PhyFLEX-i.MX6 Linux BSP-PD13.1.1 Release Notes

Operating System	Linux
BSP Release Status	RELEASED
Release Date	05 Sep 2013
Repository	
Binaries	ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.1/ **Important:** If you have hardware **SOM revision 1362.1** the Barebox and Linux kernel images with removed Ethernet skew settings can be downloaded from the link below. ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.1/SOM_1362.1/
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
PD13.2.1	September 5th, 2013	1362.2	1367.3	1364.4
		1362.1 [1]	1367.2 [2]	1364.3 [2]
			1367.1 [3]	1364.2 [2]

[1] DDR3 and Ethernet layout differences are present. BSP modifications are available to remove Ethernet skew settings that are not required for 1362.1 SOM. Please use BSP Download SOM revision 1362.1 images that have modified versions of Barebox and Linux kernel.[2] 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. [3] 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 PD13.2.1 can be downloaded from the link below.

ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.1/

Important:

If you have hardware **SOM revision 1362.1** the Barebox and Linux kernel images with removed Ethernet skew settings can be downloaded from the link below.

ftp://ftp.phytec.com/products/PFL-A-02_phyFLEX-iMX6/Linux/PD13.2.1/SOM_1362.1/

Quickstart

Release PD13.2.1 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**: Kernel 3.0
- 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 (requires modified software for SOM hardware revision 1362.1)
- CAN: CAN0
- SD/MMC: SD0; SD1
- 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 - not fully tested
- 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

Fixed in this Release

- PCIe problems with some cards (new Hardware)
- USB OTG serial gagdet 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

- i.MX6 Dual Lite and Solo
- Cameras

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

- Sound
- Barebox default-env2
- DVI / HDMI as first output
- v412_c-examples
- Barebox MAC fuse blow
- Updated:

firmware-imx-3.0.35-4.0.0imx-lib-3.0.35-4.0.0imx-test-3.0.35-4.0.0kobs-ng-3.0.35-4.0.0libfslvpuwrap-1.0.35libfslparser-3.0.7libfslcodec-3.0.7gst-fsl-plugins-3.0.7gpu-fsl-3.0.35-4.0.0gpu-fsl-test-3.0.35-4.0.0camera documentation

Known Issues

- CAN will not work correct with 1 Mbit/s
- Using Barebox to flash Barebox to NAND does not work
- Solo and Dual Lite can't boot from NAND
- Saving default environment to SD Card does not work

Upgrade and Compatibility Information

The BSP is specific to SOM: 1362.2 and Baseboard 1364.4 and will retain compatibility with future released PCB revisions. Workaround is available to use this BSP with 1362.1 SOM; 1367.1 and 1367.2 Mapper, 1364.2 and 1364.3 Baseboard. 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