

SDT-A9X4

The most efficient and cost-effective edge computing SOM based on Arm® Cortex®-A9 quad-core

Product Description

The SDT-A9X4 is the most efficient and cost-effective edge computing system-on-module based on 1.4GHz Arm® Cortex®-A9 quad-core. It also provides enough storage space with 1GB DDR3 DRAM (2GB optional) and 8GB eMMC flash memory.

The module comes with fundamental IoT technologies such as OS, connectivity, security, and cloud service. It supports Mbed Linux OS, Tizen 5.0 Linux, and generic Linux. SDT also provides complete firmware and software libraries to connect with Arm Pelion, Amazon AWS, Microsoft Azure, and Samsung SmartThings.

The SDT-A9X4 is the perfect choice for embedded AI-enabled machine vision devices, while supporting a rich UI/UX capability for camera and display requirements.

Via the DAP Station for SDT-A53X8/A9X4, you can debug and evaluate the module with PC and connect SD-card, display, camera for additional functions.

Benefits

- Powerful processing with security
- Full-HD multi-format video decoding
- Compact size for portable devices
- Enhanced 3D graphic processor
- Various standard I/O included

Application

- Machine vision
- Speech-to-Text, Text-to-Speech
- Edge computing
- High-performance IoT gateway
- Dual-display application

CPU - Samsung S5P4418

- Cortex-A9 quad-core, 1.4GHz

GPU

- 3D graphics accelerator

Memory

- 8GB eMMC 4.5 Flash memory
- 1GB DDR3 (2GB optional)
- 1MB L2 Cache

OS Support

- Linux
- Samsung Tizen 5.0 Linux
- Arm Mbed Linux OS

Security

- Secure Element
- Arm TrustZone
- Secure boot
- Secure JTAG
- HW crypto accelerator (AES, DES/TDES, SHA, MD5, PRNG)

PMIC - NXE2000

- 12 LDO regulators
- Thermal shutdown
- 5 high-efficiency step-down DC/DC converters

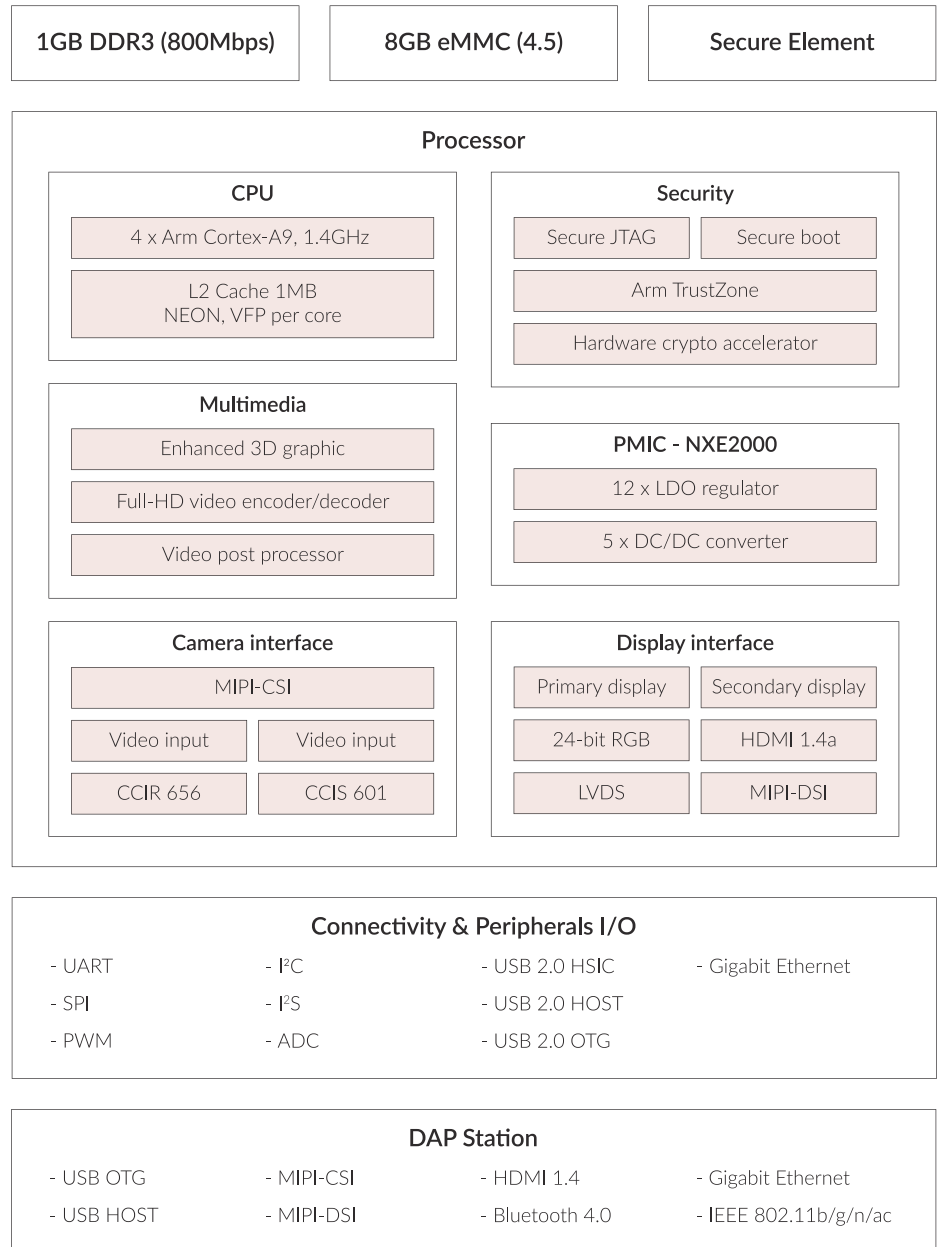
Connectivity & Peripherals I/O

- UART, SPI, I²C, PWM, ADC, GPIO, SDIO
- RMII/RGMII for 10/100/1000 Base-T Ethernet
- USB HOST, USB OTG
- MIPI CSI for camera (up to 5M, 1920x1080 @30fps)
- MIPI DSI for display (up to 1920x1280)
- HDMI 1.4a for display (up to 1920x1080 @60fps)
- Audio I/O
- SD I/O

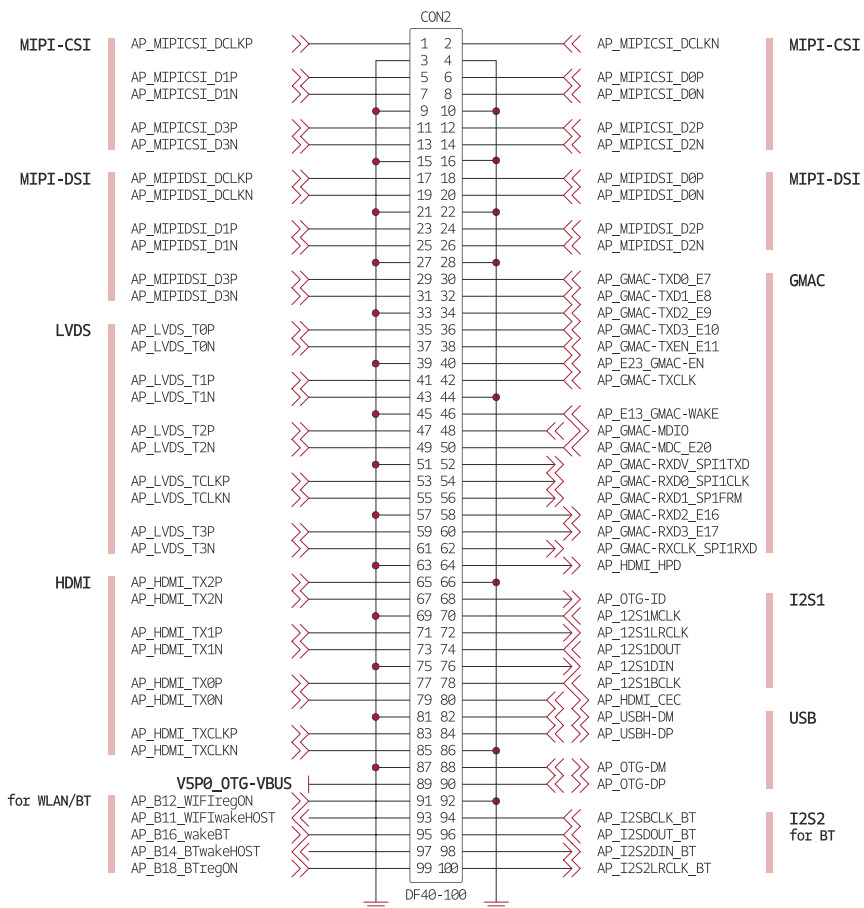
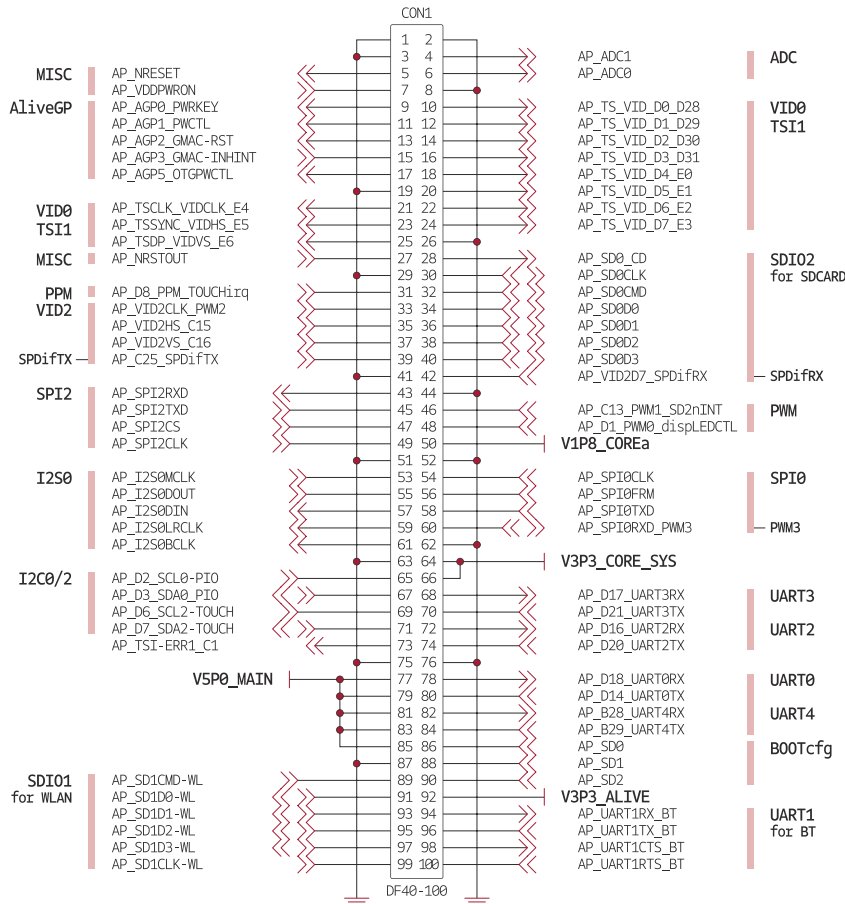
Environmental

- Dimension: 45 x 38 x 4.6 (mm)
- Operating temperature: -25~85°C

Functional Diagram



Pinout Diagram



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