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
	BDE-BW2837	WL1837	Wi-Fi 5GHz/2.4GHz dual-band and BR/EDR/BLE Dual-Mode BT4.2.	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	
	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/ IPEX connector	
	BDE-WFM20BSF	CC3235SF	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.3mm	272mA@2.4GHz,16dBm @1DSSS 318mA@5GHz:,15.1dBm @6OFDM	800m+	Chip antenna/ IPEX connector	BDE-WFM20BS, BDE-WFM20BSF, BDE-WFM20A are pin-to-pin compatible
	BDE-WFM20BS	CC3235S	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.3mm	272mA@2.4GHz,16dBm @1DSSS 318mA@5GHz:,15.1dBm @6OFDM	800m+	Chip antenna/ IPEX connector	BDE-WFM20BS, BDE-WFM20BSF, BDE-WFM20A are pin-to-pin compatible
	BDE-WFM20A	CC3135	Wi-Fi 5GHz/2.4GHz dual-band	NO -40 ℃ ~ 85℃	23mm x 20.5mm x 2.3mm	272mA@2.4GHz,16dBm @1DSSS 318mA@5GHz:,15.1dBm @6OFDM	800m+	Chip antenna/ IPEX connector	BDE-WFM20BS, BDE-WFM20BSF, BDE-WFM20A are pin-to-pin compatible
	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@EDRfullthrptr 114uA@BLE Adv 169uA@BLEConnected	200m+	Chip antenna/ IPEX connector	
	BDE-RFM208P-S1	CC1352P1 F3RGZ	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 IPEX; Sub1G: IPEX	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	CC1352P1 F3RGZ	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 IPEX; Sub1G: IPEX	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

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	BDE-RFM208-IN	CC1352R 1F3RGZ	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/ IPEX connector	BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM208	CC1352R 1F3RGZ	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/ IPEX connector	BDE-RFM208P, BDE-RFM208-IN, BDE-RFM208, BDE-RFM207P, are pin-to-pin compatible
	BDE-RFM207P	CC2652P1 FRGZR	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	CC2652R 1FRGZ	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 are pin-to-pin compatible
	BDE-RFM207	CC2652R 1FRGZ	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 are pin-to-pin compatible
	BDE-RFM207B	CC2652R B1FRGZR	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 are pin-to-pin compatible
	BDE-USB205	CC2642R 1FRGZ	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	CC2642R 1FRGZ	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 are pin-to-pin compatible
	BDE-BLEM205	CC2642R 1FRGZ	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 are pin-to-pin compatible
	BDE-BLEM203D	CC2640R 2FRSM	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	CC2640R 2FRSM	BLE 5.1	NO -40 ℃ ~ 85℃	16.55mm x 10.88mm x 2.2mm	1.1uA @ Standby 5.9mA @ RX 6.1mA @ TX @ 0dBm 9.1mA @ TX @ 5dBm	100m	PCB antenna	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin2pin compatible
	BDE-BLEM201P	CC2541F2 56RHA	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-USB201	CC2540F2 56RHA	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	CC2541F2 56RHA	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-USB216	CC1312R 1F3RGZ	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	CC1312R 1F3RGZ	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+	IPEX connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible
	BDE-RFM216	CC1312R 1F3RGZ	Sub-1G	NO -40 ℃ ~ 85℃	22mm x 15mm x 2.15mm	0.55uA @ Standby 5.8mA @ RX 24.9mA @ TX @ 14dBm	1000m+	IPEX connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible
	BDE-RFM206	CC1312R 1F3RGZ	Sub-1G	NO -40 ℃ ~ 85℃	25mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	PCB antenna/ IPEX connector	BDE-RFM206, BDE-RFM204A are pin-to-pin compatible
	BDE-RFM204	CC1310F1 28RSM	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	CC1310F1 28RSM	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	CC1310F1 28RGZ	Sub-1G	NO -40 ℃ ~ 85℃	25mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	PCB antenna/ IPEX connector	BDE-RFM206, BDE-RFM204A are pin-to-pin compatible
	BDE-RFM214A	CC1310F1 28RGZ	Sub-1G	NO -40 ℃ ~ 85℃	22mm x 15mm x 2.15mm	0.7uA @ Standby 5.4mA @ RX 13.4mA @ TX @ 10dBm	1000m+	Half-hole/ IPEX connector	BDE-RFM216-IN, BDE-RFM216, BDE-RFM214A are pin-to-pin compatible
	BDE-BC001	CC2541F2 56RHA	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	CC2640R 2FRSM	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	

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	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 antenna	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 antenna	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin-to-pin compatible
	BDE-BLEM501P	NRF5182 2QFAA	BLE 4.2	NO -40℃ ~ 85℃	16.55mm x 10.88mm x 1.5mm	1uA @ Standby 17.9mA @ RX 18.2mA @ TX @ 0dBm	50m	PCB antenna	BDE-BLEM201P, BDE-BLEM401P, BDE-BLEM203P, BDE-BLEM501P, are pin2pin compatible
	BDE-BELM901	QN9022	BLE 4.2	NO -40℃ ~ 85℃	25.00mm x 11.78mm x 2.3mm	0.1uA @ Standby 13.6 mA @ RX 13.3 mA @ TX @ 0dBm	50m	PCB antenna	

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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