SAMA5 WLSOM with WiFi and Bluetooth

ARM Cortex A5 based System on Module (SOM)

- ARM® Cortex®-A5 processor-based SAMA5D2 MPU
- 256 MByte LPDDR2 SDRAM
- MCP16502 Power Management IC
- WILC3000 WiFi and Bluetooth module
- Supports IEEE 802.11 WEP, WPA, WPA2 and WPA2 Enterprise security
- Bluetooth 5.0 Low Energy
- 64Mb Serial Quad I/O Flash Memory with Embedded EUI-48 MAC addresses
- KSZ8081 10Base-T/100Base-TX Ethernet PHY
- Pre-provisioned ECC608 Secure Element (Trust&Go)
- Multiple interfaces and I/Os for easy application development

- 40.8 x 40.8 mm Module, Pitch 0.8mm, Solderable manually for Prototyping
- Single 3V to 5.5V supply
- Industrial temperature range (-40 to 85°C)

The **SAMA5D27 Wireless SOM1** (WLSOM1) is a small single-sided System-On-Module (SOM) based on a high-performance 32-bit ARM® Cortex®-A5 processor + 2Gbit LPDDR2 System in Package running up to 500 MHz, the WILC3000 WiFi and Bluetooth module and MCP16502 Power Management IC optimized for the module. The ATSAMA5D27-WLSOM1 is built on a common set of proven Microchip components to reduce time to market by simplifying hardware design and software development. It also simplifies design rules of the main application board, reducing overall PCB complexity and cost. The ATSAMA5D27-WLSOM1 is delivered with a free Linux distribution and bare metal C code examples for RTOS implementation.
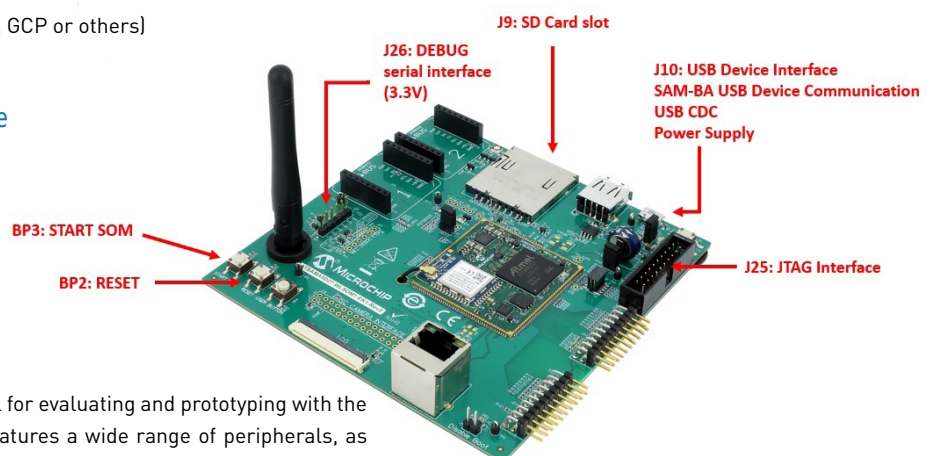
Linux Support

Microchip uses the Mainline Linux Distribution and has a proven history on long term support for Linux for their MPUs. In addition to the Linux-Distribution for SAMA5D2, the SAMA5D27-SOM1 Linux distribution provides:

- AT91Bootstrap includes initialization code for the DRAM included in the SIP and the clocks in the SOM.
- The device tree database includes the full SOM hardware description.

Software and Cloud Connectivity Simplified:

- Full access to design files + Firmware Ecosystem
- Supports multiple Cloud Solutions (AWS, Azure, GCP or others)

The ATSAMA5D27-WLSOM1-EK1 is ideal for evaluating and prototyping with the SAMA5D27-WLSOM1. The baseboard features a wide range of peripherals, as well as a user interface. Connectors and expansion headers allow easy customization and quick access to leading edge embedded features such as MikroElektronica Click Boards™.