

Petalinux Troubleshoot

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Petalinux 2023.2

General notes

Xilinx Release Notes available on: https://support.xilinx.com/s/article/000035572?language=en_US

BL31 gets Stuck during booting

Issue	<p>Petalinux 2023.2 seems to have a Problem booting with UART1: It gets stuck on BL31 while trying to print a char to UART1 during booting.</p> <p>This error happens on Versal and Zynq Ultrascale+ devices. The error is that BL31 built by petalinux does not correctly take into account that UART1 is used, and tries to output on UART0</p>
Workaround	<p>This can be fixed by e.g. overriding yourself with creating arm-trusted-firmware_%.bbappend in meta-user/recipes-bsp/arm-trusted-firmware with content</p> <p>For Versal: ATF_CONSOLE = "pl011_1"</p> <p>For Zynq Ultrascale+: ATF_CONSOLE = "cadence1"</p>

Modified FSBL is not containing patches

Issue	<p>Trenz modified FSBL for petalinux is not taken into account from petalinux. This is only need on trenz project which has FSBL patch included inside the petalinux template. --><project folder>\os\petalinux\project-spec\meta-user\recipes-bsp\embeddedsw AMD has changed patch priority and petalinux ignores provided FSBL patch in \os\petalinux\project-spec\meta-user\recipes-bsp\embeddedsw</p>
Workaround	<p>In order for the patches to be used, the existing line BBFILE_PRIORITY_meta-user = "[VALUE]" must be set to 9 instead of the original value 7 in the Petalinux config file project-spec/meta-user/conf/layer.conf</p>

Error Verifying contents on S15FL127S QSPI flash memory chip

Issue	<p>When writing an S15FL127S QSPI Chip from Linux via flashcp the verification fails. This is a driver issue of Linux as FL127 needs a page size of 256.</p>
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<p>Workaround</p>	<ul style="list-style-type: none"> To solve the programming problem in linux console via "flashcp" command: <ul style="list-style-type: none"> Add the following patch file in linux kernel files: <ul style="list-style-type: none"> <div data-bbox="448 417 1461 1253"> <div>0001-fix-for-s25fl127s.patch</div> <div> <pre> From f3d982f01a0a7112b8d461f450082d502df1a23d Mon Sep 17 00:00:00 2001 From: OpenEmbedded <oe.patch@oe> Date: Thu, 25 Apr 2024 10:43:18 +0000 Subject: [PATCH] fix for s25fl127s --- drivers/mtd/spi-nor/spansion.c 3 +- 1 file changed, 2 insertions(+), 1 deletion(-) diff --git a/drivers/mtd/spi-nor/spansion.c b/drivers/mtd/spi-nor/spansion.c index 104de1252b04..0ee9ff9627e1 100644 --- a/drivers/mtd/spi-nor/spansion.c +++ b/drivers/mtd/spi-nor/spansion.c @@ -383,10 +383,11 @@ static const struct flash_info spansion_nor_parts[] = { NO_SFDP_FLAGS(SPI_NOR_DUAL_READ SPI_NOR_QUAD_READ) MFR_FLAGS(USE_CLSR) }, - { "s25fl128s1", INFO6(0x012018, 0x4d0180, 64 * 1024, 256) + { "s25fl127s", INFO6(0x012018, 0x4d0180, 64 * 1024, 256) //fl127 need page size of 256 FLAGS(SPI_NOR_HAS_LOCK) NO_SFDP_FLAGS(SPI_NOR_DUAL_READ SPI_NOR_QUAD_READ) MFR_FLAGS(USE_CLSR) + .fixups = &s25fs_s_nor_fixups, }, { "s25fl1256s0", INFO6(0x010219, 0x4d0080, 256 * 1024, 128) FLAGS(SPI_NOR_HAS_LOCK) </pre> </div> </div> Add the patch file in the linux-xlnx_%.bbappend file as shown: <ul style="list-style-type: none"> <div data-bbox="448 1323 1461 1564"> <div>linux-xlnx_%.bbappend</div> <div> <pre> FILESEXTRAPATHS:prepend := "\${THISDIR}/\${PN}:" SRC_URI:append = " file://bsp.cfg \ file://0001-fix-for-s25fl127s.patch" KERNEL_FEATURES:append = " bsp.cfg" </pre> </div> </div>
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QSPI flash memory chip is not recognized

<p>Issue</p>	<p>In Linux console the QSPI flash memory chip can not be detected.</p> <p>dmesg output contains: "Unknown JEDEC ID"</p>
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Workaround	<ul style="list-style-type: none"> To solve the detection problem in linux console: <ul style="list-style-type: none"> Set the maximum frequency of spi interface in the device tree. The actual speed depends on the design and whether SPI clock feedback is used on the board if you are not speed dependent, 40MHz is a safe value for any setting e.g. add the following line in the qspi node: <ul style="list-style-type: none"> spi-max-frequency = <40000000>;
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Petalinux 2022.2

General notes

Xilinx Release Notes available on: https://support.xilinx.com/s/article/000034483?language=en_US

Petalinux Build

Command	Trenz modified FSBL for petalinux is not taken into account from petalinux. This is only need on trenz project which has FSBL patch included inside the petalinux template. --><project folder>\os\petalinux\project-spec\meta-user\recipes-bsp\embeddedsw
Error Message	AMD has changed patch priority and petalinux ignores provided FSBL patch in \os\petalinux\project-spec\meta-user\recipes-bsp\embeddedsw
Workaround	In order for the patches to be used, the existing line BBFILE_PRIORITY_meta-user = "[VALUE]" must be set to 9 instead of the original value 7 in the Petalinux config file project-spec/meta-user/conf/layer.conf

Command	petalinux-build
Error Message	<p>NOTE: Executing Tasks</p> <p>WARNING: libns12-2.0.0-r0 do_package_qa_setscene: Failed to fetch URL file://d9/cf/sstate:libns12:cortexa72-cortexa53-xilinx-linux:2.0.0:r0:cortexa72-cortexa53:7:d9cfc3b8d649a8ce19aabf8269165e1f73650ce67a2ceb8cff581836b80b5dc5_package_qa.tgz;downloadfilename=d9/cf/sstate:libns12:cortexa72-cortexa53-xilinx-linux:2.0.0:r0:cortexa72-cortexa53:7:d9cfc3b8d649a8ce19aabf8269165e1f73650ce67a2ceb8cff581836b80b5dc5_package_qa.tgz, attempting MIRRORS if available</p> <p>ERROR: libns12-2.0.0-r0 do_package_qa_setscene: Fetcher failure: Unable to find file file://d9/cf/sstate:libns12:cortexa72-cortexa53-xilinx-linux:2.0.0:r0:cortexa72-cortexa53:7:d9cfc3b8d649a8ce19aabf8269165e1f73650ce67a2ceb8cff581836b80b5dc5_package_qa.tgz;downloadfilename=d9/cf/sstate:libns12:cortexa72-cortexa53-xilinx-linux:2.0.0:r0:cortexa72-cortexa53:7:d9cfc3b8d649a8ce19aabf8269165e1f73650ce67a2ceb8cff581836b80b5dc5_package_qa.tgz anywhere. The paths that were searched were:</p> <p>./petalinux/build/sstate-cache</p> <p>./petalinux/build/sstate-cache</p> <p>WARNING: libns12-2.0.0-r0 do_package_qa_setscene: No sstate archive obtainable, will run full task instead.</p> <p>ERROR: Logfile of failure stored in: ./petalinux/build/tmp/work/cortexa72-cortexa53-xilinx-linux/libns12/2.0.0-r0/temp/log.do_package_qa_setscene.22625</p> <p>WARNING: Setscene task (./petalinux/components/yocto/layers/core/meta/recipes-extended/libns1/libns12_git.bb:do_package_qa_setscene) failed with exit code '1' - real task will be run instead</p> <p>WARNING: petalinux-image-minimal-1.0-r0 do_rootfs: Enabling autologin to user root. This configuration should NOT be used in production!</p> <p>NOTE: Tasks Summary: Attempted 4491 tasks of which 3939 didn't need to be rerun and all succeeded.</p>
Workaround	Run petalinux-build a second time, this normally works fine

Petalinux 2021.2

General notes

Xilinx Release Notes available on: https://support.xilinx.com/s/article/000032521?language=en_US

Petalinux 2020.2

General notes

Xilinx Release Notes available on: <https://www.xilinx.com/support/answers/75775.html>

Kernel changes with petalinux commands

Command	petalinux-config -c kernel petalinux-build -c kernel -x finish -f
Error Message	ERROR: Task do_finish does not exist for target virtual/kernel (<project dir>/components/yocto/layers/meta-xilinx/meta-xilinx-bsp/recipes-kernel/linux/linux-xlnx_2020.2.bb:do_finish) ERROR: Command execution failed: 1
Workaround	Export changes from yocto workspace to the user-layer <pre>petalinux-devtool finish linux-xlnx \${PWD}/project-spec/meta-user/ -f</pre> Note: Before "petalinux-config -c kernel" can be used again after export, run: <pre>petalinux-build -x mrproper -f</pre>

U-Boot changes with petalinux commands

Command	petalinux-config -c u-boot petalinux-build -c u-boot -x finish -f
Error Message	ERROR: Task do_finish does not exist for target virtual/bootloader (<project dir>/petalinux/components/yocto/layers/meta-xilinx/meta-xilinx-bsp/recipes-bsp/u-boot/u-boot-xlnx_2020.2.bb:do_finish) ERROR: Command execution failed: 1

Workaround	<p>Export changes from yocto workspace to the user-layer</p> <pre>petalinux-devtool finish u-boot-xlnx \${PWD}/project-spec/meta-user/ -f</pre> <p>Note: Before "petalinux-config -c u-boot" can be used again after export, run:</p> <pre>petalinux-build -x mrproper -f</pre>
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Petalinux 2019.2

General notes

Xilinx Release Notes available on: [Xilinx AR#72950](#)

Installation failed

Command	<code>./petalinux-v20183-final-installer.run /opt/pkg/petalinux</code>
Error Message	could not install "..yocto/source" files during installation
Workaround	<p>Do not use root account to install petalinux.</p> <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2018.3-final-installer.run /opt/pkg/petalinux</pre>

Kernel changes are missing

Command	<pre>petalinux-config -c kernel petalinux-build -x mrproper</pre>
Error Message	<petalinuxproject>/project-spec/meta-user/recipes-kernel/ is missing after kernel config was changed or: cleaning failed with "WARNING: Workspace directory not empty:../petalinux/components/plnx_workspace..."
Workaround	<pre>petalinux-build -c kernel -x finish -f</pre>

U-Boot changes are missing

Command	<pre>petalinux-config -c u-boot petalinux-build -x mrproper</pre>
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Error Message	<petalinuxproject>/project-spec/meta-user/recipes-bsp/u-boot/files/*cfg is missing after u-boot config was changed or: cleaning failed with "WARNING: Workspace directory not empty:../petalinux/components/plnx_workspace..."
Workaround	<pre>petalinux-build -c u-boot -x finish -f</pre>

Petalinux 2018.3

General notes

Xilinx Release Notes available on: [AR#71653](#)

Installation failed

Command	./petalinux-v2019.2-final-installer.run /opt/pkg/petalinux
Error Message	could not install "..yocto/source" files during installation
Workaround	<p>Do not use root account to install petalinux.</p> <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux/2019.2 ./petalinux-v2018.3-final-installer.run /opt/pkg/petalinux/2019.2</pre>

Petalinux 2018.2

General notes

Xilinx Release Notes available on: [Xilinx AR#71201](#)

Installation failed

Command	./petalinux-v2018.3-final-installer.run /opt/pkg/petalinux
Error Message	could not install "..yocto/source" files during installation
Workaround	<p>Do not use root account to install petalinux.</p> <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2018.2-final-installer.run /opt/pkg/petalinux</pre>

Petalinux 2017.4

General notes

Xilinx Release Notes available on: [AR#70277](#)

Installation failed

Command	<code>./petalinux-v2017.4-final-installer.run /opt/pkg/petalinux</code>
Error Message	could not install "..yocto/source" files during installation
Workaround	<div>Do not use root account to install petalinux. <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2017.4-final-installer.run /opt/pkg/petalinux</pre></div>

Petalinux 2017.2

General notes

Xilinx Release Notes available on: [AR# 69372](#)

Installation failed

Command	<code>./petalinux-v2017.2-final-installer.run /opt/pkg/petalinux</code>
Error Message	could not install "..yocto/source" files during installation
Workaround	<div>Do not use root account to install petalinux. <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2017.2-final-installer.run /opt/pkg/petalinux</pre></div>

Petalinux 2017.1

General notes

Xilinx Release Notes available on: [AR# 69074](#)

Installation failed

Command	<code>./petalinux-v2017.1-final-installer.run /opt/pkg/petalinux</code>
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Error Message	could not install "..yocto/source" files during installation
Workaround	<p>Do not use root account to install petalinux.</p> <pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2017.1-final-installer.run /opt/pkg/petalinux</pre>

Build process failed

Command	petalinux-build
Error	Problems with device tree and serial port
Workaround	See: https://forums.xilinx.com/t5/Embedded-Linux/Petalinux-v2017-1-device-tree-and-serial-ports/td-p/764735

Petalinux 2016.4

General notes

Xilinx Release Notes available on: [AR# 68370](#)

Installation failed

Command	sudo ./petalinux-v2016.4-final-installer.run /opt/pkg/petalinux
Error Message	<pre>INFO: Checking installer checksum... INFO: Extracting PetaLinux installer... INFO: Installing PetaLinux... INFO: Checking PetaLinux installer integrity... INFO: Extracting Installation files... INFO: Checking installation environment requirements... INFO: Installing PetaLinux SDK to "/opt/Xilinx/petalinux-v2016.4-final/." INFO: Installing PetaLinux zynqMP Yocto SDK to "/opt/Xilinx/petalinux-v2016.4-final/. /components/yocto/source/aarch64"... ***** ERROR: Failed to install Yocto SDK for zynqMP. *****</pre>

Workaround	<div>Do not use root account to install petalinux.</div> <div><pre>sudo chown <owner>:<owner> /opt/pkg/petalinux ./petalinux-v2016.4-final-installer.run /opt/pkg/petalinux</pre></div>
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Kernel configuration failed

Command	petalinux-config -c kernel
Error Message	<pre>[INFO] generating Kconfig for project [INFO] sourcing bitbake [INFO] generating plnxtool conf [INFO] generating meta-plnx-generated layer <...> [INFO] generating machine configuration [INFO] configuring: kernel [INFO] generating kernel configuration files [INFO] bitbake virtual/kernel -c menuconfig Loading cache: 100% ##### ##### ETA: 00:00:00 Loaded 2938 entries from dependency cache. Parsing recipes: 100% ##### ##### Time: 00:00:06 Parsing of 2325 .bb files complete (2291 cached, 34 parsed). 2940 targets, 196 skipped, 0 masked, 0 errors. NOTE: Resolving any missing task queue dependencies NOTE: Preparing RunQueue NOTE: Executing RunQueue Tasks NOTE: Tasks Summary: Attempted 2 tasks of which 0 didn't need to be rerun and all succeeded. Loading cache: 100% ##### ##### ETA: 00:00:00 Loaded 2938 entries from dependency cache. Parsing recipes: 100% ##### ##### Time: 00:00:06 Parsing of 2325 .bb files complete (2291 cached, 34 parsed). 2940 targets, 196 skipped, 0 masked, 0 errors. NOTE: Resolving any missing task queue dependencies NOTE: Preparing RunQueue NOTE: Checking sstate mirror object availability (for 2 objects) NOTE: Executing SetScene Tasks</pre>

	<p>NOTE: Executing RunQueue Tasks</p> <p>WARNING: linux-xlnx-4.6-xilinx+gitAUTOINC+2762bc9163-r0 do_menuconfig: Unsupported terminal "screen", defaulting to "auto"</p> <p>ERROR:</p> <p>linux-xlnx-4.6-xilinx+gitAUTOINC+2762bc9163-r0 do_menuconfig: Unable to spawn terminal screen: Execution of '<code><...>/build/tmp/work/plnx_arm-xilinx-linux-gnueabi/linux-xlnx/4.6-xilinx+gitAUTOINC+2762bc9163-r0/temp/run.do_terminal.10088</code>' failed with exit code -6:</p> <p>Fatal Python error: Py_Initialize: Unable to get the locale encoding</p> <p>ImportError: No module named 'encodings'</p> <p>Current thread 0x00007faa3309f700 (most recent call first):</p> <p>ERROR: linux-xlnx-4.6-xilinx+gitAUTOINC+2762bc9163-r0 do_menuconfig: Function failed: do_menuconfig</p> <p>ERROR:</p> <p>Logfile of failure stored in:</p> <p><code><...>/build/tmp/work/plnx_arm-xilinx-linux-gnueabi/linux-xlnx/4.6-xilinx+gitAUTOINC+2762bc9163-r0/temp/log.do_menuconfig.10088</code></p> <p>ERROR: Task 7 (/opt/petalinux-v2016.4-final/components/yocto/source/arm/layers/meta-xilinx/recipes-kernel/linux/linux-xlnx_4.6.bb, do_menuconfig) failed with exit code '1'</p> <p>NOTE: Tasks Summary: Attempted 170 tasks of which 161 didn't need to be rerun and 1 failed.</p> <p>Summary: 1 task failed:</p> <p> /opt/petalinux-v2016.4-final/components/yocto/source/arm/layers/meta-xilinx/recipes-kernel/linux/linux-xlnx_4.6.bb, do_menuconfig</p> <p>Summary: There was 1 WARNING message shown.</p> <p>Summary: There were 2 ERROR messages shown, returning a non-zero exit code.</p> <p>ERROR: bitbake failed to configure kernel</p> <p>ERROR: Failed to config kernel.</p> <p>webtalk failed:PetaLinux statistics:extra lines detected:notsent_nofile!</p> <p>webtalk failed:Failed to get PetaLinux usage statistics!</p>
Workaround	<p>Problem related to python environment and gnome-terminal. One of possible solutions is to remove gnome-terminal.</p> <p>Install terminator as replacement for gnome-terminal, or xterm can be used instead of gnome-terminal</p> <pre>sudo apt-get install terminator sudo apt-get remove gnome-terminal</pre>

Build process failed

Command	petalinux-build petalinux-config -c kernel
Error Message	<pre>sh: line 1: 29590 Segmentation fault /opt/pkg/tools/webtalk/bin/unwrapped/lnx64.o/xilproxy > /home/petalinux/SVN/cores/2016.4/design/TEC0053/ARTY_Z7_FULL/os/petalinux/.Xil/Webtalk-29586-petalinux-VirtualBox/webtalk/xilproxy.log 2>&1 /opt/pkg/tools/webtalk/bin/unwrapped/lnx64.o/xilproxy /opt/pkg/tools/webtalk/bin/unwrapped/lnx64.o/xilproxy: error while loading shared libraries: libtcmalloc.so.4: cannot open shared object file: No such file or directory</pre>

Workaround

Disable PetaLinux webtalk

```
petalinux-util --webtalk off
```