

DVF120 SoC for UCC Devices PRODUCT BRIEF

The DVF120, a member of Synaptics' family of embedded UCC processors, is an advanced system on chip (SoC) specially designed and optimized for mid and high-end, feature-rich IP phones and terminals that require powerful processing, advanced AI capability, and 3D graphics. This chip comes with Linux[®] and Android[™] OS, superior audio algorithms, variety of peripherals, dual displays, companion Synaptics SoC for connectivity and audio front end.

synaptics

DVF120

ICC COMPUTE

BENEFITS

- Strong computing with low power mode
- Al-enabled audio processing
- Enterprise-grade security
- System cost optimization
- Field-hardened Linux and Android SDK
- Family of processors with common SDK

APPLICATIONS

- Linux and Android-based IP terminals
- ► Microsoft Teams[™], Zoom[™], and WebEx[™] terminals and associated touch controllers
- Audio docking devices

AI ENABLED; HIGH-

PERFORMANCE CPU

SECURE

Advanced conferencing devices

PROVEN LINUX/ ANDROID SDK

LOW SYSTEM COST

FEATURES

- Quad-core Arm Cortex-A55 processor; up to 1.9 GHz per core
- Imagination[™] BXE-2-32, dual-core (2 pixels per clock) GPU; clock frequency of up to 800 MHz
- Supports OpenGL[®] ES[™] 3.2, OpenCL[™] 3.0, EGL[™] 1.5, Vulkan[®] 1.3, Android neural network (NN) API through IMGDNN AP
- 802.3 (G)MAC supports RGMII and RMII
- DDR4/DDR3/DDR3L, NAND, and eMMC 5.1 controllers
- ► TDM/I²S: 5 fully bidirectional interfaces with up to 16 channels each
- Support for up to 8 digital microphones 4 PDM stereo interfaces

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 TrustZone[®] technology with secure boot, dedicated security processor (DSP), HSM, TEE, secure storage, on-chip anti-fuse OTP

▶ USB3.0, USB2.0 OTG, SDIO3.0, UART

SYSTEM BLOCK DIAGRAM

32/16 bit DDR4/DDR3/DDR3L @2,133MT/s NAND Controller eMMC 5.1 MIPI-DSI **SDIO 3.0** Quad Cortex-A55 w TrustZone up to 1080p60 each core @1.9GHz Security Engine GMAC with 24-bit RGB Cortex-NEON[™] IEEE 1588 PTP up to 1080p30 Cortex-A NEON[™]/F ARM Cortex M3 Cortex-A55 NEON 1 @200MHz Cortex-A55 NEON[™]/FPU USB2.0 **Display Controller** TRNG, eFuse, Secure Boot, TrustZone® USB3.0 Imagination[™] GPU AES, RSA, SHA, OTP BXE-2-32 L1 32KB / L2 64KB / L3 512KB @800MHz TWSI x 4 / I2C UART x 2 AXI Cross Point Switch SPI x 2 **DVFA** Interface 5 Channel I2S (Rx+Tx) or 10 Channel TDM JTAG Debug Port w/ ARM CoreSight Debug 8 Channel PDM Rx Audio HW mute KBD (8x10) JVF DAIF DRT GPIO x 72 PWM x 4

TRADEMARKS

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- MIPI DSI[®] and RGB
- Dual display support
- 72 GPIOs

