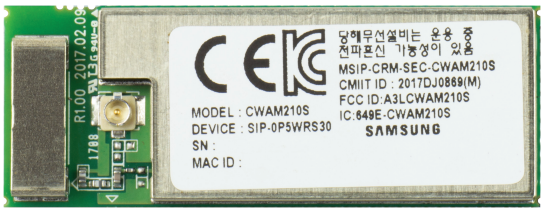
ARTIK™ 053 Module

Wi-Fi®-based IoT module with built-in hardware security for single-function “things”.

The newest member of the ARTIK 0 family features a 320MHz, 32-bit ARM® Cortex® R4 and Wi-Fi® connectivity. It runs Tizen RT® and makes use of open source development tools.

ARTIK 053 brings Wi-Fi to things that need connectivity, without sacrificing security. ARTIK 053 has a built-in security module that keeps its factory-installed certificates and keys safe.

ARTIK 053 runs Tizen RT, a platform that includes a compact RTOS with built-in TCP/IP stack and support for Lightweight Machine-to-machine (LWM2M) protocol. This also means you can develop for ARTIK 053 using free tools like the ARTIK IDE, GCC C/C++ compilers, and OpenOCD.

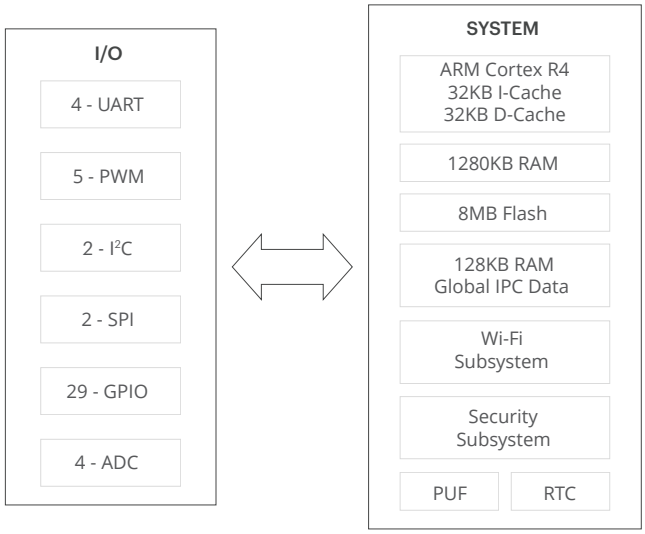


Samsung ARTIK™ 053 Module

Samsung ARTIK™ 053 Module Features

Processor	
CPU	32 bit ARM® Cortex® R4 with 32KB I-Cache and 32KB D-Cache @ 320MHz
Memory	
RAM	1280KB (General use) 128KB (Global IPC data)
FLASH	8MB Flash
Security	
Secure System	AES/DES/TDES, SHA-1/SHA-2, PKA (Public Key Accelerator), PRNG/DTRNG (Random Number Generators), Secure key storage
PUF	Physical Unclonable Function
Radio	
Wi-Fi®	Certified IEEE 802.11™ b/g/n Wi-Fi®, 2.4GHz radio
Regulatory	FCC (U.S), IC (Canada), CE (EU), KC (Korea), SRRC (China)
Power Management	
Single Supply	Wide voltage input range 5V-12V
Interfaces	
I/O	UART, I²C, SPI, PWM, ADC, GPIO
Form Factor	
Dimensions	15mm W x 40mm H x 3mm D

Samsung ARTIK™ 053 Module Block Diagram



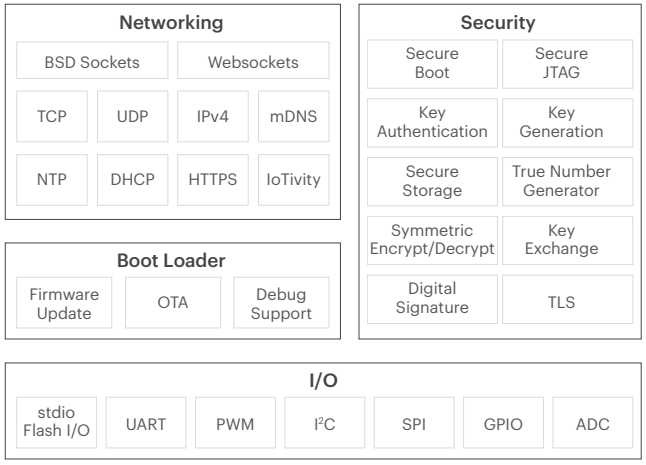
Samsung ARTIK™ 053 Module Ordering Information

For ordering, please contact a sales representative in your area or visit **artik.io/contact-us**.

Samsung Tizen RT™ OS Features

Kernel Services	
Real time	Tasks, threads, queues, mutex, semaphore, signal
Time	Real-time clock, date/time, timer, sleep
Network Services	
Internet	DHCP, NTP client, DNS client, mDNS, BSD sockets, Websockets
Services	Web client/server, MQTT client, IoTivity, cJSON
Libc Services	
Libc Compatibility	Flash-based Stdio, Stdlib, String, Unistd, Time
Security Services	
Encryption	AES 128/256, RSA 1024/2048, ECC BP/NIST 192/224/256/384/512
Authentication	HMAC 128/256, certificate
Certificate Storage	Secure Flash storage
Firmware Integrity	Secure boot and JTAG protection

Samsung TizenRT™ OS Block Diagram



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