

CSR Wireless Products
Bluetooth® ICs



The BlueCore™ line of Bluetooth products from CSR integrate a microcontroller along with peripherals to match your application requirements. Variants are available with integrated ROM or flash. Multimedia versions with integrated DSP and stereo codec, or Plug-n-Go™ with integrated balun, filter and matching. **BlueCore3:** CSR's complete v1.2 Bluetooth solution including eSCO (extended Synchronous Connections), which allows for retransmissions of dropped packets, allowing for a clearer, better sound out of your Bluetooth device. **BlueCore4:** CSR's EDR (Enhanced Data Rate) v2.0 Bluetooth solution, it

offers backwards compatibility with v1.1 and v1.2 Bluetooth devices. External Flash, ROM, Plug-n-Go and Headset versions are available to match your application. Offers up to 3 times the data rate as previous versions of Bluetooth with lower power consumption. **BlueCore5:** Series offers the latest generation technology, offering compatibility with the latest Bluetooth specification, v2.1. **BlueCore 6:** Series provides the AuriStream audio interface, which provides significant power saving over previous CVSD (Continuous Variable Slope Delta)

Integration Type	Flash (Mbits)	ROM (Mbits)	On-Chip Codec	Features/Operating Voltage	Package	Digi-Key Part No.	Cut Tape Price Each	T & Rf Pricing 2,000	CSR Part No.		
BlueCore3											
ROM	—	4	No/PCM Interface	Dual UART Ports, Self Test/1.8V	42-CSP	BC313141A18-IXF-E4CT-ND	5.60	5.41	4.83	2481.59/M	BC313141A18-IXF-E4
ROM	—	4	No/PCM Interface	USB, Self Test/1.8V DSP Co-Processor.	84-VFBGA	BC313143A18-IRK-E4CT-ND	6.21	6.00	5.36	2787.39/M	BC313143A18-IRK-E4
Multimedia, External Flash	—	—	16-Bit Stereo Audio	Dual UART, Scatnetnet/1.8V	120-VFBGA	BC352239A-IVQ-E4CT-ND	13.10	12.65	11.30	—	BC352239A-IVQ-E4
Multimedia, Plug-n-Go	8	—	16-Bit Stereo Audio	DSP Co-Processor, Dual UART, Scatnetnet, Regulator/1.8V	96-LFBGA	BC358239A-INN-E4CT-ND	24.36	23.52	21.00	14701.38/M	BC358239A-INN-E4
Audio Flash	6	—	15-Bit Linear Audio	UART, Scatnetnet, On-Chip Regulator and Battery Charger/1.8V	96-TFBGA	BC31A223A-IVN-E4CT-ND	16.57	16.01	14.29	—	BC31A223A-IVN-E4
BlueCore4											
ROM	—	4	—	BT v2.1 + EDR, On-Chip Regulator, Wi-Fi Coexistence/1.8V	47-WLCSP	BC0401PC08-ICXB-RCT-ND NEW!	5.56	5.37	4.80	3363.68/M	BC0401PC08-ICXB-R
External Flash	—	—	No/PCM Interface	Dual UART Ports, USB, Scatnetnet, Regulator, Wi-Fi Coexistence/1.8V	96-TFBGA	BC417143B-IQN-E4CT-ND	6.17	5.97	5.33	2775.63/M	BC417143B-IQN-E4
External Flash	—	—	No/PCM Interface	Dual UART Ports, USB, Scatnetnet, Regulator, Wi-Fi Coexistence/1.8V	96-TFBGA	BC417143B-IRN-E4CT-ND	6.17	5.97	5.33	2775.63/M	BC417143B-IRN-E4
ROM	—	4	No/PCM Interface	Dual UART Ports, USB, Scatnetnet, Regulator, Wi-Fi Coexistence/1.8V	84-VFBGA	BC418143A06-IRK-E4CT-ND	6.14	5.93	5.30	2752.10/M	BC418143A06-IRK-E4
ROM	—	4	No/PCM Interface	USB, UART, Scatnetnet, Regulator, Wi-Fi Coexistence/1.8V	47-CSP	BC418143A06-IXB-E4CT-ND	5.53	5.34	4.77	2481.59/M	BC418143A06-IXB-E4
Flash, Plug-n-Go	8	—	PCM Interface	Dual UART Ports/1.8V	96-LFBGA	BC419143B-ANN-E4CT-ND	22.96	22.17	19.79	10290.98/M	BC419143B-ANN-E4
ROM, Plug-n-Go	—	4	PCM Interface	Dual UART Ports/1.8V	96-LFBGA	BC418143A06-ANN-E4CT-ND	13.34	12.88	11.50	5986.40/M	BC418143A06-ANN-E4
ROM, Plug-n-Go	8	4	PCM Interface	USB and Dual UART Ports up to 3Mbps/1.8V	84-VFBGA	BC418143A07-ANN-E4CT-ND NEW!	13.10	12.65	11.30	5868.80/M	BC418143A07-ANN-E4
Headset	—	6	15-Bit Linear Audio	UART, Regulator, Battery Charger/1.8V	96-TFBGA	BC413159A06-IPK-E4CT-ND	12.48	12.06	10.77	—	BC413159A06-IPK-E4
Headset	—	6	15-Bit Linear Audio	USB, UART, Regulator/1.8V	56-QFN	BC413159A11-IOA-E4CT-ND	5.53	5.34	4.77	2481.59/M	BC413159A11-IOA-E4
Audio ROM	6	—	15-Bit Linear Audio	UART, Regulator/1.8V	96-TFBGA	BC413159B10-IPK-E4CT-ND	7.57	7.32	6.53	3398.95/M	BC413159B10-IPK-E4
Audio Flash	6	—	15-Bit Linear Audio	UART, LED Driver, Regulator, Battery Charger/1.8V	96-TFBGA	BC41C671A-IPK-E4CT-ND	11.67	11.27	10.06	5233.69/M	BC41C671A-IPK-E4
BlueCore5											
Multimedia, External Flash	—	—	16-Bit Stereo Audio	USB, UART, Regulator, Battery Charger/1.5V	169-TFBGA	BC57E687B-ITB-E4CT-ND	14.13	13.64	12.18	8526.81/M	BC57E687B-ITB-E4
Multimedia, External Flash	—	—	16-Bit Stereo Audio	USB, I2C, UART, Regulator, Battery Charger/1.5V	169-TFBGA	BC57E687C-GITB-E4CT-ND NEW!	13.37	12.91	11.53	5998.16/M	BC57E687C-GITB-E4
ROM HCI, FM	—	6	No/PCM Interface	FM Radio, v2.1+ EDR, Dual UART up to 4Mbps	84-VFBGA	BC51E130A14-IRK-E4CT-ND	7.99	7.71	6.89	3575.39/M	BC51E130A14-IRK-E4
ROM HCI, FM	—	6	No/PCM Interface	FM Radio, v2.1+ EDR, Dual UART up to 4Mbps	67-WLCSP	BC51E129B14-IYH-E4CT-ND	7.16	6.92	6.18	3210.78/M	BC51E129B14-IYH-E4
Multimedia ROM	—	8	16-Bit Stereo Audio	DSP Co-Processor, v2.1+ EDR, Dual UART ports up to 4Mbps	68-QFN	BC57F687A04-IQF-E4CT-ND	11.33	10.94	9.77	5080.78/M	BC57F687A04-IQF-E4
Multimedia ROM	—	8	16-Bit Stereo Audio	A2DP1.2 and AVRCP1.0 enabled w/ SBC encoder, DSP/1.5V and 1.8V	68-QFN	BC57F687A05-IQF-E4CT-ND NEW!	12.48	12.06	10.77	5598.30/M	BC57F687A05-IQF-E4
Multimedia Flash	8	—	16-Bit Stereo Audio	DSP Co-Processor, v2.1+ EDR, Dual UART ports up to 4Mbps and USB, I2C	120-LFBGA	BC57H687C-ITM-E4CT-ND	19.03	18.38	16.41	8526.78/M	BC57H687C-ITM-E4
Multimedia Flash	16	—	16-Bit Stereo Audio	DSP Co-Processor, v2.1+ EDR, Dual UART ports up to 4Mbps and USB, I2C	105-LFBGA	BC57G687C-INN-E4CT-ND	22.92	22.13	19.76	10279.24/M	BC57G687C-INN-E4
BlueCore6											
ROM	—	6	AuriStream 16-Bit	v2.1 + EDR, Piconet, Scatnetnet, UART Port to 4Mbaud, Regulator/1.5V and 1.8V	40-QFN	BC63B239A04-IQD-E4CT-ND NEW!	6.17	5.97	5.33	2775.63/M	BC63B239A04-IQD-E4
ROM	—	4	PCM Interface/AuriStream 16-Bit	SDIO/CSPI/UART Interface up to 4Mbaud	51-WLCSP	BC63B239A04-IUE-E4CT-ND	5.32	5.14	4.59	2387.50/M	BC63B239A04-IUE-E4
Audio ROM	—	6	AuriStream 16-Bit	Internal Regulator, Battery Charger, External CODEC Support	48-QFN	BC63C159A03-IQB-E4CT-ND	7.23	6.99	6.24	3246.07/M	BC63C159A03-IQB-E4
					64-BGA	BC63C159A03-GIVA-E4CT-ND	7.99	7.71	6.89	3514.27/M	BC63C159A03-GIVA-E4

† For Tape and Reel part number, change CT-ND to TR-ND.

Bluetooth® Application Development Kits and Reference Design Kits

CSR Bluetooth Development Kits and Reference Design Kits provide hardware to evaluate many different application possibilities and give you the opportunity to develop with different BlueCore™ devices. SYS Kits provide components with Bluetooth application profile(s) along with CD with PSKEY editing software.

BTN-001A-ND	BlueTunes1 Development Kit for Wireless Stereo Audio, BlueCore3 Multimedia	\$588.06
BTN-001B-ND	NEW! BlueTunes1 Development Kit for Headset/Speaker — RoHS Compliant	\$588.06
BTN-002-2B-ND	BlueTunes2 Development Kit for Wireless Stereo Audio, BlueCore5 Multimedia	\$1176.11
BTN-003-1A-ND	NEW! BlueTunes ROM Stereo Headset Solution Development Kit — RoHS Compliant	\$588.06
DEV-SYS-1645B3-1A-ND	BC5-MM Development Board only, BlueTunes2 — RoHS Compliant	\$470.44
BV-001-3A-ND	BlueVox Development Board, Wireless Audio (Mono) — RoHS Compliant	\$588.06
BV-001-4A-ND	BlueVox Development Board Wireless Audio (Mono), for BlueVox QFN — RoHS Compliant	\$588.06
BV-003-1A-ND	NEW! BlueVoxDSP Development Kit	\$588.06
DEV-SYS-1487-1B-ND	USB Dongle Bluetooth EDR Reference Design, Nanosira, BlueCore4 External — RoHS Compliant	\$117.61
DEV-SYS-1504-1A-ND	UART and SPI Level Shifter Interface Board for UniFi or BlueCore	\$352.83
DEV-RR-001-1A-ND	RoadRunner Plug-n-Talk Reference Design Hardware, vehicle plug in for hands-free evaluation	\$1176.11
DEV-RR-SDK-01A-ND	RoadRunner Plug-n-Talk Software Development Kit	\$1176.11
DEV-PC-0119-1C-ND	NEW! BlueVoxDSP Example Design Board — RoHS Compliant	\$117.61
DEV-PC-0123-1C-ND	NEW! BlueVox2 Example Design Board — RoHS Compliant	\$110.26
DEV-PC-1309C-ND	UART and SPI Interface Board for BlueCore, Board Only — RoHS Compliant	\$110.26
DEV-PC-1546B-2A-ND	NEW! BC3-MM Music Voice Dongle — RoHS Compliant	\$110.26
DEV-PC-1833-4A-ND	NEW! BlueVox DSP Development Board — RoHS Compliant	\$235.22
DEV-PC-1888-2A-ND	NEW! BlueVox2 Development Board — RoHS Compliant	\$220.52
DEV-SYS-1309-1C-ND	UART and SPI Interface Board with Cables for BlueCore — RoHS Compliant	\$110.26
DEV-MP3-1A-ND	BluePlayer MP3 Development Kit — RoHS Compliant	\$1470.14

DEV-SYS-RADIOPRO-1A-ND	RadioPro Development Kit, Wireless Internet Radio — RoHS Compliant	\$3522.45
DEV-SYS-1808-1A-ND	USB to SPI Interface Converter — RoHS Compliant	\$248.45
DEV-SYS-1519-1B-ND	Reference Design Kit, BC4-ROM A07 Module — RoHS Compliant	\$294.03
DEV-SYS-0101-1B-ND	BC5-FM Development Kit — RoHS Compliant	\$294.03
DEV-SYS-0114-1A-ND	BC6-ROM Development Kit — RoHS Compliant	\$294.03
DEV-SYS-0115-1A-ND	BC6-ROM QFN Development Kit — RoHS Compliant	\$294.03
DEV-SYS-MONOHS-1A//ND	BC5-MM Dual Microphone Headset Development Kit — RoHS Compliant	\$588.06
DEV-SYS-1455-2A-ND	TrueTest Development Kit — RoHS Compliant	\$3457.76

Bluetooth® Development Tools Casira™

The Casira Development Kit allows for the development and testing of your Bluetooth design. This kit includes: 2 Casira development pods (each pod includes a BlueCore™ based module), power supplies and cords, programming and RS232 cables, 2 headsets and a CD with documentation and BlueSuite Software. BlueSuite includes drivers to communicate with the BlueCore devices at the HCI and RFCOMM layers, and programs such as BlueChat for establishing a data or voice link, and BlueTest which can be used to put the BlueCore device into test modes for radio development and qualification. BlueSuite also provides a Flash ROM loader and Device Firmware upgrade Wizard.

BCES01-ND	Bluetooth Development Kit	\$3528.33
BCES01-EP-ND	Casira End Point (Development Pod) — RoHS Compliant	\$823.28
ANT001-ND	Antenna for Casira Module	\$21.48
CK001-ND	Connector Kit (as fitted to Casira Motherboard)	\$28.93
CK003-ND	Parallel-RJ45+ Cable (XSPI + SPI Cable) — RoHS Compliant	\$30.87
STK-417143B-1B-ND	Module (2) for Casira Development Kit — RoHS Compliant	\$294.03

BlueLab™ SDK

The BlueLab SDK (Software Development Kit) provides developers with a graphical user interface to develop their Bluetooth application on the microcontroller that is on the BlueCore™ devices, providing for applications without a separate host processor. The xIDE development environment provides a Project Manager Interface to make development easier. BlueLab also provides source codes for several Bluetooth application profiles: SPP (Serial Port Profile), DUN (Dial-Up Networking), HID (Human Interface Devices), A2DP (Advanced Audio Distribution Profile), AVRCP (Audio Video Remote Control Profile) and others.

BLABSUP001-ND	Upgrade to BlueLab 3.x	\$588.06
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Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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