









# Wireless Connectivity Solutions













Across-the-Board TI Wireless Modules





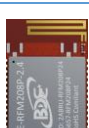



Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna Options	On-board SPI Flash
2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in Sub-1GHz	1	CC1354P10		BDE-MB1354P101NN32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.3</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 3.4mA@Active</li> <li>• 0.98uA@Standby</li> <li>• 0.17uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm@Sub-1G, +5dBm@2.4G</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -104dBm@50kbps</li> <li>• -104dBm@BLE 125kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 6.9mA@RX@2.4G</li> <li>• 25.8mA@TX@+14dBm@868M</li> <li>• 64mA@TX@+20dBm@915M</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	32Mbit
	2			BDE-MB1354P101NU32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	3			BDE-MB1354P101NA32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	4			BDE-MB1354P101UN32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	5			BDE-MB1354P101UU32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	6			BDE-MB1354P101UA32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	7			BDE-MB1354P101NN0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	8			BDE-MB1354P101NU0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	9			BDE-MB1354P101NA0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	10			BDE-MB1354P101UN0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	11			BDE-MB1354P101UU0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	12			BDE-MB1354P101UA0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	





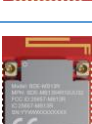
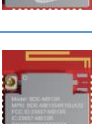






Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in Sub-1GHz	13	CC1352P7		BDE-MB1352P71NN32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.2</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 704kB</li> <li>• SRAM: 144kB</li> <li>• 2.63mA@Active</li> <li>• 0.8uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm@Sub-1G, +5dBm@2.4G</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -110dBm@50kbps</li> <li>• -104dBm@BLE 125kbps</li> <li>• 5.4mA@RX@868M</li> <li>• 6.4mA@RX@2.4G</li> <li>• 24.9mA@TX@+14dBm@868M</li> <li>• 64mA@TX@+20dBm@915M</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	32Mbit
	14			BDE-MB1352P71NU32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	15			BDE-MB1352P71NA32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	16			BDE-MB1352P71UN32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	17			BDE-MB1352P71UU32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	18			BDE-MB1352P71UA32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	19			BDE-MB1352P71NNO							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	20			BDE-MB1352P71NU0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	21			BDE-MB1352P71NA0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	22			BDE-MB1352P71UN0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
23		BDE-MB1352P71UU0	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>									
24		BDE-MB1352P71UA0	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>									

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2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in Sub-1GHz	25	CC1352P		BDE-RFM208P-S1-NN							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>		
	26			BDE-RFM208P-S1-NU							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>		
	27			BDE-RFM208P-S1-NA	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.2</li> <li>• IEEE 802.15.4g</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 352kB</li> <li>• SRAM: 80kB</li> <li>• 2.9mA@Active</li> <li>• 0.85uA@Standby</li> <li>• 0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm@Sub-1G, +5dBm@2.4G</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -105dBm@50kbps</li> <li>• -105dBm@BLE 125kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 6.9mA@RX@2.4G</li> <li>• 24.9mA@TX@+14dBm@868M</li> <li>• 63mA@TX@+20dBm@915M</li> </ul>	-40 to +85	29.8 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	Not Included	
	28			BDE-RFM208P-S1-UN	<ul style="list-style-type: none"> <li>• KNX RF</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	29			BDE-RFM208P-S1-UU								<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	30			BDE-RFM208P-S1-UA								<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in 2.4GHz	31	CC1354P10		BDE-MB1354P102NN32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.3</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 3.4mA@Active</li> <li>• 0.98uA@Standby</li> <li>• 0.17uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm@2.4G, +5dBm@Sub-1G</li> <li>• RX Sensitivity: -121dBm@2.5kbps, -110dBm@50kbps, -104dBm@BLE 125kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 6.9mA@RX@2.4G</li> <li>• 25.8mA@TX@+14dBm@868M</li> <li>• 101mA@TX@+20dBm@2.4G</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	32Mbit
	32			BDE-MB1354P102NU32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	33			BDE-MB1354P102NA32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	34			BDE-MB1354P102UN32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	35			BDE-MB1354P102UU32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	36			BDE-MB1354P102UA32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	37			BDE-MB1354P102NN0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	38			BDE-MB1354P102NU0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	39			BDE-MB1354P102NA0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	40			BDE-MB1354P102UN0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	41			BDE-MB1354P102UU0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	42			BDE-MB1354P102UA0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in 2.4GHz	43	CC1352P7		BDE-MB1352P72NN32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.2</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 704kB</li> <li>• SRAM: 144kB</li> <li>• 2.63mA@Active</li> <li>• 0.8uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm@2.4G, +5dBm@Sub-1G</li> <li>• RX Sensitivity: -121dBm@2.5kbps, -110dBm@50kbps, -104dBm@BLE 125kbps</li> <li>• 5.4mA@RX@868M</li> <li>• 6.4mA@RX@2.4G</li> <li>• 24.9mA@TX@+14dBm@868M</li> <li>• 101mA@TX@+20dBm@2.4G</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	32Mbit
	44			BDE-MB1352P72NU32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	45			BDE-MB1352P72NA32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	46			BDE-MB1352P72UN32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	47			BDE-MB1352P72UU32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	48			BDE-MB1352P72UA32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	49			BDE-MB1352P72NNO							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	50			BDE-MB1352P72NU0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	51			BDE-MB1352P72NA0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	52			BDE-MB1352P72UN0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
53		BDE-MB1352P72UU0	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>									
54		BDE-MB1352P72UA0	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>									







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2.4GHz & Sub-1GHz Dual-Band, Multi-Protocol with PA in 2.4GHz	55	CC1352P		BDE-RFM208P-2.4-NN							<ul style="list-style-type: none"> <li>ANT pin for S1G</li> <li>ANT pin for 2.4G</li> </ul>		
	56			BDE-RFM208P-2.4-NU							<ul style="list-style-type: none"> <li>ANT pin for S1G</li> <li>U.FL for 2.4G</li> </ul>		
	57			BDE-RFM208P-2.4-NA	<ul style="list-style-type: none"> <li>Thread</li> <li>Zigbee®</li> <li>Matter</li> <li>BLE 5.2</li> <li>IEEE 802.15.4g</li> <li>Wi-SUN®</li> <li>mioty®</li> <li>Amazon Sidewalk</li> <li>Wireless M-Bus</li> <li>SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>KNX RF</li> <li>6LoWPAN</li> <li>Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>Cortex®-M4F</li> <li>Flash: 352kB</li> <li>SRAM: 80kB</li> <li>2.9mA@Active</li> <li>0.85uA@Standby</li> <li>0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +20dBm@Sub-1G, +5dBm@2.4G</li> <li>RX Sensitivity: -121dBm@2.5kbps</li> <li>-110dBm@50kbps</li> <li>-105dBm@BLE 125kbps</li> <li>5.8mA@RX@868M</li> <li>6.9mA@RX@2.4G</li> <li>24.9mA@TX@+14dBm@868M</li> <li>85mA@TX@+20dBm@2.4G</li> </ul>	-40 to +85	29.8 x 19 x 2.15	<ul style="list-style-type: none"> <li>Bluetooth</li> <li>FCC</li> <li>IC</li> <li>CE</li> </ul>	<ul style="list-style-type: none"> <li>ANT pin for S1G</li> <li>PCB trace for 2.4G</li> </ul>	Not Included	
	58			BDE-RFM208P-2.4-UN								<ul style="list-style-type: none"> <li>U.FL for S1G</li> <li>ANT pin for 2.4G</li> </ul>	
	59			BDE-RFM208P-2.4-UU								<ul style="list-style-type: none"> <li>U.FL for S1G</li> <li>U.FL for 2.4G</li> </ul>	
	60			BDE-RFM208P-2.4-UA								<ul style="list-style-type: none"> <li>U.FL for S1G</li> <li>PCB trace for 2.4G</li> </ul>	













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2.4G & Sub-1G Dual-Band, Multi-Protocol	61	CC1354R10		BDE-MB1354R10NN32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.3</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 3.4mA@Active</li> <li>• 0.98uA@Standby</li> <li>• 0.17uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +14dBm@Sub-1G, +5dBm@2.4G</li> <li>• RX Sensitivity: -121dBm@2.5kbps, -110dBm@50kbps, -104dBm@BLE 125kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 6.9mA@RX@2.4G</li> <li>• 25.8mA@TX@+14dBm@868M</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	32Mbit
	62			BDE- MB1354R10NU32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	63			BDE- MB1354R10NA32							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	64			BDE- MB1354R10UN32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	65			BDE- MB1354R10UU32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	66			BDE- MB1354R10UA32							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	67			BDE-MB1354R10NNO							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	68			BDE- MB1354R10NU0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	69			BDE- MB1354R10NA0							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	70			BDE- MB1354R10UN0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	71			BDE- MB1354R10UU0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	72			BDE- MB1354R10UA0							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	















Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
2.4G & Sub-1G Dual-Band, Multi-Protocol	73	CC1352R		BDE-RFM208-NN	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• BLE 5.2</li> <li>• IEEE 802.15.4g</li> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• KNX RF</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 352kB</li> <li>• SRAM: 80kB</li> <li>• 2.9mA@Active</li> <li>• 0.85uA@Standby</li> <li>• 0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +14dBm@Sub-1G, +5dBm@2.4G</li> <li>• RX Sensitivity: -121dBm@2.5kbps, -110dBm@50kbps, -105dBm@BLE 125kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 6.9mA@RX@2.4G</li> <li>• 24.9mA@TX@+14dBm@868M</li> </ul>	-40 to +85	29.8 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	Not Included
	74			BDE-RFM208-NU							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	75			BDE-RFM208-NA							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	76			BDE-RFM208-UN							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	77			BDE-RFM208-UU							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	78			BDE-RFM208-UA							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	79			BDE-RFM208-IN-NN							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
	80			BDE-RFM208-IN-NU							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• U.FL for 2.4G</li> </ul>	
	81			BDE-RFM208-IN-NA							<ul style="list-style-type: none"> <li>• ANT pin for S1G</li> <li>• PCB trace for 2.4G</li> </ul>	
	82			BDE-RFM208-IN-UN							<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• ANT pin for 2.4G</li> </ul>	
83		BDE-RFM208-IN-UU	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• U.FL for 2.4G</li> </ul>									
84		BDE-RFM208-IN-UA	<ul style="list-style-type: none"> <li>• U.FL for S1G</li> <li>• PCB trace for 2.4G</li> </ul>									

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash	
2.4G Multi-Protocol with PA	85	CC2674P10		BDE-MP2674P10N32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.3</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 4.0mA@Active</li> <li>• 1.19uA@Standby</li> <li>• 0.13uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX</li> <li>• 101mA@TX@+20dBm</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin		
	86			BDE-MP2674P10U32							• U.FL		32Mbit
	87			BDE-MP2674P10A32							• PCB trace		
	88			BDE-MP2674P10N0							• ANT pin		
	89			BDE-MP2674P10U0							• U.FL		Not Included
	90			BDE-MP2674P10A0							• PCB trace		
	91	CC2652P7		BDE-MP2652P7N32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.2</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 704kB</li> <li>• SRAM: 144kB</li> <li>• 3.1mA@Active</li> <li>• 0.9uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX</li> <li>• 101mA@TX@+20dBm</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin		
	92			BDE-MP2652P7U32							• U.FL		32Mbit
	93			BDE-MP2652P7A32							• PCB trace		
	94			BDE-MP2652P7N0							• ANT pin		
	95			BDE-MP2652P7U0							• U.FL		Not Included
	96			BDE-MP2652P7A0							• PCB trace		

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash	
2.4G Multi-Protocol with PA	97	CC2651P3		BDE-MP2651P3N32	<ul style="list-style-type: none"> <li>• Zigbee®</li> <li>• BLE 5.2</li> <li>• SimpleLink™ TI 15.4-Stack Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4</li> <li>• Flash: 352KB</li> <li>• SRAM: 32KB</li> <li>• 2.91mA@Active</li> <li>• 0.8uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +20dBm</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX</li> <li>• 101mA@TX@+20dBm</li> </ul>	-40 to +85	26 x 19 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin		
	98			BDE-MP2651P3U32							• U.FL		32Mbit
	99			BDE-MP2651P3A32							• PCB trace		
	100			BDE-MP2651P3N0							• ANT pin		
	101			BDE-MP2651P3U0							• U.FL		Not Included
	102			BDE-MP2651P3A0							• PCB trace		

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash								
2.4G Multi-Protocol	103	CC2674R10		BDE-MP2674R10N32	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.3</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 4.0mA@Active</li> <li>• 1.19uA@Standby</li> <li>• 0.13uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +5dBm</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX</li> <li>• 9.8mA@TX@+5dBm</li> </ul>	-40 to +85	21.5 x 15 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit								
	104			BDE-MP2674R10U32							• U.FL									
	105			BDE-MP2674R10A32							• PCB trace									
	106			BDE-MP2674R10N0							• ANT pin									
	107			BDE-MP2674R10U0							• U.FL		Not Included							
	108			BDE-MP2674R10A0							• PCB trace									
	109		CC2652R7								BDE-MP2652R7N32		<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• Matter</li> <li>• BLE 5.2</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 704kB</li> <li>• SRAM: 144kB</li> <li>• 3.1mA@Active</li> <li>• 0.9uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +5dBm</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX</li> <li>• 9.7mA@TX@+5dBm</li> </ul>	-40 to +85	21.5 x 15 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	110										BDE-MP2652R7U32								• U.FL	
	111			BDE-MP2652R7A32	• PCB trace															
	112			BDE-MP2652R7N0	• ANT pin															
	113			BDE-MP2652R7U0	• U.FL	Not Included														
	114			BDE-MP2652R7A0	• PCB trace															

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash	
2.4G Multi-Protocol	115	CC2651R3		BDE-MP2651R3N32	<ul style="list-style-type: none"> <li>• Zigbee®</li> <li>• BLE 5.2</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4</li> <li>• Flash: 352kB</li> <li>• SRAM: 32kB</li> <li>• 2.91mA@Active</li> <li>• 0.8uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +5dBm@2.4G</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• 6.4mA@RX@2.4G</li> <li>• 9.5mA@TX@+5dBm@2.4G</li> </ul>	-40 to +85	21.5 x 15 x 2.15	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit	
	116			BDE-MP2651R3U32							• U.FL		
	117			BDE-MP2651R3A32							• PCB trace		
	118			BDE-MP2651R3N0							• ANT pin		
	119			BDE-MP2651R3U0							• U.FL		Not Included
	120			BDE-MP2651R3A0							• PCB trace		
	121	CC2652R		BDE-RFM207	<ul style="list-style-type: none"> <li>• Thread</li> <li>• Zigbee®</li> <li>• BLE 5.2</li> <li>• IEEE 802.15.4</li> <li>• SimpleLink™ TI 15.4-Stack(2.4GHz)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 352kB</li> <li>• SRAM: 80kB</li> <li>• 3.4mA@Active</li> <li>• 0.94uA@Standby</li> <li>• 0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +5dBm@2.4G</li> <li>• RX Sensitivity: -104dBm@BLE 125kbps</li> <li>• -100dBm@802.15.4 (2.4 GHz)</li> <li>• 6.9mA@RX@2.4G</li> <li>• 9.6mA@TX@+5dBm@2.4G</li> </ul>	-40 to +85	22.95 x 15 x 2.05	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• PCB trace	Not Included	
	122			BDE-RFM207-IN							• PCB trace		

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	123	CC2340R52 KP		BDE-LE2340R52KPN32	<ul style="list-style-type: none"> <li>• BLE 5.3</li> <li>• Zigbee®</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• Proprietary</li> </ul>			-40 to +85	11.5 x 9.7 x 2	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	124			BDE-LE2340R52KPU32					• U.FL			
	125			BDE- LE2340R52KPA32					• Chip antenna			
	126			BDE-LE2340R52KPN32-IN				• ANT pin				
	127			BDE-LE2340R52KPU32-IN				• U.FL				
	128			BDE- LE2340R52KPA32-IN				• Chip antenna				
	129			BDE-LE2340R52KPN0				• ANT pin				
	130			BDE-LE2340R52KPU0				• U.FL				
	131			BDE- LE2340R52KPA0				• Chip antenna				
	132			BDE-LE2340R52KPN0-IN				• ANT pin				
	133			BDE-LE2340R52KPU0-IN				• U.FL				
	134			BDE- LE2340R52KPA0-IN				• Chip antenna				

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	135	CC2340R52GE		BDE-LE2340R52GEN32	<ul style="list-style-type: none"> <li>• BLE 5.3</li> <li>• Zigbee®</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• Proprietary</li> </ul>			-40 to +85	11.5 x 9.7 x 2	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	136			BDE-LE2340R52GEU32					• U.FL			
	137			BDE- LE2340R52GEA32					• Chip antenna			
	138			BDE-LE2340R52GEN32-IN				• ANT pin				
	139			BDE-LE2340R52GEU32-IN				• U.FL				
	140			BDE- LE2340R52GEA32-IN				• Chip antenna				
	141			BDE-LE2340R52GEN0				• ANT pin				
	142			BDE-LE2340R52GEU0				• U.FL				
	143			BDE- LE2340R52GEA0				• Chip antenna				
	144			BDE-LE2340R52GEN0-IN				• ANT pin				
145		BDE-LE2340R52GEU0-IN	• U.FL									
146		BDE- LE2340R52GEA0-IN	• Chip antenna									




Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	135	CC2340R21GE		BDE-LE2340R21GEN32	<ul style="list-style-type: none"> <li>• BLE 5.3</li> <li>• Zigbee®</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• Proprietary</li> </ul>			-40 to +85	11.5 x 9.7 x 2	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	136			BDE-LE2340R21GEU32					13.5 x 11.5 x 2		• U.FL	
	137			BDE-LE2340R21GEA32					• Chip antenna			
	138			BDE-LE2340R21GEN32-IN					11.5 x 9.7 x 2		• ANT pin	
	139			BDE-LE2340R21GEU32-IN					-40 to +105		• U.FL	
	140			BDE-LE2340R21GEA32-IN					13.5 x 11.5 x 2		• Chip antenna	
	141			BDE-LE2340R21GEN0					11.5 x 9.7 x 2		• ANT pin	
	142			BDE-LE2340R21GEU0					-40 to +85		• U.FL	
	143			BDE-LE2340R21GEA0					13.5 x 11.5 x 2		• Chip antenna	
	144			BDE-LE2340R21GEN0-IN					11.5 x 9.7 x 2		• ANT pin	
145		BDE-LE2340R21GEU0-IN	-40 to +105	• U.FL								
146		BDE-LE2340R21GEA0-IN	13.5 x 11.5 x 2	• Chip antenna								



Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	123	CC2340R22 KP		BDE-LE2340R22KPN32	<ul style="list-style-type: none"> <li>• BLE 5.3</li> <li>• Zigbee®</li> <li>• SimpleLink™ TI 15.4-Stack</li> <li>• Proprietary</li> </ul>			-40 to +85	11.5 x 9.7 x 2	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	124			BDE-LE2340R22KPU32					• U.FL			
	125			BDE- LE2340R22KPA32					• Chip antenna			
	126			BDE-LE2340R22KPN32-IN				• ANT pin				
	127			BDE-LE2340R22KPU32-IN				• U.FL				
	128			BDE-LE2340R22KPA32-IN				• Chip antenna				
	129			BDE-LE2340R22KPN0				• ANT pin				
	130			BDE-LE2340R22KPU0				• U.FL				
	131			BDE- LE2340R22KPA0				• Chip antenna				
	132			BDE-LE2340R22KPN0-IN				• ANT pin				
	133			BDE-LE2340R22KPU0-IN				• U.FL				
	134			BDE- LE2340R22KPA0-IN				• Chip antenna				

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	147	CC2642R		BDE-BLEM205	BLE 5.2	<ul style="list-style-type: none"> <li>Cortex®-M4F</li> <li>Flash: 352kB</li> <li>SRAM: 80kB</li> <li>3.4mA@Active</li> <li>0.94uA@Standby</li> <li>0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +5dBm</li> <li>RX Sensitivity: -105dBm@BLE 125kbps</li> <li>-97dBm@BLE 1Mbps</li> <li>6.9mA@RX</li> <li>9.6mA@TX@+5dBm</li> </ul>	-40 to +85	22.95 x 15 x 2.05		• PCB trace	Not Included
	148			BDE-BLEM205-IN				-40 to +105			• PCB trace	
	149			BDE-BLEM215				-40 to +85	22 x 15 x 2.05		• U.FL	
	150	CC2642R-Q1		BDE-BLEM205-Q1				-40 to +105	22.95 x 15 x 2.05		• PCB trace	
	151	CC2640R2F (RHB)		BDE-LE2640R2FN32	BLE 5.1	<ul style="list-style-type: none"> <li>Cortex®-M3</li> <li>Flash: 128kB</li> <li>SRAM: 20kB</li> <li>2.9mA@Active</li> <li>1.1uA@Standby</li> <li>0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +5dBm</li> <li>RX Sensitivity: -103dBm@BLE 125kbps</li> <li>-97dBm@BLE 1Mbps</li> <li>5.9mA@RX@</li> <li>9.1mA@TX@+5dBm</li> </ul>	-40 to +85	11.6 x 11 x 2.1	<ul style="list-style-type: none"> <li>Bluetooth</li> <li>FCC</li> <li>IC</li> <li>CE</li> </ul>	• ANT pin	32Mbit
	152			BDE-LE2640R2FU32							• U.FL	
	153			BDE-LE2640R2FA32					• Chip antenna			
	154			BDE-LE2640R2FN0					• ANT pin			
	155			BDE-LE2640R2FU0					• U.FL		Not Included	
	156			BDE-LE2640R2FA0					• Chip antenna			

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Low Energy	157	CC2640R2L (RHB)		BDE-LE2640R2LN32	BLE 5.1	<ul style="list-style-type: none"> <li>Cortex®-M3</li> <li>Flash: 128kB</li> <li>SRAM: 20kB</li> <li>2.9mA@Active</li> <li>1.5uA@Standby</li> <li>0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +5dBm</li> <li>RX Sensitivity: -97dBm@BLE 1Mbps</li> <li>5.9mA@RX@2.4G</li> <li>9.1mA@TX@+5dBm</li> </ul>	-40 to +85	11.6 x 11 x 2.1	<ul style="list-style-type: none"> <li>Bluetooth</li> <li>FCC</li> <li>IC</li> <li>CE</li> </ul>	• ANT pin	32Mbit
	158			BDE-LE2640R2LU32					• U.FL			
	159			BDE-LE2640R2LA32					• Chip antenna			
	160			BDE-LE2640R2LN0					• ANT pin			
	161			BDE-LE2640R2LU0					• U.FL		Not Included	
	162			BDE-LE2640R2LA0					• Chip antenna			
	163		CC2640R2F (RSM)						BDE-BLEM203D		BLE 5.1	
	164	CC2541		BDE-BLEM201P	BLE 5.0 Proprietary	<ul style="list-style-type: none"> <li>8051</li> <li>Flash: 256kB</li> <li>SRAM: 8kB</li> <li>0.27mA@Wake-Up</li> <li>1.0uA@Sleep Timer On</li> <li>0.5uA@External Interrupts</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +0dBm</li> <li>RX Sensitivity: -94dBm@BLE 1Mbps</li> <li>17.9mA@RX</li> <li>18.2mA@TX@+0dBm</li> </ul>	16.55 x 10.88 x 2.3	• Chip antenna	Not Included		
	165			BDE-BLEM211					• ANT pin			

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Bluetooth Dual-mode	166	CC2564C		BDE-BD2564CN	Bluetooth 5.1 with BR, EDR, LE	No MCU	<ul style="list-style-type: none"> <li>• TX power: +8dBm</li> <li>• RX Sensitivity: -96dBm@BLE 1Mbps</li> <li>• 41.2mA@EDRfullthrp</li> <li>• 114uA@BLE Adv</li> <li>• 169uA@BLEConnectd</li> </ul>	-40 to +85	7 x 7 x 1.55 (P2P compatible with TI's CC2564MODN)	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> <li>• TELEC</li> </ul>	• ANT pin	Not Included
	167			BDE-BD2564CA					14 x 7 x 1.55 (P2P compatible with TI's CC2564MODA)		• Chip antenna	
	168			BDE-BDM209A					22 x 12 x 2.15		• Chip antenna	







Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash				
Wi-Fi & Bluetooth Combo	169	CC3351 CC3350 CC3301 CC3300		BDE-BW3351NP1 BDE-BW3350NP1 BDE-BW3301NP1 BDE-BW3300NP1 BDE-BW3351NP1-IN BDE-BW3350NP1-IN BDE-BW3301NP1-IN BDE-BW3300NP1-IN	<ul style="list-style-type: none"> <li>• Wi-Fi 6 (802.11.b/g/n/ax): 2.4GHz &amp; 5G (5G only for 3351/3350 variants)</li> <li>• BLE 5.3 (BLE only for 3351/3301 variants)</li> </ul>	No MCU	<ul style="list-style-type: none"> <li>• TX power: +20dBm@Wi-Fi 2.4G@1 DSSS +19dBm@ Wi-Fi 2.4G@HE MCS0 +20dBm@BLE 2.4G</li> <li>• RX Sensitivity: -98dBm@Wi-Fi 2.4G@1 DSSS -88dBm@Wi-Fi 2.4G@HE MCS0 -99.4dBm@BLE 1Mbps</li> <li>• 66mA@RX@Wi-Fi</li> <li>• 260mA@TX@+19dBm@Wi-Fi 2.4G MCS0 HE</li> <li>• BLE: 240uA@Advertise@1s Interval 110uA@Connection@1s Interval</li> </ul>	-40 to +85 -40 to +105 (105 support only for -IN variants)	13.3 x 13.4 x 2 (P2P compatible with TI's WL1837MOD)	<ul style="list-style-type: none"> <li>• Bluetooth</li> <li>• FCC</li> <li>• IC</li> <li>• CE</li> <li>• TELEC</li> </ul>	• ANT pin	Not Included				
	170			BDE-BW3351NP2 BDE-BW3350NP2 BDE-BW3301NP2 BDE-BW3300NP2 BDE-BW3351NP2-IN BDE-BW3350NP2-IN BDE-BW3301NP2-IN BDE-BW3300NP2-IN							• ANT pin					
	171			BDE-BW3351UP1 BDE-BW3350UP1 BDE-BW3301UP1 BDE-BW3300UP1 BDE-BW3351UP1-IN BDE-BW3350UP1-IN BDE-BW3301UP1-IN BDE-BW3300UP1-IN							• U.FL					
	172			BDE-BW3351UP2 BDE-BW3350UP2 BDE-BW3301UP2 BDE-BW3300UP2 BDE-BW3351UP2-IN BDE-BW3350UP2-IN BDE-BW3301UP2-IN BDE-BW3300UP2-IN							• U.FL					
	173			BDE-BW3351AP1 BDE-BW3350AP1 BDE-BW3301AP1 BDE-BW3300AP1 BDE-BW3351AP1-IN BDE-BW3350AP1-IN BDE-BW3301AP1-IN BDE-BW3300AP1-IN							• PCB trace					
	174			BDE-BW3351N1 BDE-BW3350N1 BDE-BW3301N1 BDE-BW3300N1 BDE-BW3351N1-IN BDE-BW3350N1-IN BDE-BW3301N1-IN BDE-BW3300N1-IN							• ANT pin					
	175			BDE-BW3351U1 BDE-BW3350U1 BDE-BW3301U1 BDE-BW3300U1 BDE-BW3351U1-IN BDE-BW3350U1-IN BDE-BW3301U1-IN BDE-BW3300U1-IN							• U.FL					
	176			BDE-BW3351A1 BDE-BW3350A1 BDE-BW3301A1 BDE-BW3300A1 BDE-BW3351A1-IN BDE-BW3350A1-IN BDE-BW3301A1-IN BDE-BW3300A1-IN							• Chip antenna					
	177			BDE- BW3351NP1M2 BDE- BW3350NP1M2 BDE- BW3301NP1M2 BDE- BW3300NP1M2							• U.FL					
	178			BDE- BW3351NP2M2 BDE- BW3350NP2M2 BDE- BW3301NP2M2 BDE- BW3300NP2M2							• U.FL					
	179		WL1837								BDE-BW2837		<ul style="list-style-type: none"> <li>• 802.11a/b/g/n: 2.4 GHz and 5 GHz</li> <li>• Bluetooth 5.1 with BR, EDR, LE</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +17.3dBm@Wi-Fi 2.4G@1 DSSS +18dBm@Wi-Fi 5G@6 OFDM</li> <li>• RX Sensitivity: -95dBm@Wi-Fi 2.4G@1 DSSS -92.5dBm@Wi-Fi 5G@6 OFDM</li> <li>• 510mA@TX@Wi-Fi 2.4G@20M MIMO MCS15</li> <li>• 329mA@TX@Wi-Fi 5G@20M SISO 54 OFDM</li> </ul>	13.3 x 13.4 x 2 (P2P compatible with TI's WL1837MOD)	• ANT pin

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Wi-Fi MCU	180	CC3235SF		BDE-WF3235SFN32	• 802.11a/b/g/n: 2.4 GHz and 5 GHz	• Cortex®-M4 • Flash: 1024kB • RAM: 256kB • 120uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate	• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +18.1dBm@Wi-Fi 5G@6 OFDM • RX Sensitivity: -96dBm@Wi-Fi 2.4G@1 DSSS -92dBm@Wi-Fi 5G@6 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3235MODSF)	25 x 20.5 x 2.4 (P2P compatible with TI's CC3235MODASF)	• FCC • IC • CE	• ANT pin	32Mbit
	181			BDE-WF3235SFAU32							• U.FL	
	182			BDE-WF3235SFA32							• PCB trace	
	183	CC3235S		BDE-WF3235SN32	• 802.11a/b/g/n: 2.4 GHz and 5 GHz	• Cortex®-M4 • RAM: 256kB • 120uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate	• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +18.1dBm@Wi-Fi 5G@6 OFDM • RX Sensitivity: -96dBm@Wi-Fi 2.4G@1 DSSS -92dBm@Wi-Fi 5G@6 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3235MODS)	25 x 20.5 x 2.4 (P2P compatible with TI's CC3235MODAS)	• FCC • IC • CE	• ANT pin	
	184			BDE-WF3235SAU32							• U.FL	
	185			BDE-WF3235SA32							• PCB trace	
	186	CC3230SF		BDE-WF3230SFN32	• 802.11b/g/n: 2.4 GHz	• Cortex®-M4 • Flash: 1024kB • RAM: 256kB • 120uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate	• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +14.5dBm@Wi-Fi 2.4G@54 OFDM • RX Sensitivity: -96.0m@Wi-Fi 2.4G@1 DSSS -74.5m@Wi-Fi 2.4G@54 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G	20.5 x 17.5 x 2.4	25 x 20.5 x 2.4	• FCC • IC • CE	• ANT pin	
	187			BDE-WF3230SFAU32							• U.FL	
	188			BDE-WF3230SFA32							• PCB trace	
	189	CC3230S		BDE-WF3230SN32	• 802.11b/g/n: 2.4 GHz	• Cortex®-M4 • RAM: 256kB • 120uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate	• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +14.5dBm@Wi-Fi 2.4G@54 OFDM • RX Sensitivity: -96.0m@Wi-Fi 2.4G@1 DSSS -74.5m@Wi-Fi 2.4G@54 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G	20.5 x 17.5 x 2.4	25 x 20.5 x 2.4	• FCC • IC • CE	• ANT pin	
	190			BDE-WF3230SAU32							• U.FL	
	191			BDE-WF3230SA32							• PCB trace	

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash		
Wi-Fi MCU	192	CC3220SF		BDE-WF3220SFN32	802.11b/g/n: 2.4 GHz			-40 to +85	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3220MODSF)		• ANT pin			
	193			BDE-WF3220SFAU32					• Cortex®-M4 • Flash: 1024kB • RAM: 256kB • 135uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate		• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +14.5dBm@Wi-Fi 2.4G@54 OFDM • RX Sensitivity: -96.0m@Wi-Fi 2.4G@1 DSSS -74.5m@Wi-Fi 2.4G@54 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G		25 x 20.5 x 2.4 (P2P compatible with TI's CC3220MODASF)	• U.FL
	194			BDE-WF3220SFA32					• PCB trace					
	195	CC3220S		BDE-WF3220SN32	802.11b/g/n: 2.4 GHz			-40 to +85	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3220MODS)		• ANT pin			
	196			BDE-WF3220SAU32					• Cortex®-M4 • RAM: 256kB • 135uA@LPDS • 710uA@Idle • 1uA@Shutdown • 4.5uA@Hibernate		• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +14.5dBm@Wi-Fi 2.4G@54 OFDM • RX Sensitivity: -96.0m@Wi-Fi 2.4G@1 DSSS -74.5m@Wi-Fi 2.4G@54 OFDM • 59mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G		25 x 20.5 x 2.4 (P2P compatible with TI's CC3220MODAS)	• U.FL
	197			BDE-WF3220SA32					• PCB trace					
	198	CC3200		BDE-WF3200N32	802.11b/g/n: 2.4 GHz			-40 to +85	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3200MOD)		• ANT pin	32Mbit		
	199			BDE-WF3200AU32					• Cortex®-M4 • RAM: 36kB • 250uA@LPDS • 825uA@Idle • 4uA@Hibernate		• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +14.5dBm@Wi-Fi 2.4G@54 OFDM • RX Sensitivity: -95.7m@Wi-Fi 2.4G@1 DSSS -74.0m@Wi-Fi 2.4G@54 OFDM • 59mA@RX@Wi-Fi 2.4G • 278mA@TX@Wi-Fi 2.4G		25 x 20.5 x 2.4	• U.FL
	200			BDE-WF3200A32					• PCB trace					
	201	CC3135		BDE-WF3135N	802.11a/b/g/n: 2.4 GHz and 5 GHz	No MCU		-40 to +85	20.5 x 17.5 x 2.4 (P2P compatible with TI's CC3135MOD)		• ANT pin			
	202			BDE-WF3135AU					• TX power: +18dBm@Wi-Fi 2.4G@1 DSSS +18.1dBm@Wi-Fi 5G@6 OFDM • RX Sensitivity: -96m@Wi-Fi 2.4G@1 DSSS -92m@Wi-Fi 5G@6 OFDM • 53mA@RX@Wi-Fi 2.4G • 223mA@TX@Wi-Fi 2.4G		25 x 20.5 x 2.4		• U.FL	
	203			BDE-WF3135A					• PCB trace					

Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Sub-1G	204	CC1314R10		BDE-SG1314R10N32	<ul style="list-style-type: none"> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M33</li> <li>• Flash: 1024kB</li> <li>• SRAM: 256kB</li> <li>• 3.4mA@Active</li> <li>• 0.98uA@Standby</li> <li>• 0.17uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +14dBm@868M</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -110dBm@50kbps</li> <li>• 5.8mA@RX@868M</li> <li>• 25.8mA@TX@+14dBm@868M</li> </ul>	-40 to +85	22 x 15 x 2.15	<ul style="list-style-type: none"> <li>• FCC</li> <li>• IC</li> <li>• CE</li> </ul>	• ANT pin	32Mbit
	205			BDE-SG1314R10U32							• U.FL	
	206			BDE-SG1314R10N0							• ANT pin	Not Included
	207			BDE-SG1314R10U0							• U.FL	
	208	CC1312R7		BDE-SG1312R7N32	<ul style="list-style-type: none"> <li>• Wi-SUN®</li> <li>• mioty®</li> <li>• Amazon Sidewalk</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4F</li> <li>• Flash: 704kB</li> <li>• SRAM: 144kB</li> <li>• 2.63mA@Active</li> <li>• 0.8uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +14dBm@868M</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -110dBm@50kbps</li> <li>• 5.4mA@RX@868M</li> <li>• 24.9mA@TX@+14dBm@868M</li> </ul>				• ANT pin	32Mbit
	209			BDE-SG1312R7U32							• U.FL	
	210			BDE-SG1312R7N0							• ANT pin	Not Included
	211			BDE-SG1312R7U0							• U.FL	
	212	CC1311R3		BDE-SG1311R3N32	<ul style="list-style-type: none"> <li>• mioty®</li> <li>• Wireless M-Bus</li> <li>• SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>• 6LoWPAN</li> <li>• Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>• Cortex®-M4</li> <li>• Flash: 352kB</li> <li>• SRAM: 32kB</li> <li>• 2.63mA@Active</li> <li>• 0.7uA@Standby</li> <li>• 0.1uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>• TX power: +14dBm@868M</li> <li>• RX Sensitivity: -121dBm@2.5kbps</li> <li>• -110dBm@50kbps</li> <li>• 5.4mA@RX@868M</li> <li>• 24.9mA@TX@+14dBm@868M</li> </ul>				• ANT pin	32Mbit
	213			BDE-SG1311R3U32							• U.FL	
	214			BDE-SG1311R3N0							• ANT pin	Not Included
	215			BDE-SG1311R3U0							• U.FL	



Category	NO.	TI Chipset	Module Picture	Orderable Part Number	Technology & Protocol	MCU	RF	Operating Temp. (°C)	Dimension (mm)	Certification	Antenna	On-board SPI Flash
Sub-1G	216	CC1312R		BDE-RFM206	<ul style="list-style-type: none"> <li>IEEE 802.15.4g</li> <li>Wi-SUN®</li> <li>mioty®</li> <li>Amazon Sidewalk</li> <li>Wireless M-Bus</li> <li>SimpleLink™ TI 15.4-Stack (Sub-1G)</li> <li>KNX RF</li> <li>6LoWPAN</li> <li>Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>Cortex®-M4F</li> <li>Flash: 352KB</li> <li>SRAM: 80KB</li> <li>2.9mA@Active</li> <li>0.85uA@Standby</li> <li>0.15uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +14dBm@868M</li> <li>RX Sensitivity: -121dBm@SimpleLink long-range mode</li> <li>-110dBm@50 kbps</li> <li>5.8mA@RX@868M</li> <li>24.9mA@TX@+14dBm@868M</li> </ul>	-40 to +85	<ul style="list-style-type: none"> <li>FCC</li> <li>IC</li> <li>CE</li> </ul>	• PCB trace	Not included	
	217			BDE-RFM216								22 x 15 x 2.15
	218	CC1310F128 (RGZ)		BDE-RFM204A	25 x 15 x 2.15	• PCB trace						
	219			BDE-RFM214A	22 x 15 x 2.15	• U.FL						
	220	CC1310F128 (RSM)		BDE-RFM204	<ul style="list-style-type: none"> <li>IEEE 802.15.4g</li> <li>Wi-SUN®</li> <li>Wireless M-Bus</li> <li>6LoWPAN</li> <li>Proprietary</li> </ul>	<ul style="list-style-type: none"> <li>Cortex®-M3</li> <li>Flash: 128KB</li> <li>SRAM: 20KB</li> <li>2.5mA@Active</li> <li>0.70uA@Standby</li> <li>0.185uA@Shutdown</li> </ul>	<ul style="list-style-type: none"> <li>TX power: +15dBm@868M</li> <li>RX Sensitivity: -124dBm@Using long-range mode</li> <li>-110dBm@50 kbps</li> <li>5.4mA@RX@868M</li> <li>13.4mA@TX@+10dBm@868M</li> </ul>			20.5 x 13 x 2.1		• PCB trace
	221			BDE-RFM214								



BDE Technology was founded in 2009 in Chicago, Illinois. The company specializes in wireless technologies, particularly Wi-Fi, Bluetooth, Bluetooth Low Energy, Zigbee, Thread, Sub-1 GHz, Wi-SUN, Amazon Sidewalk, Matter, RFID and NB-IoT etc. BDE is committed to providing wireless IoT modules and solutions to OEMs, system integrators, device manufacturers and solution providers worldwide.

BDE is a Texas Instruments (TI) authorized third party module provider. BDE provides across-the-board TI wireless modules. For every TI wireless IC, BDE builds a series of modules around it. Working closely with TI wireless BU, BDE synchronizes the module development progress with that of the chips. The modules are sampled and released to the market at the same time as the ICs.

BDE is a Bluetooth SIG recommended service provider for Prequalified Components, OEM & ODM Products & Reference Designs and Software Application Development.

Equipped with BDE's innovative products and outstanding services which include wireless modules, HW/SW custom design services, certification services and world class expertise, customers are able to shorten development cycles, reduce design uncertainty, lower market risk, minimize cost, and release more competitive products into markets quickly. BDE's flexible, highly integrated products and solutions are able to be customized to the most demanding requirements in numerous IoT devices and applications in the fields of industrial automation, medical and health care, automotive, smart energy, smart building, home automation, sports & fitness and consumer electronics etc.

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