



Shield96_STANDARD

Advanced Hardware Security for IoT – At Scale

IoT developers are very concerned with the security and data privacy of IoT solutions. In conjunction with security as a priority, skills gaps are highlighted as a struggle and having a security platform where security has been baked in from the beginning to make it more accessible and easier to implement is critical.

Features/Benefits

- > TrustZone architecture
- > Tamper detection
- > Secure data storage
- > Secure boot
- > Cryptographic accelerators

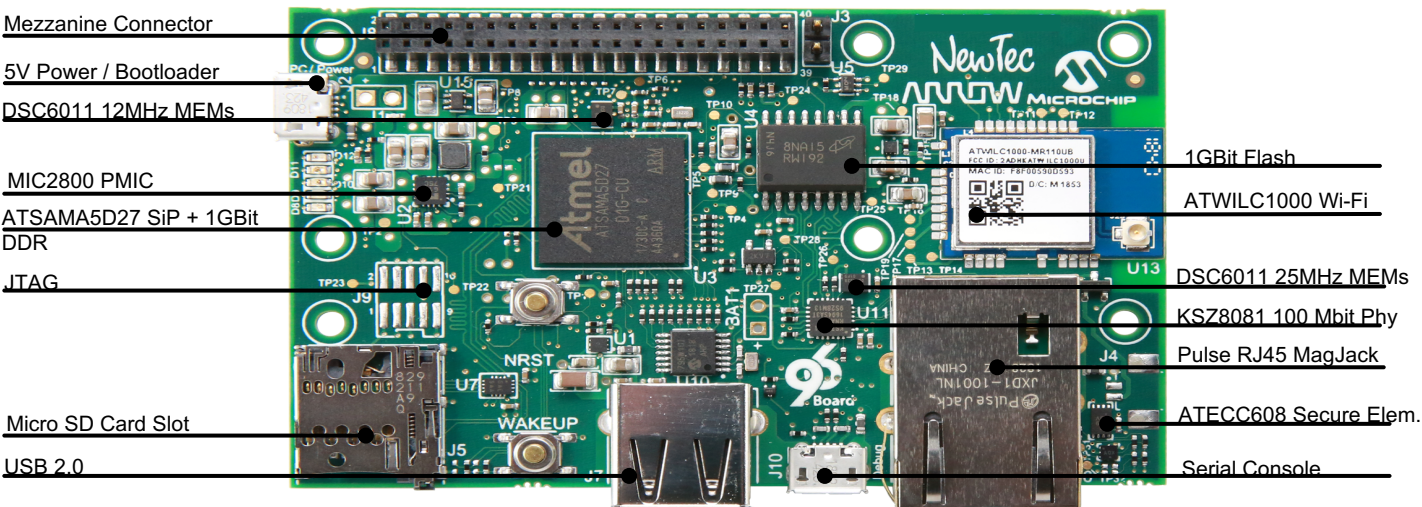
Customization Services

Shield96 is designed for pre-production purposes and can be used for proof-of-concept development and testing. Arrow can help create customized production-ready systems, with the following services:

- > Preload “Custom TA” trusted application
- > Customized hardware/software to meet security needs and environmental requirements
- > Bespoke application development for mobile, desktop or web
- > Scalable cloud or self-hosted analytics and dashboard development
- > Automated Secure Provisioning Service at scale

Market Demands and Trends

The current focus for strong security in the Internet of Things (IoT) industry is the use of hardware security or embedded security. Keeping cost under control is crucial for the success of all businesses, therefore selecting the proper MPU/board and fully utilizing its capabilities is critical. The ATSAM5D2 incorporates all the needed security features for applications like electronic payments to all IoT verticals. To utilize its full capabilities the ATSAM5D2 requires well designed software that addresses the entire lifecycle from development through manufacturing and into operation.





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Component	Description
Form Factor	Conform to 96Boards IoT Edition Extended (1.8V), 40 Pin Low Speed Expansion Connector
SoC	ATSAMA5D27, Cortex A5 Core (ARMv7-A-Architecture), 500 MHz, 128 Mb RAM integrated System in Package
WLAN	Microchip ATWILC1000-MR110xB, IEEE 802.11 b/g/n
Ethernet	10BASE-T/100BASE-TX IEEE 802.3 compliant
USB 2.0 OTG	USB A Connector
Real Time Clock/Calendar	Microchip MCP795W1 Optional Batter-Backed
Crypto	Crypto Authentication Device ATECC608
SD Card	One micro SD Card Slot
NOR Flash	Micron MT25QU01 GBBB, 128 Mb clock frequency 1666 MHz (MAX) for all protocols in STR
LEDS	Power (Green), Wi-Fi Active (Yellow), Use LED (Blue), User LED (Orange), User LED (Green)
Buttons	Reset Button, Wake-Up Button
JTAG	10-Pin Micro header
Debug USB	Access to Serial Console
Programming Port	Atmel Bossa Programming Port
OS Support	Embedded Linux
Size	85 mm x 54 mm

Current Security Obstacles for Customers

Introducing embedded security comes with challenges such as skill and experience gaps. Taking to market a product with security onboarded requires firmware to be provisioned securely in volume, fuses to be burned, keys to be managed for the lifecycle of the product.

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ORDERING INFORMATION:

- Preloaded with EmSPARK Security Suite HD96_Trusted_Platform
- Virgin board HD96_Standard



Download Sequitur Labs EMSPARK™ Security Suite for the Shield96 Board