

SAM9x60 Family with EGT

Microchip completes its entry-level Linux IoT-Platform with the SAM9X60 family of MPUs

These devices are also available as SiP (System in Package) with 8 MB of SDRAM for bare-metal/RTOS-Applications or up to 1Gbit DDR2 for Linux-Applications. The packages are optimized for easy PCB-design with only 4 layers, thus offering very competitive system cost! A very comprehensive feature set with regards to security like AES&SHA in Hardware, Secure Boot, OTP for key storage and many more, makes the SAM9x60-family ideally suited for IoT-applications. In addition, the devices offer a large number of connectivity options as well as enhanced user interface capabilities. This is complemented by Microchip's NON-EOL-policy and long term Linux-support with a proven record of updates for over 18 years now!

Key Features:

ARM926EJ-S Core

- ◆ Up to 600MHz, 2x 32kB L1 cache

Memory type support

- ◆ 16-bit LPDDR / DDR2
- ◆ 16/32-bit LPSDR / SDRAM
- ◆ Raw MLC/SLC NAND with 24-bit ECC
- ◆ QSPI, 2x SD 2.0 / eMMC 4.41

Connectivity

- ◆ Dual 10/100 EMAC, Dual CAN
- ◆ Three HS USB Host or Two Host + Device

User Interface

- ◆ 24-bit LCD Interface with 4 overlays
- ◆ 2D Graphics Engine (GPU)
- ◆ Camera Interface
- ◆ I2S/TDM, Mono Class D controller

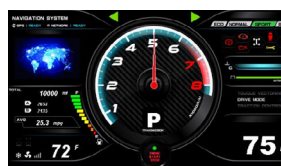
Security

- ◆ Secure Boot, Unique ID
- ◆ HW Crypto Engine (AES, SHA, TDES, TRNG)
- ◆ Secure Key Storage (OTP)
- ◆ Tamper pins

SAM9X60 SiP Derivatives:

- ◆ SAM9X60 + 64 Mb (8 MB) SDRAM
 - For RTOS or Bare Metal, HMI up to XGA
 - BGA196 11x11mm, 0.65mm pitch
- ◆ SAM9X60 + 512 Mb (64 MB) or 1 Gb (128 MB DDR2)
 - For Linux, Connectivity and HMI up to XGA
 - BGA233 14x14mm, 0.8mm pitch

Graphics:



The SAM9x60 family is supported by the free and open source Ensemble Graphics Toolkit (EGT), an optimized and easy to use library to create HMI, supporting touchscreen/keyboard/mouse, image and video scaling, 30fps video and audio playback, widget animation and much more.

Available <https://github.com/linux4sam/egt>



Benefits

- ◆ Reduces design complexity and facilitate design for EMI
- ◆ Smaller footprint
- ◆ 4-layer PCB designs
- ◆ Industrial grade (-40/+85°C)
- ◆ Single supplier for MPU & Memory
- ◆ Long term supply agreement for DRAM
- ◆ No DRAM pricing fluctuation
- ◆ Scalable memory options



The SAM9X60-EK ([DT100126]) for evaluation of the SAM9X60 family offers an embedded debugger (J-LINK OB), serial debug, 3 USB connectors, class D output stage, 1x ethernet port, 2 CAN transceivers and connectors, SD card slot, mikroBUS connector and Raspberry Pi expansion connector. A 5" WVGA LCD with maxXTouch (AC3200005-5) is optional.