Texas Instruments

Bluetooth SIG

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BDE Technology

Enabling Green Wireless IoT

Product Catalog - Wireless Modules

Module	Part Number	Chip	Connectivity	Industrial Grade Operation Temp.	Dimension	Current Consumption	Range	Antenna	Comments
Bluetooth/Wi-Fi Combo									
	BDE-BW2837	WL1837	Wi-Fi 5GHz/2.4GHz dual-band, BR/EDR/BLE Dual-Mode BT5.1	NO -40 ℃ ~ 85℃	13.3mm x 13.4mm x 2mm	510mA@WiFiTx@2.4GHz TX 20 M MIMO MCS15 329mA@WiFi@5GHz TX 20 M SISO 54 OFDM	800m+/ Wi-Fi 200m+ /BT	PAD	pin-to-pin compatible w/ TI WL1837MOD, WL1807MOD
	BDE-BW20C	CC3235 + CC2652P	Wi-Fi 5GHz/2.4GHz dual-band and BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	29mm x 29mm x 2.3mm	WiFi: 272mA@2.4GHz,16dBm@1DSSS 318mA@5GHz:,15.1dBm@6OFDM BLE/ZigBee: 0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm 22mA @ TX @ 10dBm 85mA @ TX @ 20dBm	800m+/ Wi-Fi 200m+ /BT	Chip antenna/ UFL connector	
Wi-Fi									
	WF3235SFN32	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3235SFN0	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3235SFA32	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS

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	WF3235SFAU32	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3235SFA0	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3235SFAU0	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3235SN32	CC3235S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3235SA32	CC3235S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3235SAU32	CC3235S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3230SFN32	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF

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	WF3230SFN0	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3230SFA32	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3230SFAU32	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3230SFA0	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3230SFAU0	CC3230SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3220SN32	CC3220S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3220SA32	CC3220S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS

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	WF3220SAU32	CC3220S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3135N	CC3135	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	17.5mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PAD	WF3235SFN32, WF3235SFN0, WF3235SN32, WF3230SFN32, WF3230SFN0, WF3230SN32, WF3135N are pin-to-pin compatible w/ TI CC3135MOD, CC3235MODS, CC3235MODSF
	WF3135A	CC3135	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	PCB antenna	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
	WF3135AU	CC3135	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.4mm	RX traffic (MCU active): 59 mA TX traffic (MCU active): 223 mA	800m+	UFL connector	WF3235SFA32, WF3235SFAU32, WF3235SFA0, WF3235SFAU0, WF3235SA32, WF3235SAU32, WF3230SFA32, WF3230SFAU32, WF3230SFA0, WF3230SFAU0, WF3230SA32, WF3230SAU32, WF3135A, Wf3135AU are pin-to-pin compatible w/ TI CC3235MODASF, CC3235MODAS
Bluetooth Dual Mode									
	BDE-BDM209A	MSP432+ CC2564C	Bluetooth 5.2 BR/EDR & BLE Dual Mode	NO -40 ℃ ~ 85℃	12mm x 22mm x 2.15mm	MCU W/ BT Shutdown -Active: 80 µA/MHz -Low-frequency active: 83 µA at 128 kHz -LPM4.5: 25 Na 41.2mA@EDRfullthrpt 114uA@BLE Adv 169uA@BLEConnectd	200m+	Chip antenna/ UFL connector	
	BD2564CA	CC2564C	Bluetooth 5.2 BR/EDR & BLE Dual Mode	NO -40 ℃ ~ 85℃	7mm x 14mm x 1.55 mm	MCU W/ BT Shutdown -Active: 80 µA/MHz -Low-frequency active: 83 µA at 128 kHz -LPM4.5: 25 Na 41.2mA@EDRfullthrpt 114uA@BLE Adv 169uA@BLEConnectd	200m+	Chip antenna/ UFL connector	pin-to-pin compatible w/ TI CC2564MODA
	BD2564CN	CC2564C	Bluetooth 5.2 BR/EDR & BLE Dual Mode	NO -40 ℃ ~ 85℃	7mm x 7mm x 1.55 mm	MCU W/ BT Shutdown -Active: 80 µA/MHz -Low-frequency active: 83 µA at 128 kHz -LPM4.5: 25 Na 41.2mA@EDRfullthrpt 114uA@BLE Adv 169uA@BLEConnectd	200m+	PAD	pin-to-pin compatible w/ TI CC2564MODN

Multi-Band									
	BDE-RFM208P-S1	CC1352P1F3RGZ	2.4G/Sub-1G BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	29.86mm x 19.98mm x 2.15mm	0.84uA @ Standby 5.8mA @ RX 8.0mA @ TX @ 0dBm 63mA @ TX @ 20dBm (3.3V, 868MHz) 85mA @ TX @ 20dBm (3.0V, 2.4G)	2000m+	2.4G: PCB antenna or UFL; Sub1G: UFL	PA on Sub1G 20dBm Sub1G Tx 5dBM 2.4G Tx; BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM208P-2.4	CC1352P1F3RGZ	2.4G/Sub-1G BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	29.86mm x 19.98mm x 2.15mm	0.84uA @ Standby 5.8mA @ RX 8.0mA @ TX @ 0dBm 63mA @ TX @ 20dBm (3.3V, 868MHz) 85mA @ TX @ 20dBm (3.0V, 2.4G)	2000m+	2.4G: PCB antenna or UFL; Sub1G: UFL	PA on 2.4G 19.5dBm 2.4G Tx 12dBm Sub1G Tx; BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM208-IN	CC1352R1F3RGZ	2.4G/Sub-1G BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	YES -40 ℃ ~ 105℃, Long life, Low error rate	29.86mm x 19.98mm x 2.15mm	0.84uA @ Standby 5.8mA @ RX 8.0mA @ TX @ 0dBm 24.9mA @ TX @ 14dBm	1000m+	PCB antenna/ UFL connector	BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM208	CC1352R1F3RGZ	2.4G/Sub-1G BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	29.86mm x 19.98mm x 2.15mm	0.84uA @ Standby 5.8mA @ RX 8.0mA @ TX @ 0dBm 24.9mA @ TX @ 14dBm	1000m+	PCB antenna/ UFL connector	BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
Multi-Protocol (BLE/Zigbee/Thread…)									
	BDE-RFM207P	CC2652P1FRGZR	BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	29.86mm x 19.98mm x 2.15mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm 22mA @ TX @ 10dBm 85mA @ TX @ 20dBm	200m+	PCB antenna	PA version 20dBm Tx power BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM207-IN	CC2652R1FRGZ	BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	YES -40 ℃ ~ 105℃, Long life, Low error rate	22.95mm x 15mm x 2.2mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible

	BDE-RFM207	CC2652R1FRGZ	BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	22.95mm x 15mm x 2.2mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible
	BDE-RFM207B	CC2652RB1FRGZR	BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	22.95mm x 15mm x 2.2mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible
	MP2652RSIPA	CC2652R	BLE 5.2/ Zigbee/ Thread/ IEEE802.15.4/ 6LoWPAN/ Wi-SUN, etc.	NO -40 ℃ ~ 85℃	15 mm x 12.9 mm x 2.2 mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm	200m	Chip antenna	
Bluetooth Low Energy									
	LE2640R2FA0	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2FA4	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2FA8	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2FAU0	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	UFL connector	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible

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	LE2640R2FAU4	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	UFL connector	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2FAU8	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	UFL connector	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2FN0	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	LE2640R2FN4	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	LE2640R2FN8	CC2640R2F	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	LE2640R2LA0	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2LA4	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible
	LE2640R2LA8	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	16.9mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	Chip antenna	LE2640R2FA0, LE2640R2FA4, LE2640R2FA8, LE2640R2FAU0, LE2640R2FAU4, LE2640R2FAU8, LE2640R2LA0, LE2640R2LA4, LE2640R2LA8, LE2640R2LAU0, LE2640R2LAU4, LE2640R2LAU8 are pin-to-pin compatible

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	LE2640R2LN0	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	LE2640R2LN4	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	LE2640R2LN8	CC2640R2L	BLE 5.1	NO -40 ℃ ~ 85℃	11.6mm x 11mm x 2.1mm (With Shielding)	Shutdown: 100nA (Wake up on external events) Standby: 1.5uA (RTC running and RAM/CPU retention)	100m	PAD	LE2640R2FN0, LE2640R2FN4, LE2640R2FN8, LE2640R2LN0, LE2640R2LN4, LE2640R2LN8 are pin-to-pin compatible
	BDE-USB205	CC2642R1FRGZ	BLE 5.2/ USB2.0	NO -40 ℃ ~ 85℃	60mm x 24mm x 9mm	0.95uA @ Standby 6.9mA @ RX 7.4mA @ TX @ 0dBm 9.7mA @ TX @ 5dBm	150m	PCB antenna	USB dongle
	BDE-BLEM205-IN	CC2642R1FRGZ	BLE 5.2	YES -40 ℃ ~ 105℃, Long life, Low error rate	22.95mm x 15mm x 2.2mm	0.95uA @ Standby 6.9mA @ RX 7.4mA @ TX @ 0dBm 9.7mA @ TX @ 5dBm	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible
	BDE-BLEM205	CC2642R1FRGZ	BLE 5.2	NO -40 ℃ ~ 85℃	22.95mm x 15mm x 2.2mm	0.95uA @ Standby 6.9mA @ RX 7.4mA @ TX @ 0dBm 9.7mA @ TX @ 5dBm	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible
	BDE-BLEM205-Q1	CC2642R-Q1	BLE 5.1	NO -40 ℃ ~ 105℃	22.95mm × 15mm × 1.5mm	Shutdown: 150nA (Wake up on external events) Standby: 0.94uA (RTC running and RAM/CPU retention) RX current: 6.9mA TX current @ 0dBm: 7.3mA TX current @ 5dBm: 9.6mA	200m	PCB antenna	BDE-RFM207-IN, BDE-RFM207, BDE-RFM207B, BDE-BLEM205-IN, BDE-BLEM205, BDE-BLEM205-Q1 are pin-to-pin compatible
	BDE-BLEM203D	CC2640R2FRSM	BLE 5.1	NO -40 ℃ ~ 85℃	20.5mm x 13mm x 2.1mm	1.1uA @ Standby 5.9mA @ RX 6.1mA @ TX @ 0dBm 9.1mA @ TX @ 5dBm	250m	PCB antenna	

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	BDE-BLEM203P	CC2640R2FRSM	BLE 5.0	NO -40 ℃ ~ 85℃	16.55mm x 10.88 mm x 2.3mm (With Shielding)	Shutdown: 100nA 1.1uA @ Standby 5.9mA @ RX 6.1mA @ TX @ 0dBm 9.1mA @ TX @ 5dBm	250m	PCB antenna	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin2pin compatible
	BDE-BLEM201P	CC2541F256RHA	BLE 5.0	NO -40 ℃ ~ 85℃	16.55mm x 10.88mm x 2.2mm	1uA @ Standby 17.9mA @ RX 18.2mA @ TX @ 0dBm	50m	PCB antenna	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin2pin compatible
	BDE-BLEM201	CC2541	BLE 4.0	NO -40 ℃ ~ 85℃	16.55mm x 10.88mm x 1.5mm	23 GPIOs (21x4mA, 2x20mA)	100m	PCB antenna	
	BDE-BLEM202	CC2540	BLE 4.0	NO -40 ℃ ~ 85℃	25mm x 15mm x 2.2mm	Ultra low power consumption: 0.5uA@DeepSleepMode	100m	PCB antenna	
	BDE-USB201	CC2540F256RHA	BLE 5.0/ USB2.0	NO -40 ℃ ~ 85℃	22.6mm x 18.5mm x 7.7mm	1uA @ Standby 19.6mA @ RX 24mA @ TX @ -6dBm	10m	PCB antenna	USB dongle
	BDE-BLEM211	CC2541F256RHA	BLE 5.0	NO -40 ℃ ~ 85℃	11.61mm x 10.97m x 2.2mm	1uA @ Standby 17.9mA @ RX 18.2mA @ TX @ 0dBm	50m	Half-hole	
	BDE-BC001	CC2541F256RHA	BLE 4.0	NO -40 ℃ ~ 85℃	42.2mm x 28.3mm x 11mm	1s/35uA/210days 3s/13uA/564days 1s/65uA/113days 3s/20uA/367days	50m	PCB antenna	
	BDE-BC002	CC2640R2FRSM	BLE 5.0	NO -40 ℃ ~ 85℃	42.2mm x 28.3mm x 11mm	1s/22uA/333days 2s/12uA/611days 3s/9uA/814days 5s/5uA/1466days	200m	PCB antenna	
Sub1GHz									
	BDE-USB216	CC1312R1F3RGZ	Sub-1G/ USB2.0	NO -40 ℃ ~ 85℃	80mm x 32mm x 12mm	0.55uA @ Standby 5.8mA @ RX 24.9mA @ TX @ 14dBm	1000m+	FPC antenna	USB dongle
	BDE-RFM216-IN	CC1312R1F3RGZ	Sub-1G	YES -40 ℃ ~ 105℃, Long life, Low error rate	22mm x 15mm x 2.15mm	0.55uA @ Standby 5.8mA @ RX 24.9mA @ TX @ 14dBm	1000m+	UFL connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible
	BDE-RFM216	CC1312R1F3RGZ	Sub-1G	NO -40 ℃ ~ 85℃	22mm x 15mm x 2.15mm	0.55uA @ Standby 5.8mA @ RX 24.9mA @ TX @ 14dBm	1000m+	UFL connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible

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	BDE-RFM206	CC1312R1F3RGZ	Sub-1G	NO -40 ℃ ~ 85℃	25mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	PCB antenna	BDE-RFM206, BDE-RFM204A are pin-to-pin compatible
	BDE-RFM206-IN	CC1312R1F3RGZ	Sub-1G	YES -40 ℃ ~ 85℃	25mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	PCB antenna	BDE-RFM206, BDE-RFM204A are pin-to-pin compatible
	BDE-RFM204	CC1310F128RSM	Sub-1G	NO -40 ℃ ~ 85℃	20.5mm x 13mm x 2.1mm	0.7uA @ Standby 3mA @ RX 10mA @ TX @ 10dBm	1000m+	PCB antenna	
	BDE-RFM214	CC1310F128RSM	Sub-1G	NO -40 ℃ ~ 85℃	13mm x 13mm x 2.1mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	Half-hole	
	BDE-RFM204A	CC1310F128RGZ	Sub-1G	NO -40 ℃ ~ 85℃	25mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	PCB antenna/ UFL connector	BDE-RFM206, BDE-RFM204A are pin-to-pin compatible
	BDE-RFM214A	CC1310F128RGZ	Sub-1G	NO -40 ℃ ~ 85℃	22mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	Half-hole/ UFL connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible
Wireless Battery Management System (BMS)									
	BMS2662R-Q1	CC2662R-Q1	Wireless BMS	NO －40 °C to +105 °C	22.95mm x 15mm x 2.1 mm	0.94uA @ Standby 6.9mA @ RX 7.3mA @ TX @ 0dBm 9.6mA @ TX @ 5dBm	250m	Half-hole	

Other BLE Modules									
	BDE-BLEM301	DA14531	BLE 5.1	NO -40℃~ 85℃	12.5mm x 14.5mm x 2.1mm	1.8uA @ sleep 2mA @ RX 4mA @ TX @ 0dBm	50m+	PCB antenn a	Compatible to Dialog SmartBond TINY™ Module DA14531MOD
	BDE- BLEM401P	BK3432	BLE 4.2	NO -40℃~ 85℃	16.55mm x 10.88mm x 2.2mm	8uA @ Standby 5.4mA @ RX 4.8mA @ TX @ -1dBm	50m	PCB antenn a	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin-to-pin compatible
	LE6621DB	OM6621D B	BLE 5.0	NO -40 ℃ ~ 85℃	11.5mm x 11mm x 2mm package	14.1 mA RX at VBAT = 3.3V 12.8 mA TX at VBAT = 3.3V and 0 dBm 2.5 uA at deep sleep mode with all RAM retained	100M	PCB antenn a	

Bluetooth SIG Recommended Service Provider

TEXAS INSTRUMENTS dialog SEMICONDUCTOR Certified Module Provider

BDE Technology, Inc. is an innovation driven company dedicated to green wireless IoT technologies. BDE is committed to providing ultra low power wireless communication technologies, particularly Bluetooth Low Energy (BLE), Bluetooth Dual-mode, Sub-1GHz, Zigbee, Thread, WiFi and NB-IoT modules and solutions to OEMs, system integrators, device manufacturers and solution providers worldwide.

BDE is a Bluetooth SIG recommended service provider for Prequalified Components, OEM & ODM Products & Reference Designs and Software Application Development. BDE is a Dialog Semiconductor authorized module partner and a TI(Texas Instruments) certified third party module provider.

Equipped with BDE's innovative products and outstanding services which include BLE protocol stacks, wireless modules, applications, system solutions and world class expertise, customers are able to shorten development cycles, reduce design uncertainty, lower production cost and release more competitive products into markets quickly and efficiently. BDE`s flexible, highly integrated products and solutions are able to be customized to the most demanding requirements in numerous IoT devices and applications such as industrial automation, medical and health care, sports and fitness, smart watches, human interface devices, automotive, smart energy, smart building, home automation etc.

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