



ARTIK™ 530 Series Modules

Build more than just a secure gateway - with a complete, fully integrated solution for IoT

The Samsung ARTIK™ 530 Series Smart IoT Modules and integrated software eliminate months of development time with a scalable solution for rapid gateway deployment

Focus your resources on what you do best—ARTIK takes care of the rest

ARTIK integrated system-on-modules come with everything you need to get to market quickly with high performance IoT-enabled gateways: pre-tested, production ready hardware with out-of-the-box connectivity, advanced software, end-to-end security, and an integrated cloud solution.

A fully tested, smart gateway software solution for IoT

ARTIK 530 series-enabled gateways provide support for edge device management, local information processing and distributed “fog” computing to empower value-added features and services for home, building and industrial products.

The ARTIK gateway solution works automatically with ARTIK Cloud and ARTIK-enabled edge nodes to discover and connect edge devices, exchange data, and make all your products work together. The edge node manager provides effortless provisioning, management and monitoring of local devices.

Built-in security to protect your assets from end-to end

Gateways built with ARTIK security connect to local devices and the cloud using mutual authentication to ensure confidential data exchange and support over-the-air product updates. Software execution can be protected by leveraging the TrustZone technology-equipped hardware. Data stored on devices can also be encrypted for enhanced privacy.

ARTIK is a scalable, open solution from Samsung, the global leader in connected devices and embedded components

Application examples

- Home gateways
- Voice control speakers
- Industrial edge gateways
- Building/Lighting zone controllers
- Display-based healthcare monitors

Product Features

Production ready, pre-integrated system-on-modules (SoMs)



High performance processing to support demanding edge analytics

- Quad core ARM® Cortex® A9 @1.2 GHz
- GPU for multimedia, graphics applications
- Linux based operating system with integrated middleware
- 4 GB flash with two memory options - 512MB or 1GB RAM



Built-in solution to easily connect, onboard and manage local devices

- Supports popular wireless standards: 802.11 a/b/g/n, Bluetooth® 4.2, ZigBee® and Thread
- 10/100/1000Mbps Ethernet MAC for high-speed Internet access
- Certified for regulatory standards such as FCC/IC/CE/KC/SRRC
- Full function edge node manager for immediate productivity



Integrated Samsung ARTIK cloud services enables remote management and value-added services

- Onboard and connect gateways and edge devices to cloud in minutes
- Manage and update products over the air, individually or as a fleet
- Orchestrate complex interactions between devices and 3rd party data sources



Robust, enterprise grade security for safety and data protection

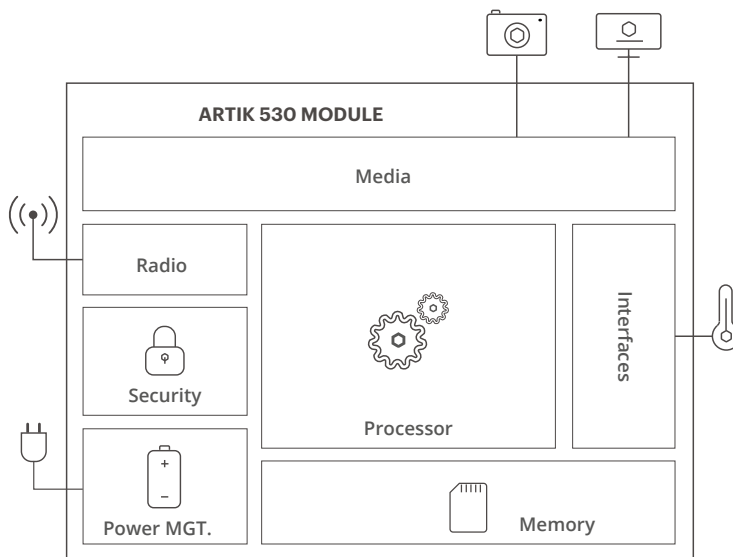
- Strong root of trust from Samsung PKI, mutual authentication to cloud
- Unique device certificate and key stored in tamper-resistant Secure Element; EAL Level 5+
- Secure boot validates software authenticity during power-up (s version)
- Trusted Execution Environment (TEE) for processing, storing and managing sensitive data (s version)
- Samsung KMS for simplified code signing (s version)
- Hardware crypto engine

Samsung ARTIK™ 530 Series System-on-Modules

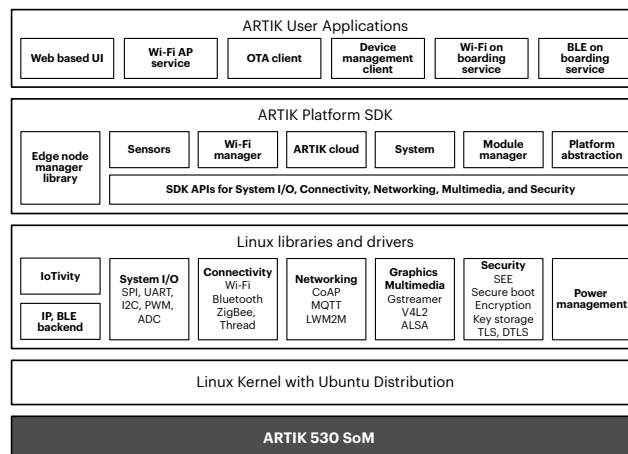
Samsung ARTIK 530 Series Module Features

Processor	
CPU	Quad Core ARM® Cortex® A9 with 32KB L Cache and 32KB D-Cache per core @ 1.2GHz Shared 1MB L2 Cache
GPU	3D Graphics Accelerator
Memory	
DRAM	512MB DDR3 / 1GB DDR3
FLASH	4GB eMMC v4.5
Security	
Secure Element	Common Criteria EAL5 SE
Authentication	Unique Key and Certificate, PKI
Secure Storage	TrustZone Secured Flash Partition and Isolated Key Storage (s version)
Firmware Integrity	Secure Boot and Secure JTAG (s version)
Radio	
WLAN	IEEE 802.11a/b/g/n, dual band SISO
Bluetooth	4.2 (BLE + Classic)
802.15.4	ZigBee / Thread
Regulatory	FCC (U.S.), IC (Canada), CE (EU), KC (Korea), SRRC (China)
Media	
Camera I/F	4-Lane MIPI CSI up to 5M (1920x1080 @ 30fps)
Display	4-Lane MIPI DSI HDMI 1.4a (1920x1080p @ 60fps) LVDS (1280x720p @ 60fps)
Audio	Two I2S input/output channels
Interfaces	
Ethernet	10/100/1000 Base-T MAC (External PHY Required)
I/O	ADC, GPIO, HSIC, I2C, JTAG, SPI, USB Host, USB OTG
Operating System	
OS Support	Linux Ubuntu 16.04 LTS
Platform E2E Software	
Device Management	Edge Node Manager
Provisioning	BLE Onboarding
Firmware Updates	OTA Mechanism
Development	ARTIK SDK
Form Factor	
Dimensions	49mm W x 36mm H x 3.4mm D
Temperature	
530, 530s	-25 to 85 °C T _{case}
530s 1G	0 to 85 °C T _{case}

ARTIK 530 Series Module Block Diagram



ARTIK 530 Series Systems



*(s version)

530 Series Product Portfolio

	RAM	Security	Temperature	Pin Compatibility	Part Number	
					Module	Kit
530	512 MB	Secure Element	-25 to 85° C	530s, 530s-1G	SIP-005AFS301	SIP-KITNXD001
530s	512 MB	+ KMS, Secure Boot, TEE	-25 to 85° C	530, 530s-1G	SIP-005AFS302	SIP-KITNXD002
530s 1G	1 GB	+ KMS, Secure Boot, TEE	0 to 85° C	530, 530s	SIP-005CUS332	SIP-KITNXG002

Ordering Information

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

For product information, visit artik.io/modules/artik-530

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