WiLink™ 7.0 single-chip WLAN, GPS, *Bluetooth*® and FM solution

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Product Bulletin

### WiLink™ 7.0 single-chip connectivity solution

The WiLink™ 7.0 solution from TI is the first complete hardware and software solution to offer proven, carrier-quality mobile WLAN (mWLAN); global positioning satellite (GPS); *Bluetooth*®; and FM transmit/receive cores integrated into a single chip.

This seventh-generation chip further extends the capabilities of the WiLink product family to include GPS location functions. Although the cores offer robust performance individually, the WiLink 7.0 platform integrates the cores into a single-chip solution, eliminating coexistence issues and saving mobile-device manufacturers design time and system cost.

New and robust user experiences will be realized with the WiLink 7.0 solution. TI's WiLink 7.0 platform supports the simultaneous operation of the WLAN, GPS, *Bluetooth*, BLE, ANT and FM radio to allow countless connectivity combinations and enable the ultimate user experience. For example, mobile-device users could determine their current position with GPS, download a related map over a WLAN connection, and listen to an FM radio station over a *Bluetooth* headset all at the same time. This is just one example of the many multitasking opportunities the WiLink 7.0 solution enables for users.

Key benefits

- Industry's first true single-chip mobile WLAN, GPS, Bluetooth®, BLE, ANT and FM transmit/receive solution.
- Implemented in 65-nm CMOS process, enabling:
  - Total bill-of-materials (BOM) reduction by sharing passive components between connectivity technologies.
  - 50 percent smaller form factor than solution using the WiLink™ 6.0 solution and separate GPS chip.
- Proven carrier-quality connectivity technologies to enhance the user experience, with range-extended mobile WLAN (mWLAN) (802.11a/b/g/n), *Bluetooth* specification 3.0, FM functional cores and enhanced GPS tracking.
  - Supports *Bluetooth* low energy technology
  - Extensible to the upcoming WiFi direct specification
- Sophisticated Enhanced Low Power (ELP) technology from TI and Voice over WLAN (VoWLAN) support, with on-chip Unlicensed Mobile Access (UMA) and IP Multimedia Subsystem (IMS) acceleration for extended talk time and battery life.
- Optimized RF coexistence for simultaneous operation of each integrated connectivity function.
- Offers full support for Cisco Compatible Extensions (CCX)
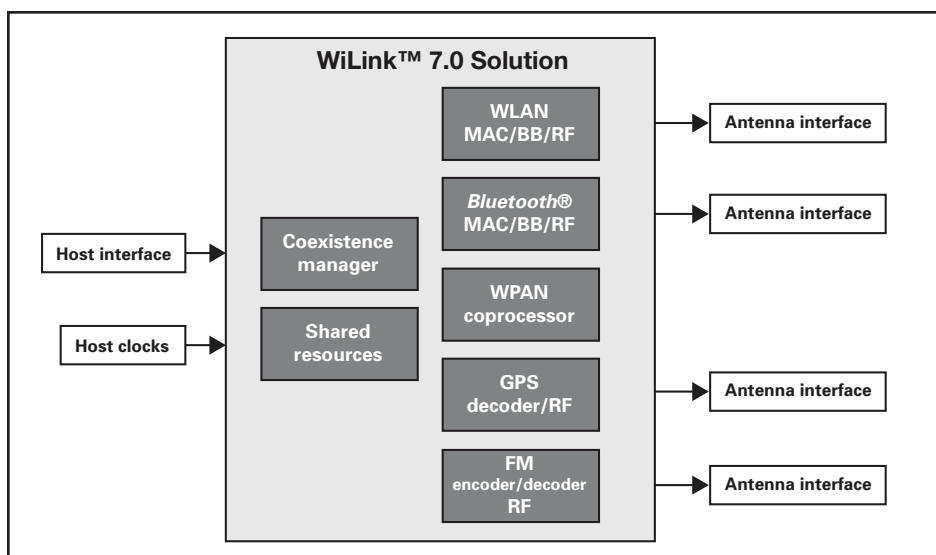
▲ *WiLink 7.0 solution*

Bringing connectivity features previously found only in high-end devices to the mainstream, the WiLink 7.0 solution helps mobile-device manufactures quickly and seamlessly bring high-demand connectivity technologies into mainstream products. These include smart phones, mobile Internet devices (MIDs), portable media players (PMPs), gaming devices and personal navigation devices (PNDs).

The WiLink 7.0 single-chip solution is manu-factured in a 65-nm CMOS process to meet the low-power, small-form-factor and low-cost requirements of mobile-device manufacturers. The single-chip implementation reduces OEM product design risk and time to market by solving RF coexistence problems on-chip.

TI's WiLink 7.0 platform is designed to work with a variety of processors, including TI's OMAP™ applications processor family.

WiLink 7.0 solution lowers risk with market proven cores

Built upon seven generations of proven technologies and legacy software resulting in shipments of more than 400-million units to top OEMS worldwide, this single-chip solution further extends TI's heritage of bringing technologies previously seen in high-end devices to the mass market.

WiLink 7.0 solution mitigates coexistence challenges

As more radios are added to mobile devices, RF coexistence performance is increasingly important. The WiLink 7.0 solution includes TI's proven, robust coexistence platform, which addresses system-wide interference issues that impact radio designs and hardware/software solutions.

TI leads the market in coexistence solutions for *Bluetooth* and mWLAN technologies, with more than 30 mobile devices currently using TI's coexistence technology. TI's WiLink 7.0 solution eliminates the need for time-consuming coexistence debugging to ease the integration process and seamlessly bring the solution to new product designs.

WiLink 7.0 software development kit

The WiLink 7.0 software development kit (SDK) included with the WiLink 7.0 platform is optimized for mobile-device applications and will help speed device manufacturers' design cycle times. The WiLink 7.0 SDK includes support for Linux®, Windows® WinCE™ and Symbian™ operating systems, as well as lab testing and manufacturing software. It is partitioned to minimize host CPU loading and power consumption in mobile applications.

For more information
www.ti.com/wilink7-pb

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