

# PhyBOARD-Zeta i.MX7 PD16.1-rc1 Release Notes

Operating System	Linux
BSP Release Status	UNKNOWN
Release Date	
Repository	
Binaries	<a href="http://artifactory.phytec.com/artifactory/webapp/#/artifacts/browse/tree/General/imx7-images-released-public/imx7-PD16.1-rc1.xml-b4.tar.bz2">http://artifactory.phytec.com/artifactory/webapp/#/artifacts/browse/tree/General/imx7-images-released-public/imx7-PD16.1-rc1.xml-b4.tar.bz2</a>
Source Archive	
Release Notes	<a href="#">Click Here</a>



This is a Release Candidate BSP. Please use this BSP ONLY for evaluation purposes. PHYTEC does not recommend starting any development based on this BSP. As of 17 Dec 2015 NXP has released a newer version fido\_3.14.52\_1.1.0\_GA and we are working to utilize this for the next release.

- [Introduction](#)
- [Versioning](#)
  - [Software](#)
  - [Compatible Hardware](#)
  - [Compatible Expansion Boards and Accessories](#)
- [BSP Download](#)
- [Quickstart](#)
- [BSP Features](#)
- [Fixed In This Release](#)
- [New In This Release](#)
  - [Known Issues](#)
    - [PHYTEC Known Issues](#)
    - [NXP Known Issues](#)
- [Technical Support](#)

## Introduction

This BSP provides a basis for development, deployment and execution of Linux based applications on the IMX7 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 quick start.

## Versioning

### Software

Component	Version
Linux Kernel	3.14.38 (Based on NXP Release L3.14.38_6ul7d-beta)
Yocto	1.8 Fido (Based on NXP Release L3.14.38_6ul7d-beta)
OpenGL	TBD
Qt	5.4.1

U-boot	2015.04 (Based on NXP Release L3.14.38_6ul7d-beta)
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## Compatible Hardware

BSP Release Version	BSP Release Date	SOM PCB Version	CB PCB Version
PhyBOARD-Zeta i.MX7 PD16.1-rc1	January 18, 2016	TBD	TBD

## Compatible Expansion Boards and Accessories

Module Name	Part Number	PCB Version	Description
LCD Display Adapter	PEB-AV-02	1415.1	Display / Touch Interface (LVDS / 4Wire)

\* Support for PEB-AV-01 and Evaluation board PEB-EVAL-02 planned for future release

## BSP Download

Prebuilt images of PhyBOARD-Zeta i.MX7 PD16.1-rc1 can be downloaded and extracted from the link below:

<http://artifactory.phytec.com/artifactory/webapp/#/artifacts/browse/tree/General/imx7-images-released-public/imx7-PD16.1-rc1.xml-b4.tar.bz2>

## Quickstart

Quickstarts for PhyBOARD-Zeta i.MX7 PD16.1-rc1:

[PhyBOARD-Zeta i.MX7 Linux Quickstart PD16.1-rc1](#)

## BSP Features

Interface	Detail	Implemented	Tested	Status in Device tree	Notes
UART	uart1	Yes	No	<a href="#">[click for info]</a>	expansion header
	uart2	Yes	No	<a href="#">[click for info]</a>	expansion header
	uart3	Yes	No	<a href="#">[click for info]</a>	expansion header
	uart4	Yes	No	<a href="#">[click for info]</a>	
	uart5	Yes	Yes	Enabled	RS232 default serial console at Connector X2
	uart6	Yes	No	<a href="#">[click for info]</a>	expansion header
	uart7	Yes	No	<a href="#">[click for info]</a>	expansion header
I2C	i2c1	Yes	Yes	Enabled	expansion header
	i2c2	Yes	No	<a href="#">[click for info]</a>	AV Connector X4
	i2c3	Yes	No	<a href="#">[click for info]</a>	
	i2c4	Yes	No	<a href="#">[click for info]</a>	expansion header
Ethernet	RGMII1	Yes	Yes	Enabled	KSZ9031RNX PHY on SOM, Connector X8
	RGMII2	Yes	Yes	Enabled	KSZ9031RNX PHY on CarrierBoard, Connector X7
SAI	sai1	Yes	No		Audio/Video Connector X4
	sai2	Yes	No	<a href="#">[click for info]</a>	expansion header
	sai3	Yes	No	<a href="#">[click for info]</a>	

MMC/SDIO	SD1	Yes	Yes	Enabled	microSD slot connector X11
	SD2	Yes	No	<a href="#">[click for info]</a>	expansion header
	SD3	Yes	Yes	Enabled	signals routed to eMMC.
Communication	<a href="#">TiWi-BLE</a> Bluetooth	No	No		
	<a href="#">TiWi-BLE</a> WiFi	No	No		<i>Planned for future</i>
USB	usb1	Yes	Yes	Enabled	USB-A Host Connector X9
	usb2	Yes	Yes	Enabled	USB-AB OTG Connector X10
CAN	can1	Yes	Yes	Enabled	Header X1
	can2	Yes	No	<a href="#">[click for info]</a>	
SPI	spi1	Yes	No	<a href="#">[click for info]</a>	expansion connector
	spi2	Yes	No	<a href="#">[click for info]</a>	expansion connector
	spi3	Yes	No	<a href="#">[click for info]</a>	expansion connector
	spi4	Yes	No	<a href="#">[click for info]</a>	
Display and Touch	LCD LVDS	Yes	See <a href="#">Known Issues</a>	Enabled - imx7-phyboard-zeta-lcd.dts	via expansion board PEB-AV-02-070W
	Analog LCD Touch	No	No		Capacitive ETM-FT5x06 via expansion board PEB-AV-02-070W
	HDMI	No	No		via expansion board PEB-AV-01
	Backlight	Yes	Yes	Enabled - imx7-phyboard-zeta-lcd.dts	PWM via pwm4 via expansion board PEB-AV-02-070W
GPIO	User Buttons and LEDs	Yes	Yes	Enabled	User LED GPIO2_10 on CarrierBoard
Memory	8/16-bit NAND Flash (GPMC)	Yes	No		MT29F4G08 - not populated in default SOM configuration
	SPI NOR Flash	Yes	See <a href="#">Known Issues</a>	Disabled	N25Q128A on QSPI_A
	EEPROM	Yes	Yes	Enabled	M24C32 on i2c1
	eMMC	Yes	See <a href="#">Known Issues</a>	Enabled	MTFC4GMDEA-4M on SD3
RTC	Internal i.MX7	Yes	Yes	Enabled	SNVS RTC
	External RTC	No	No		RV-4162-C7 on I2C1
Power Management	PMIC	Yes	Yes	Enabled	PF3000 on I2C1
JTAG	JTAG				
PCIe	mini-pcie	Yes	See <a href="#">Known Issues</a>	Disabled	connector X12

[1] Interface requires additional configuration, such as pinmuxing. It may be possible to change the software configuration to utilize this interface even if it is not being set in the board's default configuration. Please see NXP's i.MX7D Technical Reference Manual for more information on the various modes each pin can be muxed to.

## Fixed In This Release

- N/A

## New In This Release

- N/A

## Known Issues

## PHYTEC Known Issues

- LCD data signals at Audio/Video connector X3 are not in the order expected by PEB-AV-02, so colors are displayed incorrectly. Fix is planned for next board revision.
- SPI NOR Flash chip not configured correctly by dts/driver, causing segmentation fault
- Booting from eMMC not supported yet
- PCIe connector not accessible due to large capacitors, fix is planned for next board revision.

## NXP Known Issues

- N/A

## Technical Support

For further information or to report any problems, visit the [PHYTEC Support Portal](#)