Renesas R-Car Gen 3 Yocto BSP v3.9.0

Some of you may have noticed that the upstream Renesas R-Car Gen 3 Yocto BSP was updated to v3.9.0. With updates to the GDP and Genivi wiki complete, along with initial sanity testing its time for a blog to pull the threads together. So, this blog discusses using it with Genivi-14, the Genivi Yocto Baseline and GDP.

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Developer Summary

Purpose	Repository Location	Branch
Upstream Yocto BSP support	https://github.com/renesas-rcar/meta-renesas.git	rocko
Adapt Yocto BSP (meta-renesas) to Genivi Yocto Baseline (meta-ivi)	https://github.com/GENIVI/meta-ivi-renesas.git	genivi-14.x

Migration Guide

If you wish to use the "click through" licensed gfx/mmp packages that requires no NDA then please download the packages for **Yocto v3.9.0 and Wayland 1.13 /Weston 2.0** from here.

The new Yocto BSP release introduces updates to various Yocto BSP packages including the kernel, Initial Program Loader (IPL) and u-boot. The kernel and op-tee updates include mitigations for Spectre/Meltdown.

Please flash the updated IPL/u-boot to your board. Instructions for doing that can be found on elinux.org in the "Flashing Firmware" section of the M3 Starter Kit and H3 Starter Kit board pages. For Salvator-X(S) and Ebisu boards please refer to the documentation that came with the customer Yocto BSP.

There has been no change to the example local.confs and no updates to meta-ivi-renesas were required.

Details of the Yocto BSP changes can be found in the git commit messages. Here is a log since v3.7.0 using the github compare function.

Please refer to the table below for the correct dtb to use for your board and SoC:

Board	SoC	DTB filename
Ebisu	E3	Image-r8a77990-ebisu.dtb
M3 Starter Kit	M3	Image-r8a7796-m3ulcb.dtb
Salvator-X	M3	Image-r8a7796-salvator-x.dtb
Salvator-XS	M3	Image-r8a7796-salvator-xs.dtb
Salvator-X	M3N 1.1	Image-r8a77965-salvator-x.dtb
Salvator-XS	M3N 1.1	Image-r8a77965-salvator-xs.dtb
H3 Starter Kit	H3 1.0, 1.1	Image-r8a7795-es1-h3ulcb.dtb
H3 Starter Kit	H3 2.0	Image-r8a7795-h3ulcb.dtb
Salvator-X	H3 1.0, 1.1	Image-r8a7795-es1-salvator-x.dtb
Salvator-X	H3 2.0	Image-r8a7795-salvator-x.dtb
Salvator-XS 4GByte	H3 2.0, 3.0	Image-r8a7795-salvator-xs.dtb
Salvator-XS 8GByte	H3 3.0	Image-r8a7795-salvator-xs-4x2gb.dtb

You can find the migration guide for v3.7.0 and links to earlier releases in my v3.7.0 blog.

Documentation

Historically I have maintained pages discussing the building of Genivi s/w for R-Car in the meta-ivi Yocto BSP wiki area. I have updated the page covering R-Car Gen 3 builds for Genivi-14 to use YBSP v3.9.0.

Genivi Yocto Baseline

I have successfully sanity tested building the 14.0.0 (P-1.0) Genivi Yocto Baseline using Yocto BSP v3.9.0 on the M3 Starter Kit.

See the Documentation section above on how to build it.

GDP

The GDP Master branch has been updated (pull request) to use Yocto BSP v3.9.0. I have also updated the corresponding build instructions of the GDP Master wiki page. Finally, I have successfully sanity tested it on the M3 Starter Kit.