

## 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.

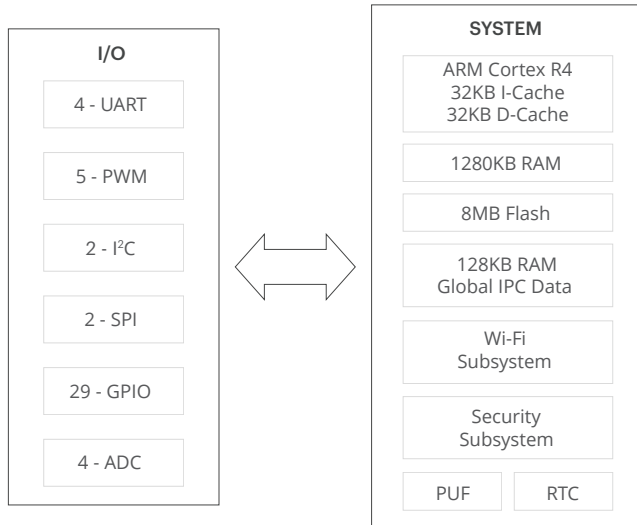


# Samsung ARTIK™ 053 Module

## 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

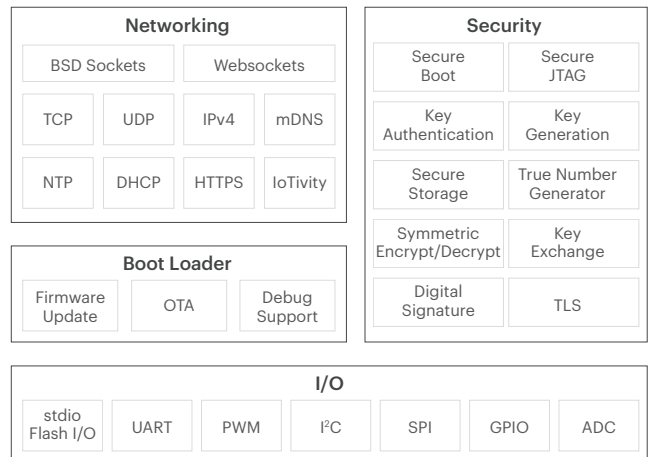
## Samsung ARTIK™ 053 Module Block Diagram



## Samsung 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



## Samsung ARTIK™ 053 Module Ordering Information

For ordering, please contact a sales representative in your area or visit [artik.io/contact-us](http://artik.io/contact-us).

SAMSUNG ELECTRONICS RESERVES THE RIGHT TO CHANGE PRODUCTS, INFORMATION AND SPECIFICATIONS WITHOUT NOTICE.

Products and specifications discussed herein are for reference purposes only. All information discussed herein is provided on an "AS IS" basis, without warranties of any kind. This document and all information discussed herein remain the sole and exclusive property of Samsung Electronics. No license of any patent, copyright, mask work, trademark or any other intellectual property right is granted by one party to the other party under this document, by implication, estoppel or otherwise. Samsung products are not intended for use in life support, critical care, medical, safety equipment, or similar applications where product failure could result in loss of life or personal or physical harm, or any military or defense application, or any governmental procurement to which special terms or provisions may apply. For updates or additional information about Samsung products, contact your nearest Samsung office. All brand names, trademarks and registered trademarks belong to their respective owners.

