

phyFLEX-i.MX6 3.14-PL15.1.0 Release Notes

Operating System	Linux
BSP Release Status	RELEASED
Release Date	
Repository	
Binaries	ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/imx6-3.14-PL15.1.0/
Source Archive	
Release Notes	Click Here



PHYTEC does not recommend starting new development based on this BSP. Please use the [PD15.1.1 release](#) instead.

This BSP provides a basis for development, deployment and execution of Linux based applications on the phyFLEX-i.MX6 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](#).

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Versioning

Software

Component	Version
Yocto	1.6 (Daisy)
Linux Kernel	3.4.19
Barebox	2014.11

Compatible Hardware

BSP Release Version	BSP Release Date	SOM PCB Version	CB PCB Version	FLEX Mapper Board PCB
phyFLEX-i.MX6-3.14-PL15.1.0	05 Aug 2015	1362.2	1364.6	1367.3
			1364.4	
		1362.1	1364.3 [B]	1367.2 [A]
			1364.2 [A]	1367.1 [B]

[A] Does not fully support PCIe. FLEX Mapper board does not include nPCIe0_PERST. FLEX Baseboard missing 100 termination resistor on PCIe clock and reset for an extra PCIe.

[B] Hardware interface does not support Camera0 interface extension and full 18-bit Camera0 (missing J6 and J7 for CSI0_DAT3 and CSI0_DAT2 signal multiplexing). Different reset out circuitry for Camera0 and Camera1. JP12 does not exist (X_CAMERA1_CLK & X_CAMERA0_CLK).

Compatibility Warnings



This BSP is not backwards compatible and has no workaround for 1362.0 SOM and 1364.1 Baseboard due to a change in PCB pinout, see [Modification of the pinout for the phyFLEX-i.MX6 \(PLF-A-XL1\)](#)

BSP Download

Prebuilt images of imx6-3.14-PL15.1.0 can be downloaded from the link below:

ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/imx6-3.14-PL15.1.0/

Quickstart

Quickstarts for phyFLEX-i.MX6-3.14-PL15.1.0:

[phyFLEX-i.MX6 RDK Quickstart imx6-3.14-PL15.1.0](#)

BSP Features

Interface	Detail	Implemented	Tested	Notes
UART	uart1	Yes	No	[click for info]
	uart2	Yes	No	[click for info]
	uart3 (labelled UART1)	Yes	Yes	enabled - RS-232 on Connector X50
	uart4 (labelled UART0)	Yes	Yes	enabled - Connector X51 (default serial console)
	uart5	Yes	No	[click for info]
I2C	i2c1 (Only used on SOM)	Yes	Yes	enabled
	i2c2 (labelled I2C0)	Yes	Yes	enabled
	i2c3 (labelled I2C1)	Yes	No	[click for info]
Ethernet	10/100/1000Mbit/s Eth0 from RGMII	Yes	Yes	enabled - Connector X28
Digital Audio Multiplexer	AUD3	Yes	No	[click for info]
	AUD4	Yes	No	[click for info]
	AUD5	Yes	Yes	enabled
	AUD6	Yes	No	[click for info]
MMC/SDIO	SD1	Yes	No	[click for info]
	SD2 (Labelled SD1)	Yes	Yes	enabled - Connector X56
	SD3 (Labelled SD0)	Yes	Yes	enabled - Connector X57
Communication	TiWi-BLE WiFi on SD3	Yes	Yes	disabled - Connector X58 (SD3 signals configured for MMC at X57 by default)
	TiWi-BLE Bluetooth	No	No	
USB	usb_otg (labelled USB0)	Yes	Yes	enabled - Connector X26
	usb_h1 (labelled USB1)	Yes	Yes - see Known Issues	enabled - Connector X69 (USB_DN0)
CAN	flexcan1 (labelled CAN0)	Yes	Yes	enabled - Connector X52
	flexcan2	Yes	No	[click for info]
SPI	ECSPI1	Yes	No	[click for info]
	ECSPI2	Yes	No	[click for info]
	ECSPI3 (Labelled SPI0)	Yes	Yes	Enabled - Header X53

	ECSPi5 (Labelled SPI1)	Yes	No	Needs pinctrl - Header X30
PCIe		Yes	Yes	Enabled - Connector X59
SATA		Yes	Yes	Enabled - Connector X62, X61
Display and Touch	24-bit LCD Interface	Yes	Yes	enabled - (Requires LCD-018-070-KAP) Connector X65
	Analog LCD Touch - Capacitive	Yes	Yes	enabled - Capacitive: ETM-FT5x06 (on LCD-018-070-KAP)
	Analog LCD Touch - Resistive STMPE811 (on CB), I2C4	No		Connector X65
	HDMI	No		Connector X40
	PWM Backlight	Yes	Yes - see Known Issues	enabled - Requires LCD-018-070-KAP
DVFS		Yes	Yes	enabled
GPIO	User Buttons and LEDs	Yes	Yes	GPIO1_30, 2_31, on SOM
Memory	8/16-bit NAND Flash	Yes	Yes	enabled
	SPI NOR Flash	Yes	Yes	enabled - N25Q128A13ESE40F on ECSPi3
	EEPROM	Yes	Yes	enabled - at24c32 on I2C1
RTC	RTC-8564 Real-Time Clock on I2C2 on carrier board	Yes	Yes	enabled
Power Management	PMIC	Yes	Yes	enabled - DA9063 on I2C1
Audio	TLV320AIC3007 on CB on I2C2	Yes	Yes	enabled - X11, X8, X10, X9, X7
Camera	camera0 on I2C3	No		
	Camera1 on I2C3	No		

[1] 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 the *External Signals and Pin Multiplexing* section of [Freescale's i.MX6Q Technical Reference manual](#) for more information on the various modes each pin can be muxed to.



Signal names may change between processor and PCBs. Please refer to the phyFLEX-i.MX6 Hardware Manual for signal name mapping.



For detailed information regarding the software and hardware interfaces supported in this release: [Supported Interfaces Table](#)

What's Not Supported

This BSP Release does not support the following components:

- i.MX6 Dual Lite or Solo (requires new machine configuration files)
- WLAN: multirole mode
- Video encoder: Streaming, TV
- Camera (untested)
- Display
 - Prime View PD050VL1 LVDS (LCD-017-050V)
 - Prime View PD104SLF LVDS (LCD-017-104S)
 - HDMI

New in this Release

- Updated barebox version to 2014.11
- USB OTG
- DVFS

Fixed in this Release

Barebox:

- Using barebox to flash barebox to SPI NOR
- Saving default environment to SD card
- Boot UBIFS root filesystem from NAND

Linux:

- Audio support for TLV320AIC3x
- PCIe

Known Issues

PHYTEC Known Issues

- CAN will not work correctly with 1Mbit/s
- USB Host (USB_DN0): Requires devices to be plugged in on boot.
- LCD-Backlight: Setting brightness via userspace (sys/class/backlight/) does not work. However, toggling bl_power functions properly).
- WiFi issue with phyFLEX baseboard:
 - SD3 SDIO lines for WiFi are shared with the SD interface that is used to boot the kernel and root filesystem. Therefore, you cannot boot from SD card and enable WiFi at the same time.
 - Workaround: Boot the kernel and root filesystem from network or the kernel and root filesystem from the SD2 interface.
- WiFi Calibrator Utility is not included. Additional development is required to integrate the WiLink WiFi Calibrator Utility.

FSL Community BSP Known Issues

See [here](#) for a list of known issues for the FSL Community Daisy (1.6) BSP Release. imx6-3.14-PL15.1.0 is based on this release.

Technical Support

For further information or to report any problems, contact support@phytec.com.