

PhyCORE-AM335x RDK PD15.2.1 Release Notes

Operating System	Linux
BSP Release Status	RELEASED
Release Date	
Repository	
Binaries	ftp://ftp.phytec.de/pub/Software/Linux/BSP-Yocto-AM335x/BSP-Yocto-AM335x-PD15.2.1/images/
Source Archive	
Release Notes	Click Here



This software release is maintained by www.phytec.de.

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Introduction

This BSP provides a basis for development, deployment and execution of Linux based applications on the AM335X 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

Software

Component	Version
Linux Kernel	3.12.30
Yocto	1.8 (Fido)
OpenGL	OpenGL ES 2.0 (PowerVR SGX chipset driver 5.01.01.02)
Qt	5.4
barebox	2015.09.0

Linux Devicetree Summary

(Yocto machine configuration *phycore-am335x-1*)

Default dts target	am335x-phycore-rdk.dtb
Default dtsi include description	Default dtsi include list
SOM	am335x-phycore-som.dtsi
Carrier Board	am335x-pcm-953.dtsi
LCD	am335x-phytec-lcd-018.dtsi



Other dts files are available for alternate SOM and Carrier Board configurations.

Compatible Hardware

BSP Release Version	BSP Release Date	SOM PCB Version	CB PCB Version
phyCORE-AM335x-PD15.2.1	08 Jan 2016	1358.3	1359.3

BSP Download

Prebuilt images of PD15.2.1 can be downloaded from the link below:

<ftp://ftp.phytec.de/pub/Software/Linux/BSP-Yocto-AM335x/BSP-Yocto-AM335x-PD15.2.1/images/>

Quickstart

Quickstarts for phyCORE-AM335x-PD15.2.1:

[PhyCORE-AM335x RDK Linux Quickstart PD15.1.x](#)

BSP Features

Interface	Detail	Implemented	Tested	Enabled in DTS	Notes
UART	uart0	Yes	Yes	Yes	(RS-232) on Connector X18
	uart1	Yes	Yes	No	Signals conflicts with can1
	uart2	Yes	Yes	Yes	Expansion Connector X5
	uart3	Yes	Yes	Yes	Expansion Connector X5
	uart4	Yes	No	[click for info]	
	uart5	Yes	No	[click for info]	
I2C	i2c0	Yes	Yes	Yes	Expansion Connector X5
	i2c1	Yes	No	[click for info]	
	i2c2	Yes	No	[click for info]	
Ethernet	10/100 on SoM	Yes	Yes	Yes	RMII Mode
	10/100/1000 on CarrierBoard	Yes	Yes	Yes	RGMII Mode

MCASP	mcasep0	Yes	Yes	Yes	Used by WM8974 on Carrier Board
	mcasep1	Yes	No	[click for info]	
MMC/SDIO	mmc0	Yes	Yes	Yes	SD/MMC Card on Connector X20
	mmc1	Yes	No	[click for info]	
	mmc2	Yes	No	[click for info]	
Communication	TiWi-BLE Bluetooth	No	No		
	TiWi-BLE WiFi (module PCM-953)	Yes	Yes	No	Use Yocto machine configuration "phycore-am335x-7" to enable WiFi <ul style="list-style-type: none"> uses kernel dts "am335x-phycore-rdk-wifi.dts" builds root filesystem with WiFi support
USB	usb0	Yes	Yes	Yes	USB 2.0 Mini-AB OTG Connector X7
	usb1	Yes	Yes	Yes	USB 2.0 Standard-A Connector X8 (Host)
CAN	can0	Yes	No	[click for info]	
	can1	Yes	Yes	Yes	DB9 Male Connector X13
SPI	spi0	Yes	Yes	Yes	Expansion Connector X5
	spi1	Yes	No	[click for info]	
Display and Touch	LCD (24-bit Interface)	Yes	Yes	Yes	Requires LCD-018 option Connectors X4 and X31
	Analog LCD Touch	Yes	Yes	Yes	Capacitive: ETM-FT5x06 (on LCD-018-070-KAP) Touch Controller - i2c_ts (i2c0)
	HDMI	Yes	Yes	No	Display pins configured for LCD
	Backlight	Yes	Yes	Yes	Requires LCD-018 option
GPIO	User Buttons and LEDs	Yes	Yes	Yes	User buttons: btn1, btn2 User leds: led1, led2 Bus enable GPIOs: gpio1_8 and gpio1_9 pulled LOW
Memory	8/16-bit NAND Flash (GPMC)	Yes	Yes	Yes	
	SPI NOR Flash	Yes	Yes	Yes	serial_flash on spi0
	EEPROM	Yes	Yes	Yes	at24c32 on i2c0
RTC	External RTC	Yes	Yes	Yes	RV-4162-C7 on i2c0
	PMIC RTC	Yes	Yes	Yes	TPS65910A3 on i2c0
	AM335x RTC	No	No		Planned for Future
Power Management	PMIC	Yes	Yes	Yes	TPS65910A3 on i2c0
Audio	WM8974 on CarrierBoard	Yes	Yes	Yes	
JTAG	JTAG	N/A	N/A		Connector X21

[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 Pin Attributes listed in [Ti's AM335x datasheet](#) for more information on the various modes each pin can be muxed to.

Fixed In This Release

- meta-yogurt layer
 - Qt5
 - Fixed Qt5 debug build: because of a gcc bug, Qt applications could not be built with debug information in some cases
- Disabled crypto module due to buggy behaviour
- Added workaround for SMSC link detection issue

New In This Release

- **Kernel**
 - Support for Wifi Expansion module PCM-958
 - Add support for Audio WM8974 Codec on PCM-953
 - Added support for new displays:
 - LCD-018-035-KAP
 - LCD-018-043-KAP
 - LCD-018-057-KAP
 - Added support for resistive touch
 - Updated edt touch driver to support new firmware version
 - Support basic EMMC handling (added EMMC image, added tool to change extended registers in bootloader, added update handler for raw mmc images)
- **U-boot**
 - Updated version to 2015.09.0
 - Added watchdog support (Only enabled in bootloader as default, see documentation)
 - Add support for ethernet boot
- **Yocto**
 - Updated version from Dizzy to Fido

Known Issues

PHYTEC Known Issues

- Boot tests showed in about 2 of 2000 boots that the SMSC LAN8710 phy could not be found. The PHY ID readout is wrong. The generic PHY driver will take over. Ethernet is still functional in this case.

Texas Instruments Known Issues

- See [here](#) for a list of TI's known issues for their SDK 7.0 kernel 3.12 release. PD15.2.1 is based on kernel 3.12.30 from TI.

Technical Support

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