Sitara™ processors + WiLink™ 8 connectivity solutions

TI provides Sitara™ processors and WiLink™ 8 Wi-Fi® + *Bluetooth*® combo connectivity modules that work together to create high-performance solutions for developers in streaming audio, industrial, medical and a wide variety of other applications.

Sitara processors key features

- Single and multicore Arm Cortex-A8, Cortex-A9, Cortex-A15, and Cortex-A53 offerings
- Performance options from 600 to up to 10,500 DMIPS
- Linux®, Android™, Windows® CE and RTOS
- Peripherals can include: PCIe, SATA, Gigabit Ethernet, USB 3.0, USB 2.0, DCAN, QSPI, UART, McASP, I²C and more

Texas Instruments (TI) continues to optimize and expand its portfolio of Sitara processor solutions for the embedded market. The Sitara AM57x processors include single- and multi-core Arm Cortex-A15 cores and extend performance by 280 percent compared to standard dual-core Arm Cortex-A9 processors found in the broad embedded market. These high-performance successors to the popular Sitara AM335x and AM437x platforms integrate additional features to support a variety of markets from human machine interface (HMI) to Internet of Things (IoT) gateways to industrial automation.

The TI WiLink 8 combo connectivity module family enables manufacturers to easily add fully integrated 2.4- and 5-GHz versions of Wi-Fi and dual-mode Bluetooth 4.2 solutions to embedded applications. WiLink 8 modules are well suited for power-optimized designs for home and building automation, smart energy, gateways, wireless audio, wearables and many more industrial and IoT applications. The WiLink 8 modules and software are both compatible and pre-integrated with a wide range of processors including TI's Sitara family of processors.

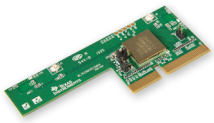
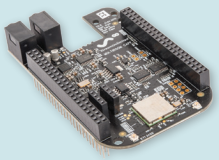
Benefits

The Sitara family of processors, together with WiLink 8 combo connectivity modules, is a game changer in the wireless industrial field as well as other applications. With the two devices combined, you get a high-performance platform enabling seamless cloud connectivity, high wireless throughput, integrated dual-mode Bluetooth and Wi-Fi connectivity and a unified programming experience to control the system.

WiLink 8 combo connectivity device features

- High-performance Wi-Fi
  - 802.11 a/b/g/n 2.4- and 5-GHz
  - Up to 100Mbps (UDP) of throughput
  - Station and access point
  - Wi-Fi direct, multi-channel multi-role
- Dual-mode Bluetooth on-chip (Bluetooth and Bluetooth low energy)
- Wi-Fi/Bluetooth single antenna co-existence
- Built-in power management
- Advanced low-power modes
- Host interfaces: SDIO for Wi-Fi and UART for Bluetooth
- Temperature ranges:
  - –20°C to +70°C
  - –40°C to +85°C
- Small form factor: 13.4 × 13.3 × 2mm

Development tools

Product Number	Description	Benefits	Availability
BeagleBone Black	BeagleBone Black is a low-cost, community-supported development platform based on Sitara AM335x processors for developers and hobbyists.	Boot Linux in under 10 seconds and get started on development in less than five minutes with just a single USB cable and extend the capabilities with a large portfolio of “Cape” plug-in boards.	**Authorized distributors**
WL1835MODCOM8 	The 2.4-GHz WL1835-based evaluation board is compatible with Sitara EVMs for AM335x, AM4x, AM5x, and AM6x as well as several other TI EVMs and reference designs.	The TI WiLink COM8 module for Wi-Fi and Bluetooth / Bluetooth low energy connectivity, provides a fast connectivity ramp with software, collateral and reference applications available from TI. The COM8 board can easily plug into the Sitara processor EVM boards.	**TI store** and authorized distributors
WL1837MOD Cape 	The WiLink 8 WL1837MOD audio cape used with BeagleBone Black is a best-in-class audio solution, featuring ultra-precise audio synchronization, multi-room capabilities, support for online music services, UPnP and more. The design is also Apple AirPlay® certifiable and supports Google Cast™ audio.	WiLink 8 cape paired with BeagleBone Black enables rapid software development through pluggable hardware and open source community.	**Authorized distributors**
WL1837MODCOM8	The 5-GHz WL1837-based evaluation board is compatible with Sitara EVMs for AM335x, AM4x, AM5x, and AM6x as well as several other TI EVMs and reference designs.	The TI WiLink COM8 module for Wi-Fi and Bluetooth / Bluetooth low energy connectivity, provides a fast connectivity ramp with software, collateral and reference applications available from TI. The COM8 board can easily plug into the Sitara processor EVM boards.	**TI store** and authorized distributors

Learn how to get started with WiLink 8 on any Sitara processor **here**.

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