connector X28 |
| | i2c5 | No | |
| Ethernet | cpsw_emac0 (RGMII0 on SoM) | Yes | RGMII0 - KSZ9031RNX SoM PHY<br>Connector X7 |
| | cpsw_emac1 (RGMII1 on CarrierBoard) | Yes | RGMII1 - KSZ9031RNX Connector X8 |
| Display and Touch | Analog Touch Control 1 | No | Capacitive: ETM-FT5x06 (on LCD-018), I2C4 |
| | Analog Touch Control2 | No | Resistive: STMPE811 (on CB), I2C4 |
| | PWM Backlight | Yes | ehrpwm0 (EHRPMW1A on CB) |
| | 24-bit LCD Interface | No | LVDS Connector X25<br>requires LCD-018 |
| | HDMI | Yes | hdmi1_ddc<br>Connector X24 (encoder TPD12S on carrier board) |
| McASP | mcasp1 | No | |
| | mcasp2 | No | |
| | mcasp5 | No | |
| | mcasp6 | No | |
| | mcasp7 | No | |
| | mcasp8 | No | |
| eMMC/SD/SDIO | mmc1 | Yes | Connector X2 |
| | mmc2 | Yes | eMMC on SOM |
| | mmc3 | No | Connector X26 (WiFi/BT connector) |
| USB | usb1 | see Known Issues | USB 3.0 Standard-A Connector X30 (Host only) |
| | usb2 | see Known Issues | USB 2.0 Mini-AB Connector X9 (device default); signals may also be routed to X19 (Standard-A) |
| CAN | can1 | Yes | DB9 Connector X6 |
| | can2 | Yes | Pin Header Connector X5 |
| MCSPI | spi1 | No | Connector X28 (Expansion connector) enabled using spidev on X_SPI1_nCS0 |
| | spi2 | No | |
| | spi3 | No | |
| | spi4 | No | |
| QSPI | qspi1 | No | NOR Serial Flash on SOM |
| SATA | sata1 | No | Connector X11 (SATA) and X12 (power connector) |
| PCIe | pcie1 | No | Connector X27 (PI6C557 4x PCIe connector) |
| IPU | ipu1 | No | |
| | ipu2 | No | |
| DSP | dsp1 | Yes | |
| | dsp2 | Yes | |
| GPIO | User Buttons and LEDs | Yes | |
| Memory | EEPROM | No | M24C32 on I2C1 |
| | NAND (8/16 bit) | No | No NAND populated |
| | QSPI NOR Flash | No | N25Q128A connected to QSPI1_CS2 |
| | eMMC | Yes | mmc2 on SOM |
| RTC | Internal AM57xx | No | Internal to processor |
| | PMIC TPS659037 | No | TPS659037 I2C1 |
| | External RTC | No | RV-4162-C7 on I2C1 |
| Audio | Stereo Codec on CarrierBoard | No | TLV320AIC3007 codec; connected to McASP1 and I2C4 |

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|---|---|---|---|
| Communication | TiWi-BLE WiFi | No | Connector X26 |
| | TiWi-BLEBluetooth | No | Connector X26 |
| | WiLink8 WiFi | No | Connector X26 |
| Parallel Camera | VIN3 on i2c3 | No | VM-009 at Connector X23 (phyCAM-P connector) |
| Hardware Acceleration | Graphics (PowerVR SGX544) | No | |

# New In This Release

This is the first release so all features supported in the BSP-RTOS-TI-AM57x-PD17.1.0 Release Notes#Features section are new to this release. See below for some specific interface details.

# Fixed In This Release

N/A

# Known Issues

## Texas Instruments Known Issues

# Technical Support

For further support please visit PHYTEC's Support Portal