Product Change Notification	Date
	October 11, 2023
Product	Digi Embedded Yocto Release 4.0-r4 (dey-4.0-r4)

Reason for Change

☐ Technical Requirement	☐ Product Transition
☐ Customer Requirement	☐ Product Discontinuation
☐ Quality Improvement	☒ **Product Enhancement**
	☐ Other

Description of Change	Digi Embedded Yocto version 4.0-r4 is based on the Yocto Project® release 4.0 LTS "kirkstone" and provides feature enhancements, bug fixes and Embedded Documentation Portal updates.
	Platform Support: CC8M Nano/Mini, CC8X, CC6UL, CC6+, CC6/6N, CCMP13/15, CC93
	Release changelog
	4.0-r4
	• Improved SWU package support and generation
	• New ConnectCore Cloud Services application design
	• Boot count support enabled by default
	• ST-based platforms
	o IMPORTANT: Reworked NAND partition table and disabled UBI Fastmap mechanism. See Storage layout for information on migrating to the new partition table layout
	o Updated BSP
	▪ Trusted Firmware ARM v2.6 (based on tag v2.6-stm32mp-r2.1 by STM)
	▪ OP-TEE v3.16.0 (based on tag v2.6-stm32mp-r2.1 by STM)
	▪ U-Boot v2021.10 (based on tag v2.6-stm32mp-r2.1 by STM)
	▪ Linux kernel v5.15.118 (based on tag v2.6-stm32mp-r2.1 by STM)
	o Added support for bootable SD card image generation
	o TrustFence®
	▪ Added support for encrypted U-Boot environment
	▪ Added support for secure firmware update
	• NXP-based platforms
	o Added support for ConnectCore 6/6N, ConnectCore 6+ and ConnectCore 8X
	▪ Linux kernel v5.15.71 (based on tag lf-5.15.71-2.2.0 by NXP)
	o Updated BSP for ConnectCore 93

- U-Boot v2023.04 (based on tag lf-6.1.22-2.0.0 by NXP)
- Linux kernel v6.1.22 (based on tag lf-6.1.22-2.0.0 by NXP)
  - Qt6 for CC93, CC8M, CC8X, CC6/6N/6+
- Digi ConnectCore Cloud Services 1.2
  - Firmware update enhancements
    - Improved versioning system (consistent in build system, cloud, local update)
    - Partial updates using SWU packages
    - Incremental (diff) updates for filesystem images
  - Configuration enhancements (platform)
    - Removed settings step (not used by ConnectCore)
    - Improved filesystem configuration allowing to create directories (platform)
  - CloudConnector
    - Split between Service and Application to simplify creation of custom apps
    - Improved/simpler APIs for data service (data request/data streams)
    - Examples and documentation updates to use the new model
  - Improved Subaccounts support (platform)
    - Added support for nested subaccounts
    - Improved UI to manage subaccounts
    - Better permissions control
  - Documentation revamp
- General bug fixing and improvements

4.0-r3
- ST-based platforms
  - Added preliminary TrustFence support
  - Fixed Ethernet PHY pinctrl resuming from deep sleep
  - Adjust CAN bus parent clock to achieve more accurate baud rates
  - Add DT overlay for Bluetooth raw test mode
  - Adjust NAND lines speed settings
  - Add specific kernel driver for Marvell Ethernet PHY on DVK
  - Fix race condition on bring up of LAN87xx Ethernet PHY
  - Disable auto-mount of microSD card to avoid race condition on kernel boot
- NXP-based platforms
  - Added support to ConnectCore 93
  - U-Boot v2022.04 (based on tag 'lf-5.15.71-2.2.0' by NXP)
  - Linux kernel v5.15.71 (based on tag 'lf-5.15.71-2.2.0' by NXP)
  - Qt6 6.3.2

- o Fix PMIC regulators suspend state on ConnectCore 8M Nano
  - o Fix clock initialization issue on LAN8710/20 PHY on ConnectCore 6UL
- Digi ConnectCore Cloud Services 1.1
  - o Improved over-the-air (OTA) software update functionality
    - Added support in Digi Remote Manager (DRM) to upload and store customer firmware images
    - Improved UI to manage firmware images
      - New 'Custom Device Firmware' tab
      - Severity rating for updates: Common Vulnerability Scoring System (CVSS)
  - o Configurations (basic support)
    - Firmware updates in bulk/mass using configurations
- General bug fixing and improvements

4.0-r2
- Added webkit support
- ST-based platforms
  - o Added support to ConnectCore MP13
  - o Updated BSP
    - Updated Trusted Firmware ARM
    - Updated OP-TEE
    - Updated U-Boot v2021.10
    - Updated Linux kernel v5.15.67 (based on tag v5.15-stm32mp-r2 by ST)
    - Updated Wi-Fi driver (based on 'v5.15.58-2023_0222' release from Cypress)
    - Updated Wi-Fi firmware to 'imx-kirkstone-fafnir_r1.0' release from Murata
- NXP-based platforms
  - o Added support to ConnectCore 8M Mini
  - o Added support to ConnectCore 8M Nano
  - o Updated BSP
    - Updated U-Boot v2020.04
    - Updated Linux kernel v5.15.71 (based on tag lf-5.15.71-2.2.0 by NXP)
  - o Updated MCA firmware for ConnectCore 6UL to v1.22.
  - o Added Qt 6.3.2 support for ConnectCore 8M platforms

4.0-r1
- Release based on Yocto 4.0 (kirkstone) including: for NXP-based platforms
  - o New toolchain based on GLIBC-2.35
  - o Updated Qt 5.15.3
  - o Updated bluez5 to v5.64

	○ Updated gstreamer1.0 to v1.20.1 ○ Updated OpenSSL to v3.0.2 ○ Updated busybox to v1.35.0 ○ Updated NetworkManager to v1.36.2 ○ Package upgrades and security fixes - Updated mca-tool to v1.26 - Updated QCA65x4 Wi-Fi firmware and driver to include Cisco Extensions support (qcacld-2.0) - ST-based platforms ○ Linux kernel v5.15.24 (based on tag v5.15-stm32mp-r1 by ST) ○ U-Boot v2021.10 - NXP-based platforms ○ Linux kernel v5.15.52 (based on tag lf-5.15.52-2.1.0 by NXP) ○ U-Boot v2020.04
Affected Part Numbers (Supported Platforms)	**ConnectCore 93** ConnectCore 93 System-on-Module (SOM) · CC-WMX-YC7D-KN ConnectCore 93 Development Kit · CC-WMX93-KIT **ConnectCore MP13** ConnectCore MP13 System-on-Module (SOM) · CC-ST-DX58-ZK · CC-WST-DX58-NK ConnectCore MP13 Development Kit · CC-WMP133-KIT **ConnectCore MP15** ConnectCore MP15 System-on-Module (SOM) · CC-ST-DW69-ZM · CC-WST-DW69-NM ConnectCore MP15 Development Kit · CC-WMP157-KIT **ConnectCore 8M Mini** ConnectCore 8M Mini System-on-Module (SOM) · CC-MX-ET7D-ZN · CC-MX-ET8D-ZN · CC-WMX-ET7D-NN · CC-WMX-ET8D-NN ConnectCore 8M Mini Development Kit · CC-WMX8MM-KIT

ConnectCore 8M Nano
ConnectCore 8M Nano System-on-Module (SOM)
·   CC-WMX-FS7D-NN
·   CC-WMX-FR6D-NN
·   CC-MX-FS7D-ZN
·   CC-MX-FR6D-ZN

ConnectCore 8M Nano Development Kit
·   CC-WMX8MN-KIT

ConnectCore 8X
ConnectCore 8X System-on-Module (SOM)
·   CC-WMX-JM8E-NN
·   CC-MX-JM8D-ZN
·   CC-MX-JM7D-ZN
·   CC-WMX-JM7D-NN
·   CC-MX-JQ6D-ZN
·   CC-MX-JQ7D-ZN
·   CC-WMX-JQ7D-ZN

ConnectCore 8X SBC Pro
·   CC-WMX8-KIT
·   CC-SBP-WMX-JM8E

ConnectCore 6UL
ConnectCore 6UL System-on-Module (SOM)
·   CC-WMX-JN7A-NE
·   CC-WMX-JN69-NN
·   CC-WMX-JN59-NN
·   CC-WMX-JN58-NE
·   CC-MX-JN7A-Z1
·   CC-MX-JN69-ZN
·   CC-MX-JN58-Z1

ConnectCore 6UL SBC Pro
·   CC-WMX6UL-KIT
·   CC-SBP-WMX-JN58
·   CC-SBP-WMX-JN7A

ConnectCore 6+
ConnectCore 6+ System-on-Module (SOM)
·   CC-WMX-KK8D-TN
·   CC-MX-LL7C-ML

ConnectCore 6+ SBC Pro
·   CC-WMX6P-KIT

	· CC-SB-WMX-KK8D **ConnectCore 6/6N** ConnectCore 6/6N System-on-Module (SOM) · CC-WMX-J97C-TN · CC-WMX-L96C-TE · CC-WMX-L87C-TE · CC-MX-L76C-Z1 · CC-MX-L86C-Z1 · CC-MX-L96C-Z1 · CC-WMX-L76C-TE · CC-WMX-K87C-FJA · CC-WMX-K77C-TE · CC-WMX-L97D-TN · CC-WMX-J98C-FJA · CC-WMX-J97C-N · CC-WMX-L87C-N · CC-WMX-K87C-NFJA · CC-WMX-L97D-NRV · CC-WMX-L97D-N · CC-WMX-J98C-NFJA · CC-WMX-J98C-N · CC-WMX-L76C-N · CC-WMX-K87C-N ConnectCore 6/6N SBC Pro with ConnectCore 6/6N module · CC-WMX6-KIT · CC-SB-WMX-J97C · CC-SB-WMX-L87C · CC-SB-WMX-L76C · CC-WMX6N-KIT · CC-SB-WMX-J97C-N · CC-SB-WMX-L87C-N

Timing of Change	Available in the embedded documentation portal now: www.digi.com/resources/documentation/digidocs/embedded/index.html Download available on GitHub: https://github.com/digi-embedded/meta-digi/tree/kirkstone Digi System-on-Module support website (select SOM platform): https://hub.digi.com/support/products/system-on-modules/

Notes	Requires software upgrade on existing product. Release Notes: https://github.com/digi-embedded/meta-digi/tree/kirkstone

Authorization	Digi International Embedded Product Management