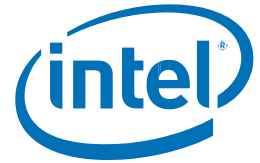




PRODUCT BRIEF
Intel® Wireless-AC 8x70
 Wi-Fi 802.11ac, 2x2 Dual Band / Bluetooth® 4.1 / FM Radio



Intel® Wireless-AC 8x70



Ultra Wi-Fi. Ultra Features. Ultra Connected Experience.

Intel® Wireless-AC 8x70 (WCS8x70) is the industry's first 28nm wireless connectivity combo product. Designed especially for smartphones, tablets and phablets, it combines WLAN 802.11ac 2x2 MIMO (1x1 option available) with Bluetooth and FM Radio on a single chip. Delivering data speeds of up to 700 Mbps, the product's high integration, low power consumption and leading wireless coexistence capabilities enables compact mobile device designs without compromising on user experience, battery life and total size.

Wireless Combo for Mobile Devices

	802.11ac MIMO for Better Performance, Coverage and Range	Features dual band, MIMO 11agn+ac fully integrated front end, as well as support for an external front end for extended range and transmit power.
	Bluetooth® 4.1 Smart Ready	Dual-mode Bluetooth® 4.1 Supports Android 5.x and Windows 10 required features. Interoperable with devices such as fitness sensors, smart home sensors and controllers, as well as legacy products, such as headsets, car kits, and audio speakers.
	FM Radio	Worldwide FM band compatible receiver for high-fidelity, stereo-broadcasted audio and RDS/RDBS data.

Product Features

	Leading-edge Performance and Advanced Features	<ul style="list-style-type: none"> • Ultra-low power consumption • Up to 700 Mbps¹ usable throughput over PCIe (802.11ac, 2x2, dual band, 80MHz) with support for Miracast™ and Intel® Wireless Display² • Concurrent network and P2P connectivity in the same or different channel • Wi-Fi indoor location support: RSSI, RTT and Time Of Flight (ToF) for enhanced accuracy • Central and peripheral BLE roles
	Pre-Integrated with Intel Platforms for Fast Time to Market	<ul style="list-style-type: none"> • Pre-integrated with Intel XMM™ 726x & XMM 7360 modems and Intel® Atom™ processor platforms • Built-in Wi-Fi/Bluetooth and LTE radio coexistence features beyond industry (SIG) standards • Supports Intel's unique LTE/Wi-Fi antenna sharing (2x2 configuration)
	High Integration for Compact Design and Lower Cost	<ul style="list-style-type: none"> • 28nm process node • Small board area and extremely low component count • High integration of dual-band front end • Directly connected to mobile device battery
	OEM Design Flexibility	<ul style="list-style-type: none"> • Pin-compatible 2x2 or 1x1 SKU options • Selectable PCIe and SDIOv3 Wi-Fi host interfaces • UART and USB Bluetooth interface options • Form factor flexibility: available in two package options for different PCB types, and in an M.2 1216 certified module • Android 5.x and Windows 10 support • Dynamic regulatory support for soft SKU and lower inventory complexity and cost

Intel® Dual Band Wireless-AC 8x70 Technical Specifications

Packaging Options

FCBGA208
FCBGA121
1216 M.2

Operating System

Android 5.x
Microsoft Windows 10*

Connectivity Features:

WLAN

WFA Core certification	802.11 a/b/g/n/ac, WPA2 Personal/Enterprise, Wi-Fi Direct, WPS2 and more
WLAN MIMO # of chains (antennas)	2 SKU: 2x2 and 1x1
Interfaces	SDIO V3 SDR104, LP-PCIe Rev2.1 Gen1
RF Band Support	Switchable 2.4GHz & 5GHz , Dual band
Bandwidth support	20/40/80 MHz
WFA QOS	WMM, WMM-PS
Wi-Fi Display	Miracast 802.11ac and Intel Wireless Display
Cellular/Wi-Fi Interworking	Passpoint 2.0
Indoor Location	IEEE 802.11mc FTM (Fine Time Measurement), RTT, RSSI

Bluetooth*

Bluetooth core	4.1
Bluetooth Features	BR/EDR Secure Connections, LE Dual Mode Topology, LE Link Layer Topology, Low Duty Cycle Directed Advertising, Train Nudging, Generalized Interlaced Scan, and more
Embedded Codec (Host offload)	A2DP (Embedded SBC and aptX), HFP (CVSD and mSBC).

FM Radio

FM Features	FM Stereo High-Fidelity Receiver, Data: RDS/RDBS, World Band support
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Product Name	Model Number	Version
Intel® Wireless-AC 8x70	WCS8270	802.11ac, 2x2, Bluetooth 4.1, FM
	WCS8170	802.11ac, 1x1, Bluetooth 4.1, FM



For more information on Intel® Wireless products, visit intel.com/wireless

¹ Based on actual product benchmark performance. Theoretical maximum bandwidth enabled by 2x2 802.11ac implementations is 867 Mbps PHY rate.

² Intel® Wireless Display requires an Intel® Wireless Display enabled PC, tablet, or smartphone, a compatible adapter, and a TV. 1080p and Blu-Ray® or other protected content playback only available on select Intel® processors with built-in visuals enabled. Consult your PC, tablet or smartphone manufacturer. For more information, see www.intel.com/go/widi

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