



SAMSUNG  
**ARTIK**<sup>™</sup> Modules

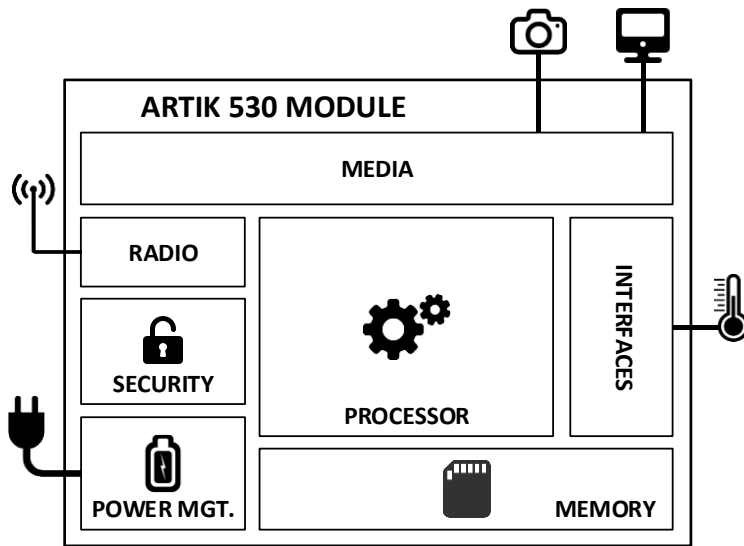
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530 Product Brief



Top View ARTIK 530 Module

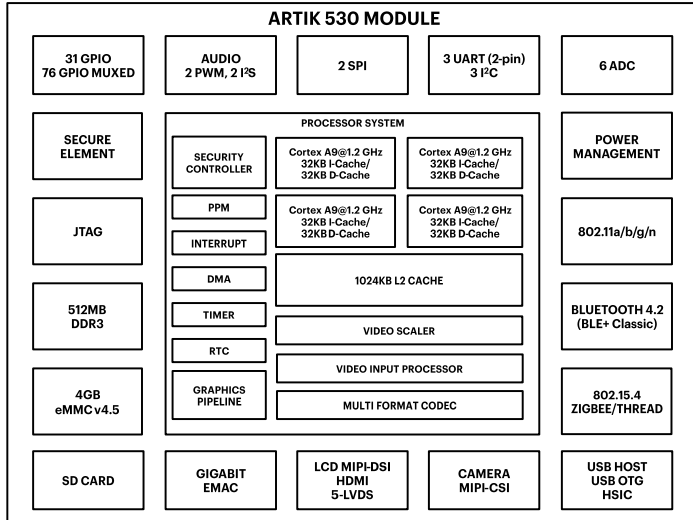
The Samsung ARTIK™ 530 Module is a highly-integrated System-in-Module that combines a quad core ARM® Cortex®-A9 processor packaged DRAM and Flash memories; a Secure Element; and a wide range of wireless communication options such as 802.11a/b/g/n, Bluetooth® 4.2 (BLE+Classic), and 802.15.4 for ZigBee®/Thread; all into one 49x36mm footprint. The many standard digital control interfaces support external sensors and higher-performance peripherals to expand the module’s capabilities. With the combination of 802.11, Bluetooth and ZigBee or Thread, the ARTIK 530 Module is the perfect choice for home automation and home hub devices, while also supporting a rich UI/UX capability for camera and display requirements. The inclusion of a hardware-based Secure Element provides end-to-end security.



ARTIK 530 Module Block Diagram

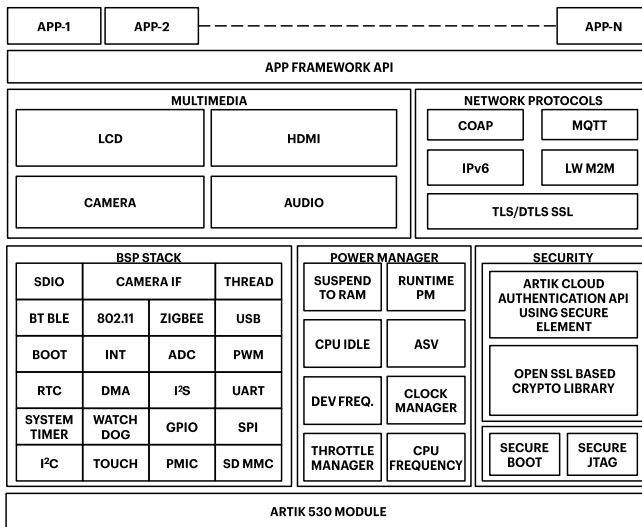
<b>Processor</b>	
CPU	Quad core ARM® Cortex® A9@1.2GHz
GPU	3D Graphics accelerator
<b>Media</b>	
Camera I/F	4-lane MIPI CSI up to 5M (1920x1080@30fps)
Display	4-lane MIPI DSI and HDMI1.4a (1920x1080p@60fps) or LVDS (1280x720p@60fps)
Audio	Two I²S audio input/output
<b>Memory</b>	
DRAM	512MB DDR3
FLASH	4GB eMMC v4.5
<b>Security</b>	
Secure Element	Secure point to point authentication and data transfer
<b>Radio</b>	
WLAN	IEEE 802.11a/b/g/n, dual band SISO
Bluetooth®	4.2 (BLE+Classic)
802.15.4	ZigBee® /Thread
<b>Power Management</b>	
PMIC	Provides all power of the ARTIK 530 Module using on board bucks and LDO's
<b>Interfaces</b>	
Ethernet	10/100/1000Base-T MAC (External PHY required)
Analog and Digital I/O	GPIO, UART, I²C, SPI, USB Host, USB OTG, HSIC, ADC, PWM, I²S, JTAG

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ARTIK 530 Module Sub System

<b>Processors</b>	<b>Quad core ARM® Cortex® A9@1.2GHz</b> <b>32KB I-Cache and 32KB D-Cache per core</b> <b>Shared 1MB L2 Cache</b> <b>Vector Floating Point Coprocessor</b> <b>GPU Coprocessor</b>
<b>Display/Camera</b>	<b>4-lane MIPI DSI up to FHD and 5-channel LVDS or HDMI1.4a</b> <b>4-lane MIPI CSI up to 5M</b>
<b>DMC</b>	<b>DDR3@800MHz</b>
<b>External Peripherals</b>	<b>Two SPI, three UART (2-pin), three I²C, two I²S, two PWM, six ADC, 31 GPIO (Dedicated), 76 GPIO (Multiplexed)</b>
<b>Multi Media</b>	<b>Multi Format Codec</b>
<b>High Speed Interfaces</b>	<b>1G MAC, USB Host, USB OTG, USB HSIC, SD/MMC</b>
<b>Security</b>	<b>Device authentication, secure boot and secure JTAG</b>



ARTIK 530 Module Software Stack

## ARTIK 530 MODULE SECURITY FEATURES

Samsung considers world class security one of the most important requirements when adding IoT nodes into the cloud. As such Samsung builds its ARTIK IoT platform with security in mind. To assure a secure environment for all IoT nodes, the ARTIK platform has dedicated security hardware and software components in place.

Every ARTIK 530 Module has the ability to authenticate its boot image using a secure hash and to execute a secure boot once the boot image has been authenticated. Secure communication and key management is facilitated by the Secure Element that is built into the ARTIK 530 Module.

The ARTIK 530 Module software stack facilitates total security starting from authenticated connection of the IoT Module into the cloud to secure communication and remote software updates.

Samsung's commitment to security gives developers the ability to create secure user experiences using the ARTIK 530 Module.

## ARTIK 530 MODULE ORDERING INFORMATION

For ordering, please contact a sales representative in your area or email [sales@artik.io](mailto:sales@artik.io).