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I am pleased to announce availability of the Freescale Linux SDK for QorIQ Processors, v1.3 which includes support for P5, P4, P3, P2, P1 and MPC85xx processors.

See list of new features and changes in QorIQ SDK v1.3 in the **What's New** section below. SDK v1.2 and v1.2.1 features are repeated afterwards for completeness.

See download instructions in the **How to obtain this release** section below.

Thanks to all the members of the SDK team for their collective efforts for this release!

What's New in QorIQ SDK v1.3

Processor and Board Support changes

- Adds support for P4080/40 rev 3
- Additional SDK features migrated to P5040 including: Freescale Embedded Hypervisor (Topaz), KVM, RAID, and Secure Boot, IEEE1588 (functional)
- Removed support for P5020/10 rev 1, P3041 rev 1, and P2041/0 rev 1

Linux Containers (LXC)

- Containers provide a means for partitioning and isolation of Linux applications.
- Applications execute in a sand-boxed, limited environment
- Includes lxc user space package
- Supported on all supported processors

Other additions and changes

- Adds Linux DPAA network termination software Generic Receive Offload (GRO)
- Adds IEEE1588 IXXAT 1.05 Stack for P2020RDB - performance certified by IXXAT
- Adds SEC XOR DMA for both CAAM and Talitos processors. Improves RAID performance
- Adds SEC Real Time Assembly (RTA) in USDPAA. Improves code ease-of-use and re-use
- Adds PCIe Advanced Error Reporting (AER)
- Adds QUICC Engine based TDM on P102x devices
- Application Specific Fastpath (ASF) migrated to P3041, P2041/0, and all P102x processors
- Updated to Yocto 1.2 Denzil release
- Frame Manager Driver 17.3 and uCode versions (see Components section for details)

What's New in QorIQ SDK v1.2 and v1.2.1

First SDK release based on Yocto/Poky replacing System Builder

- Based off Yocto project v1.1 Edison release
- Allows other recipes generated from other sources to be easily added
- Improved support across host build systems (RHEL, Fedora, Debian, etc)

DPAA and non-DPAA Processor combined into a single SDK release

- Common U-Boot and Linux kernel versions
- Unified device driver code base
- Common user documentation

Processor and Board Support changes

- Adds support for P5040 rev 1.0 and P5040DS (not all features validated on P5040 due to schedule)
- Adds support for P5020 rev 2.0 (*added in v1.2.1*)
- Adds support for P3041 rev 1.1
- Adds support for P2041/0 rev 1.1
- Adds support for P2041RDB NAND (*added in v1.2.1*)
- Support for P3060 and P3060QDS removed
- Support for P2020DS removed

Application Specific Fastpath (ASF) introduced on DPAA processors

- Adds support for P4080 and P1023
- Accelerates performance over standard Linux
- Supports IPFwd, IPSec and NAT/Firewall in Linux kernel

Linux Real-Time (RT) support introduced

- Adds RT support on P4080

Toolchain, U-Boot and Linux Kernel Updates

- gcc-4.6.2+svnr180516, eglibc-2.13+svnr14157, binutils-2.21.1a, gdb-7.3a
- U-Boot 2011.12
- Linux kernel 3.0.34
- Boot from SRIO (P4080 and P5020)

User Space Datapath Acceleration Architecture (USDPAAs)

- Adds support for multiple processes
- Enhances MAC-less and Shared MAC support
- Adds LPM feature to IPFwd reference application

Kernel-based Virtual Machine (KVM)

- Adds SMP support
- QEMU 1.0
- Adds 64-bit support
- Supported on all all processors

Freescale Embedded Hypervisor (Topaz)

- Adds 64-bit support

Kernel Driver Updates

- Linux DPAA ethernet driver adds support for Scatter/Gather and improved MAC-less and Shared MAC support
- IEEE1588 update
- SEC (Talitos and CAAM) XOR feature removed temporarily.

For a list of known and fixed issues in SDK v1.3, please refer to “Known Issues” and “Fixed Issues” in the *SDK Overview* section in the SDK Users Manual.

How to obtain this release

SDK v1.3 can be downloaded in its traditional ISO format. Alternatively, the SDK source code (U-Boot, Linux, RCW, Yocto) can be obtained using the Freescale external git server.

To obtain the QorIQ SDK v1.3 in ISO format, you'll need to download the Source ISO and optionally download 1 of the Binary ISOs. The Source ISO contains SDK source code, Yocto recipes, and SDK user documentation. This is the primary ISO for the SDK. The remaining 4 Binary ISOs contain binary images with 1 ISO for each Power Architecture core:

- e500v2 – P2020/10, P1025/16, P1023P1022/13, P1024/15, P1023/17, P1022/13, P1021/12, P1020/11, P1010/14, MPC8572, MPC8548, MPC8544, MPC8536
- e500mc – P4080/40, P3041, P2040/2041
- e5500 32-bit – P5040/21, P5020/10
- e5500 64-bit – P5040/21, P5020/10

Each Binary ISO includes:

- Yocto cache binary file(s) which can reduce build times in Yocto
- Hard drive image
- Flash images for all boards that are associated with that architecture

SDK ISOs can be downloaded from these locations:

- External web download:
http://www.freescale.com/webapp/sps/site/prod_summary.jsp?code=SDKLINUX
- Internal web download:
<http://linux.freescale.net/labDownload2/viewDownloads.php?Filter=sdk+v1.3&field=PL&Action=Filter>

Source code for the SDK can be obtained via the Freescale external git server located here:

<http://git.freescale.com/git/cgit.cgi/ppc/sdk>

Source ISO can also be obtained via compass extranet:

<http://compass.freescale.net/livelink/livelink?func=ll&objId=227872965>