

PhyFLEX-i.MX6 Linux BSP-PD13.2.2 Release Notes

Operating System	Linux
BSP Release Status	RELEASED
Release Date	17 Jan 2014
Repository	
Binaries	ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.2/
Source Archive	
Release Notes	Click Here

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Introduction

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](#).

Versioning

Component	Version
Linux Kernel	3.0.35
Barebox	2013.08.0
PTX Distribution	2012.03.0
OSELAS Toolchain	2011.11.1

This Release is compatible with the following hardware:

BSP Release Version	BSP Release Date	SOM PCB Version	FLEX Mapper Board Version	FLEX Baseboard Version
PD13.2.2	January 17th, 2014	1362.2	1367.3	1364.4
		1362.1	1367.2 ^[A]	1364.3 ^[B]
			1367.1 ^[B]	1364.2 ^[A]

[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).

BSP Download

Release PD13.2.2 can be downloaded from the link below.

ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.2/

Quickstart

Release PD13.2.2 should be used in conjunction with Quickstart version PD13.2.0:

- [PhyFLEX-i.MX6 Linux Quickstart-PD13.2.0](#)

What's Supported

This BSP Release supports the following components:

- **i.MX6**

QuadDualLite, Solo [1]

- NAND Flash: Kernel, UBIFS Filesystem
- NOR Flash: Bootloader
- DDRAM: MT41J128M16HA-15E IT DDR3
- UART: UART0; UART1
- USB: USB0 HS OTG; USB1 HS Host
- Ethernet: 10/100/1000 Mbit/s – ETH0 from RGMII
- CAN: CAN0
- SD/MMC: SD2; SD3
- WiFi: TiWi-BLE 2.4 GHz IEEE 802.11 b/g/n WiFi on SD3
- PCIe (card limited with Baseboard hardware revision 1364.2 and 1364.3)
- SATA
- I2C driver: I2C0, I2C1 enabled
- EEPROM: at24 on I2C1
- PMIC: DA9063 on I2C1
- RTC: RTC-8564 Real-Time Clock on I2C0 (device on Baseboard)
- Touch

Resistive: STMPE811 on I2C0 (device on Baseboard)Capacitive: FocalTech FT5306 on I2C0

- Display

Prime View PD050VL1 LVDS (LCD-017-050V)Prime View PM070WL4 LVDS (LCD-017-070W)Prime View PD104SLF LVDS (LCD-017-104S)EDT ETM0700G0DH6 TTL (LCD-018-070-KAP)DVI / HDMI

- Camera:

VM-006-BWVM-009VM-010-BWVM-011-BW (phyCAM-P)VM-011-COL (phyCAM-S)USB-CAM-003H (with UVC Firmware update)USB-CAM-103H (with UVC Firmware update) (without trigger)USB-CAM-051H (with UVC Firmware update)USB-CAM-151H (with UVC Firmware update) (without trigger)

- Audio: Line in, Line out, Mixer, Mic in^[2]
- Video decoding
- Graphics: OpenGL
- DVFS

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

What's Not Supported

This BSP Release does not support the following components:

- Video encoder: Streaming, TV
- 4 GB NAND modules: Support in progress but currently do not work properly
- DualLite and Solo RAM values: Verification in progress

Fixed in this Release

- PMIC problems
- Solo and Dual Lite can now boot from NAND
- BSP modifications are no longer necessary to remove Ethernet skew settings for 1362.1 SOM.
- PCIe problems with some cards (new Hardware)
- USB OTG serial gadget works not stable
- gplay movie plays only one time. To play again, reboot the board.
- If QT demo was started the display will blank after 15minutes

New in this Release

- TiWi-BLE 2.4 GHz IEEE 802.11 b/g/n WiFi in Station/Client or HostAP mode
- i.MX6 Dual Lite and Solo^[1]
- Cameras

VM-011-BW and VM-011-COL (phyCAM-P and phyCAM-S) new bootargs (configuration possible) individual camera frequencies Extended gstreamer Examples (mpeg4 decoding by VPU-Hardware and Freescale sink examples for better Bimage presentation [low tearing, low CPU-load])

- Audio^[2]
- Barebox default-env2
- DVI / HDMI as first output
- v4l2_c-examples
- Barebox MAC fuse blow
- Updated:

firmware-imx-3.0.35-4.0.0 imx-lib-3.0.35-4.0.0 imx-test-3.0.35-4.0.0 kobs-ng-3.0.35-4.0.0 libslvpuwrap-1.0.35 libslparser-3.0.7 libslcodec-3.0.7 gst-fsl-plugins-3.0.7 gpu-fsl-3.0.35-4.0.0 gpu-fsl-test-3.0.35-4.0.0 camera documentation

Known Issues

- ^[1] DualLite and Solo RAM values are not verified
- 4 GB NAND modules do not work properly
- WLAN does not operate in multirole mode
- CAN will not work correct with 1 Mbit/s
- Using Barebox to flash Barebox to NAND does not work
- Saving default environment to SD Card does not work
- ^[2] Hset_OUT makes problems with some MONO audio files
- Sometimes reboot problems

Upgrade and Compatibility Information

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 \(PLF-A-XL1\)](#).

Dependencies

N/A

Validation Information

Drivers have been tested with in-house test cases.

Technical Support

For further support please visit [PHYTEC's Support Portal](#)