

# V910 vs V920 difference (Security, HYP, SFI, System I/F)

Component	Architecture Change	Source Structure Change	dtb Change	Comments
EL3 Monitor	<ul style="list-style-type: none"> <li>Upgrade ATF base version from 1.4 to 2.6</li> <li>Use DEE instead of SIREX</li> </ul>	None	None	<ul style="list-style-type: none"> <li>No change from the aspect of customer</li> </ul>
AVB	None	<ul style="list-style-type: none"> <li>Support new lk-bootloader</li> </ul>	None	
DM-Verity	None	None	None	
FBE/FDE	HW Wrapped Key	<ul style="list-style-type: none"> <li>Support HW Wrapped Key Mode</li> </ul>	None	
RTIC CA/TA	None	<ul style="list-style-type: none"> <li>Add RTIC memory area</li> </ul>	None	
StrongBox	-	-	-	New feature
CryptoManager	None	<ul style="list-style-type: none"> <li>Change HW crypto engine from SSS to SC</li> <li>Support new HW IP Strongbox</li> </ul>	None	
DRM Widevine	None	None	None	
DRM Playready	-	-	-	New feature
DRM China	-	-	-	New feature
Firmware Protection	None	None	<ul style="list-style-type: none"> <li>Support new hypervisor's configuration for firmware protection</li> </ul>	fdsa
Secure boot	None	<ul style="list-style-type: none"> <li>Support new lk-bootloader</li> </ul>	None	<a href="#">Siheung Kim</a> Is it a component? It is component. Implementations were in EL3 and LK.
RPMB	None	None	None	
OTP	None	<ul style="list-style-type: none"> <li>Including headers are changed to support 910 and 920</li> </ul>	None	
KeyMaster /KeyMint	None	None	None	
GateKeeper	None	None	None	
ExynosTEE NWd PV driver	-	-	-	New feature
ExynosTEE NWd Daemon	-	-	-	New feature

ExynosTEE Service	-	-	-	New feature
PCIe driver	None	<ul style="list-style-type: none"> <li>For one binary, we divided source codes to v9 and v920. V920's RC Device Driver will be using for v920</li> </ul>	<ul style="list-style-type: none"> <li>Because PCIe IP is different from V910, device tree configuration is also different</li> </ul>	
Ethernet driver	<ul style="list-style-type: none"> <li>Ethernet IP was changed to XGMAC from EQOS</li> <li>To support customized XGMAC (SXGMAC), sxgmac driver is added to stmmac driver</li> </ul>	<ul style="list-style-type: none"> <li>stmmac driver of Linux mainline is used for base.</li> <li>sxgmac driver is added as an add-on driver for stmmac.</li> <li>To minimize modification of stmmac mainline driver, sxgmac driver overrides operation sets partially</li> </ul>	<ul style="list-style-type: none"> <li>Because Ethernet IP is different from V910, device tree configuration is also different</li> </ul>	
UFS driver	<ul style="list-style-type: none"> <li>Provides compliance with JEDEC UFS HCI v3.0 and UFS v3.1</li> </ul>	<ul style="list-style-type: none"> <li>(lk-bootloader UFS) Parse UFS configuration from dt</li> </ul>	None	
S2MPU driver	<ul style="list-style-type: none"> <li>HW IP updated but functions are same with v910</li> </ul>	<ul style="list-style-type: none"> <li>Updating according HW IP changing</li> </ul>	<ul style="list-style-type: none"> <li>DT node format is minor updated</li> </ul>	
vGICv3 / vITS	<ul style="list-style-type: none"> <li>HW IP version is increased from GICv2. Number of interrupts and supported CPUs are increased.</li> <li>ITS HW IP is added newly to support PCIe MSI.</li> </ul>	<ul style="list-style-type: none"> <li>Updating according HW IP changing</li> </ul>	<ul style="list-style-type: none"> <li>GICv3's DT node format is same with v910</li> <li>Adding vITS DT node</li> </ul>	
HV	-	-	-	<ul style="list-style-type: none"> <li>No change from the aspect of customer</li> </ul>
VIRTIO-framework	-	-	-	<ul style="list-style-type: none"> <li>Newly added VIRTIO-framework</li> </ul>
SFI Bootloader	<ul style="list-style-type: none"> <li>Supports CR-52 core split mode</li> <li>Supports XSPI flash memory</li> <li>Supports updated SFMPU IPs</li> </ul>	None	None	
Abox CDD	None	None	None	

CAN MCAL	<ul style="list-style-type: none"> <li>V920 new feature</li> </ul>	<ul style="list-style-type: none"> <li>MCAL folder/ file structure is the same as those of CDD for Vector Davinci configurator.</li> </ul>	-	New feature
Clkmon CDD	<ul style="list-style-type: none"> <li>The number of Clkmon instances has increased compared to V910.</li> </ul>	None	None	<ul style="list-style-type: none"> <li>The added Clkmon HW is in the CPUCL0,1,2, AUD, HSI2, CMU, MIF0,1,2,3 blocks. In addition, the check function for the reference clock in clkmon has been deleted. So a parameter have been added to the API to distinguish the instance of Clkmon, and all APIs related to reference clock check were deleted.</li> </ul>
Dio MCAL	<ul style="list-style-type: none"> <li>The number of GPIO pin is changed, but APIs are same as V910</li> </ul>	None	None	
Dpu CDD	<ul style="list-style-type: none"> <li>DPU HW is changed. But, Driver will have same interface with V910.</li> </ul>	None	None	
Eth MCAL	None	None	None	
FMU CDD	<ul style="list-style-type: none"> <li>Supports Reset Request</li> <li>Supports Latched Output Status</li> <li>Supports Output Comparator</li> </ul>	None	None	
Fls MCAL	<ul style="list-style-type: none"> <li>Flash interface IP is changed(Serial Flash Controller → XSPI. Serial Flash Controller IP support only QSPI Flash device, but XSPI IP support QSPI Flash, Octal Flash and HyperFlash device. Default Flash device in V920 is Octal Flash device), but APIs are same as V910</li> </ul>	None	None	
FlsTst MCAL	None	None	None	
Gpt MCAL	<ul style="list-style-type: none"> <li>2 Gpt instance supported</li> </ul>	None	None	
Mcu MCAL	<ul style="list-style-type: none"> <li>PLL information is changed(PLL_ETH is deleted from CMU SFI), related PLL_ETH APIs are deleted.</li> <li>Block reset sequence is changed(SYSREG is added), but APIs are same as V910</li> </ul>	None	None	
Port MCAL	None	None	None	<ul style="list-style-type: none"> <li>The number of GPIO pin is changed,</li> </ul>
RamTst MCAL	<ul style="list-style-type: none"> <li>Driver will have same interface with V910.</li> </ul>	None	None	
Safety Test	<ul style="list-style-type: none"> <li>Supports XSPI self-test</li> <li>Supports updated TMU IPs.</li> </ul>	None	None	<p><a href="#">Byoungjae Chun</a> Do all the test related features are separated to each module? Isn't it integrated to a component?</p> <p>→ Most of self-test features upon S/M are integrated into this driver.</p>
SfLib	<ul style="list-style-type: none"> <li>Supports updated SFMPU IPs</li> <li>Supports updated DRAM map</li> <li>Add API for getting power status of external block</li> </ul>	None	None	
SfrMon	<ul style="list-style-type: none"> <li>Driver will have same interface with V910.</li> </ul>	None	None	

STL Manager	<ul style="list-style-type: none"> <li>• V920 new feature</li> </ul>	None	None	
Tmu CDD	<ul style="list-style-type: none"> <li>▪ New driver at KITT2</li> </ul>	None	None	
Usi CDD	None	None	None	
Volmon CDD	<ul style="list-style-type: none"> <li>▪ Volmon HW is changed. Several Driver interface (Read Interrupt, Clear Interrupt) is updated for V920 HW.</li> </ul>	None	None	
Wdg MCAL	<ul style="list-style-type: none"> <li>• 2 Wdt instance is supported</li> </ul>	None	None	