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

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 frequenciesExtended 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
- 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

- [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