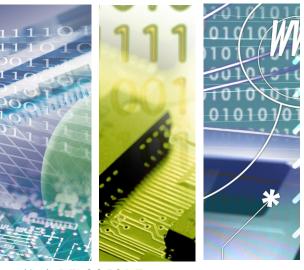


# DGF307R

802.11AX/AC/abgn Wi-Fi with BT5.2 NGFF Card





802.11abgn/AC/AX+BT5.2/5.0, 2T2R, M.2(2230), Realtek RTL8852BE

### Introduction of Products

Bointec DGF307R IEEE 802.11 a/b/g/n/ac/ax PCIE WIFI with Bluetooth 5.2 combo M.2 module is a highly integrated single-chip MIMO (Multiple In, Multiple Out) wireless local area network (WLAN) solution to let users enjoy the digital content through the latest wireless technology without using the extra cables and cords. It combines a WLAN MAC, a 2T2R capable WLAN baseband, and RF in s single chip. It enables a high performance, cost effective, low power, compact solution that easily fits onto the PCI Express and USB M.2 module.

Bointec DGF307R baseband implements Multi-user Multiple Input, Multiple Output (MU-MIMO) Orthogonal Frequency Division Multiplexing (OFDM) with two transmit and two receive paths (2T2R). Features include two spatial stream transmissions, short Guard Interval (GI) of 400ns, spatial spreading, and support for variant channel bandwidth.

Moreover, Bointec DGF307R provides one spatial stream space- time block code (STBC), Transmit Beam forming (TXBF) and Low Density Parity Check (LDPC) to extend the range of transmission. At the receiver, extended range and good minimum sensitivity is achieved by having receiver diversity up to 2 antennas. As the recipient, DGF307R also supports explicit sounding packet feedback that helps senders with beam forming capability.

## **Product Highlight**

Wi-Fi Feature:

- ☐ Support 802.11ax 2x2, Wave-2 compliant with MU-MIMO
- $\hfill\Box$  Complete 802.11n MIMO solution for 2.4GHz and 5Ghz band
- ☐ Host Interface PCIe v2.1 Gen2.
- Multiple BSSID feature allows the RTL8852BE to assume multiple MAC identities when used as a wireless bridge

BT Feature:

- □ Compatible with Bluetooth v5.2
- □ Host Interface: USB 2.0
- □ Integrated 32K oscillator for power management



# Specification

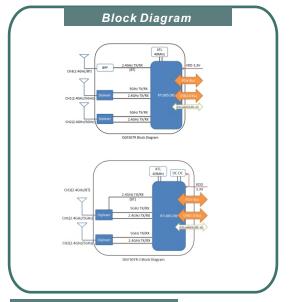
802.11ax (HE SU, non-OFDMA 20M+1z): MCSO-MCS11(1T1R) 3.6-143.4Mbps; 802.11ax (HE SU, non-OFDMA 40M+1z): MCSO-MCS11(1T1R) 7.3-28.8 Mbps; 802.11ax (HE SU,non-OFDMA 40M+1z): MCSO-MCS11(1T1R) 7.3-28.8 Mbps; 802.11ax (HE SU,non-OFDMA 40M+1z): MCSO-MCS11(2T2R) 14.6-573.5Mbps	Data Rate	802.11b: 1. 2, 5.5. 11Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n (HT20): MCSO~MCS7(1T1R SISO) 6.5~72.2Mbps; 802.11n (HT20): MCS8~MCS15(2T2R MIMO) 13~144.4Mbps; 802.11n (HT40): MCSO~MCS7(1T1R) 13.5~150Mbps; 802.11n (HT40): MCS8~MCS15(2T2R) 27~300Mbps; 802.11ax (HE MU,26~242RU): MCS0~MCS11(1T1R) 0.4~143.4Mbps; 802.11ax (HE MU,26~242RU): MCS0~MCS11(2T2R) 0.8~286.8Mbps; 802.11ax (HE SU, non-OFDMA 20MHz): MCSO~MCS11(1T1R) 3.6~143.4Mbps; 802.11ax (HE SU, non-OFDMA 20MHz): MCSO~MCS11(2T2R) 7.3~286.8Mbps;	
Media Access Control         802.11ax (HE SU,non-OFDMA 40MHz): MCS0-MCS11(2T2R) 14.6-573.5Mbps           Media Access Control         DSS, OFDM, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM for WLAN           Network Architecture         2.4GHz: USA, NORTH AMERICA, Canada and Taiwan − 1 ~ 11 China, Australia, Most European Countries − 1 ~ 13 Japan − 1 ~ 14(CH14 only for 802.11b) 802.11g:           Operation Channel         USA, Canada and Taiwan − 1 ~ 11 China, Australia, Most European Countries − 1 ~ 13 SGHz: USA, EUROPE − 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165           Frequency Range         2.4 GHz: 2.412 ~ 2.484 GHz 5 GHz: 4.915 ~ 5.925Ghz           WAPI         WAPI           Security         WEP 64-bit and 128-bit encryption with H/W TKIP processing WPAWPA2 (WI-FI Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard           Bluetooth         Bluetooth           Standard         Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2           Bus Interface         USB2.0           Data Rate         Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps           Modulation         GFSK (1Mbps), IV4 DQPSK (2Mbps) and 8DPSK (3Mbps)           Frequency Range         2102-2480MHz           Transmit Output         Power           Power         Class 2: 0~6 dBm           Receiver         8- DPSK: -83 dBm (Typical)           8- DPSK: -83 dBm (Typical)<		802.11ax (HE_SU, non-OFDMA 20MHz): MCS0~MCS11(1T1R) 3.6~143.4Mbps;	
Modulation   DSSS, OFDM, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM for WLAN   Techniques   DSSS, OFDM, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM for WLAN   Network Architecture   2.4GHz; USA, NORTH AMERICA, Canada and Taiwan − 1 ~ 11   China, Australia, Most European Countries − 1 ~ 13   Japan − 1 ~ 14 (CH14 only for 802.11b)   302.11c; USA, Canada and Taiwan − 1 ~ 11   China, Australia, Most European Countries − 1 ~ 13   SGHz; USA, EUROPE − 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165   Frequency Range   2.4 GHz ; 2.412 − 2.484 GHz   5 GHz; 4.915 −5.925Ghz   WAPI   Security   WEP 64-bit and 128-bit encryption with HW TKIP processing   WPAWIPA2 (WI-Fi Protected Access)   AES-CCMP hardware implementation as part of 802.11i security standard   Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2   Bus Interface   USB2.0   Data Rate   Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps   Modulation   GFSK (1Mbps), I7/4 DQPSK (2Mbps) and 8DPSK (3Mbps)   Frequency Range   2402−2480MHz   Transmit Output   Class 2 : 0−6 dBm   Receiver   GFSK: -88 dBm (Typical)   Bluetooth Suite   Electronics characteristics   China   First		802.11ax (HE SU,non-OFDMA 40MHz): MCS0~MCS11(2T2R) 14.6~573.5Mbps;	
Design		rol	
Network Architecture		DSSS, OFDM, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM for WLAN	
2.4GHz: USA, NORTH AMERICA, Canada and Taiwan – 1 ~ 11			
USA, NORTH AMERICA, Canada and Taiwan − 1 ~ 11 China, Australia, Most European Countries − 1 ~ 13 Japan − 1 ~ 14(CH14 only for 802.11b)  802.11g:  Operation Channel USA, Canada and Taiwan − 1 ~ 11 China, Australia, Most European Countries − 1 ~ 13 5GHz: USA, EUROPE − 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165  Frequency Range Frequency Range WAPI Security WEP 64-bit and 128-bit encryption with H/W TKIP processing WPA/WPA2 (Wi-Fi Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard  Bluetooth  Standard Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2  Bus Interface USB2.0 Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), ΓI/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range Transmit Output Power Receiver Sensitivity GFSK: −88 dBm (Typical)  8-DPSK: −88 dBm (Typical)  8-DPSK: −83 dBm (Typical)  Software Bluetooth Suite  Electronics characteristics  Operating Voltage CH1: Wi-Fi → TX/RX CH2: Wi-Fi → TX/RX CH2: Wi-Fi → TX/RX CH3: Bluetooth → TX/RX CH3: Bluetooth → TX/RX CH3: Bluetooth → TX/RX CH3: Bluetooth → TX/RX CP9 commercial: -40°C ~ +85°C Operating Humidity Operating humidity: <85%	Network Architectur		
Japan – 1 ~ 14(CH14 only for 802.11b) 802.11g:   802.11g:			
Operation Channel         802,11q:         USA, Canada and Taiwan – 1 ~ 11           China, Australia, Most European Countries – 1 ~ 13         5GHz:         USA, EUROPE – 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165           Frequency Range         2.4 GHz: 2.412 ~ 2.484 GHz 5 GHz: 4.915 ~ 5.925Ghz         WAPI           Security         WEP 64-bit and 128-bit encryption with H/W TKIP processing WPAWPA2 (Wi-Fi Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard           Standard         Bluetooth         Bluetooth           Standard         Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2           Bus Interface         USB2.0           Data Rate         Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps           Modulation         GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)           Frequency Range         C402~2480MHz           Transmit Output Power         Class 2 : 0~6 dBm           Receiver         GFSK: -88 dBm (Typical)           Sensitivity         gFSK: -89 dBm (Typical)           Software         Bluetooth Suite           Electronics characteristics           Operating Voltage         3.3 V           OS Supported         Microsoft Windows           I—PEX MHF4 Connector Receptacle (20449)           CH1 : Wi-Fi → TX/RX			
Operation Channel         USA. Canada and Taiwan – 1 ~ 11           China, Australia, Most European Countries – 1 ~ 13           5GHz:         USA, EUROPE – 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165           Frequency Range         2.4 GHz: 2.412 ~ 2.484 GHz 5 GHz: 4.915 ~ 5.925Ghz           WAPI         WEP 64-bit and 128-bit encryption with H/W TKIP processing WPAWPA2 (Wi-Fi Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard           Bluetooth         Bluetooth           Standard         Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2           Bus Interface         USB2.0           Data Rate         Bluetooth 2.1+EDR data rates of 1.2, and 3Mbps           Modulation Scheme         GFSK (1Mbps), IV4 DQPSK (2Mbps) and 8DPSK (3Mbps)           Frequency Range         2402~2480MHz           Transmit Output Power         Class 2: 0~6 dBm           Receiver         GFSK: -88 dBm (Typical)           Sensitivity         GFSK: -89 dBm (Typical)           Sensitivity         Bluetooth Suite           Electronics characteristics           Operating Voltage         3.3 V           OS Supported         Microsoft Windows           I-PEX M+IF4 Connector Receptacle (20449)           CH1: Wi-Fi → TX/RX           CH2: Wi-Fi → TX/			
China, Australia, Most European Countries — 1 ~ 13	Operation Channel		
SGHz: USA, EUROPE – 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165	Operation Channel	· · · ·	
USA, EUROPE – 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165  Frequency Range  Frequency Range  WAPI  Security  WEP 64-bit and 128-bit encryption with H/W TKIP processing WPAWPAZ (Wi-Fi Protected Access)  AES-CCMP hardware implementation as part of 802.11i security standard  Bluetooth  Standard  Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2  Bus Interface  USB2.0  Data Rate  Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation  Scheme  Frequency Range  Frequency Range  Transmit Output  Power  Receiver  Sensitivity  GFSK: -88 dBm (Typical)  8-DPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software  Bluetooth Suite  Electronics characteristics  Operating Voltage  OS Supported  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating  Commercial: -40°C ~ +85°C  Operating Humidity			
112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165			
Security			
Frequency Range    Security	-		
WAPI   WEP 64-bit and 128-bit encryption with H/W TKIP processing   WPAWPA2 (Wi-Fi Protected Access)   AES-CCMP hardware implementation as part of 802.11i security standard   Bluetooth	Frequency Range		
Security       WEP 64-bit and 128-bit encryption with H/W TKIP processing WPAWPA2 (Wi-Fi Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard         Bus Interface         Bus Interface       USB2.0         Data Rate       Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps         Modulation Scheme       GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)         Frequency Range       2402~2480MHz         Transmit Output Power       Class 2 : 0~6 dBm         Power       GFSK: -88 dBm (Typical)         Sensitivity       g-PSK: -89 dBm (Typical)         Software       Bluetooth Suite         Electronics characteristics         Operating Voltage       3.3 V         Operating Voltage       Microsoft Windows         Intervention Prograting Liberton Prograting Prograture         Commercial: 0°C ~ +70°C         Storage Temperature       Commercial: -40°C ~ +85°C         Operating Humidity       Operating humidity: <85%			
WPAWPA2 (Wi-Fi Protected Access) AES-CCMP hardware implementation as part of 802.11i security standard  Bluetooth  Standard Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2  Bus Interface USB2.0  Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range 2402~2480MHz  Transmit Output Power  Receiver GFSK: -88 dBm (Typical)  ### ### ### ### ### ### #### ### #### ####			
AES-CCMP hardware implementation as part of 802.11i security standard  Bluetooth  Standard Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2  Bus Interface USB2.0  Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range  Frequency Range  Class 2:0~6 dBm  GFSK:-88 dBm (Typical)  ### ### ############################	Security	, , , ,	
Standard Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2  Bus Interface USB2.0  Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range 2402~2480MHz  Transmit Output Power Class 2 : 0~6 dBm  Receiver Sensitivity GFSK: -88 dBm (Typical)  ### ### ### ### ### ### #### #### ##		,	
Bus Interface USB2.0  Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), Γl/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range 2402~2480MHz  Transmit Output Power Class 2: 0~6 dBm  Receiver Sensitivity GFSK: -88 dBm (Typical)  □ π/4-DQPSK: -89 dBm (Typical)  □ π/4-DQPSK: -89 dBm (Typical)  Software Bluetooth Suite  ■ Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			
Bus Interface USB2.0  Data Rate Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  Modulation Scheme GFSK (1Mbps), Γl/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range 2402~2480MHz  Transmit Output Power Class 2: 0~6 dBm  Receiver Sensitivity GFSK: -88 dBm (Typical)  □ π/4-DQPSK: -89 dBm (Typical)  □ π/4-DQPSK: -89 dBm (Typical)  Software Bluetooth Suite  ■ Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			
Data Rate       Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps         Modulation Scheme       GFSK (1Mbps), Γ/4 DQPSK (2Mbps) and 8DPSK (3Mbps)         Frequency Range       2402~2480MHz         Transmit Output Power       Class 2 : 0~6 dBm         Receiver Sensitivity       GFSK: -88 dBm (Typical)         8-DPSK: -89 dBm (Typical)       8-DPSK: -83 dBm (Typical)         Software       Bluetooth Suite         Electronics characteristics         Operating Voltage       3.3 V         OS Supported       Microsoft Windows         I-PEX MHF4 Connector Receptacle (20449)       CH1 : Wi-Fi → TX/RX         CH2 : Wi-Fi → TX/RX       CH2 : Wi-Fi → TX/RX         CH3: Bluetooth → TX/RX       Environmental         Operating Temperature       Commercial: 0°C ~ +70°C         Storage Temperature       Commercial: -40°C ~ +85°C         Operating Humidity       Operating humidity: <85%			
Data Rate       Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps         Modulation Scheme       GFSK (1Mbps), Γ/4 DQPSK (2Mbps) and 8DPSK (3Mbps)         Frequency Range       2402~2480MHz         Transmit Output Power       Class 2 : 0~6 dBm         Receiver Sensitivity       GFSK: -88 dBm (Typical)         8-DPSK: -89 dBm (Typical)       8-DPSK: -83 dBm (Typical)         Software       Bluetooth Suite         Electronics characteristics         Operating Voltage       3.3 V         OS Supported       Microsoft Windows         I-PEX MHF4 Connector Receptacle (20449)       CH1 : Wi-Fi → TX/RX         CH2 : Wi-Fi → TX/RX       CH2 : Wi-Fi → TX/RX         CH3: Bluetooth → TX/RX       Environmental         Operating Temperature       Commercial: 0°C ~ +70°C         Storage Temperature       Commercial: -40°C ~ +85°C         Operating Humidity       Operating humidity: <85%	Standard	Bluetooth 2.1+Enhanced Data Rate (EDR) + BT4.2+BT5.2	
Modulation Scheme       GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)         Frequency Range       2402~2480MHz         Transmit Output Power       Class 2 : 0~6 dBm         Receiver Sensitivity       GFSK: -88 dBm (Typical)         Sensitivity       8-DPSK: -89 dBm (Typical)         Software       Bluetooth Suite         Electronics characteristics         Operating Voltage       3.3 V         OS Supported       Microsoft Windows         I-PEX MHF4 Connector Receptacle (20449)         CH1 : Wi-Fi → TX/RX       CH2 : Wi-Fi → TX/RX         CH3: Bluetooth → TX/RX         Environmental         Operating Temperature       Commercial: 0°C ~ +70°C         Storage Temperature       Commercial: -40°C ~ +85°C         Operating Humidity		` '	
Scheme  GFSK (1Mbps), 11/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  Frequency Range Transmit Output Power  Receiver Sensitivity  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software  Bluetooth Suite  Electronics characteristics  Operating Voltage OS Supported  Microsoft Windows  LPEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Operating Humidity  Operating humidity: <85%  Operating humidity: <85%	Bus Interface	USB2.0	
Frequency Range       2402~2480MHz         Transmit Output Power       Class 2 : 0~6 dBm         Receiver Sensitivity       GFSK: -88 dBm (Typical)         π /4-DQPSK: -89 dBm (Typical)         8-DPSK: -83 dBm (Typical)         Software       Bluetooth Suite         Electronics characteristics         Operating Voltage         Operating Voltage         Antenna Type         LPEX MHF4 Connector Receptacle (20449)         CH1 : Wi-Fi → TX/RX         CH2 : Wi-Fi → TX/RX         CH3 : Bluetooth → TX/RX         Environmental         Operating Temperature         Commercial: -40°C ~ +85°C         Operating Humidity         Operating Humidity	Bus Interface Data Rate	USB2.0	
Transmit Output Power  Receiver Sensitivity  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software  Bluetooth Suite  Electronics characteristics  Operating Voltage 3.3 V  OS Supported  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1 : Wi-Fi → TX/RX  CH2 : Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating humidity	Bus Interface Data Rate Modulation	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps	
Power Receiver Sensitivity  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software Bluetooth Suite  Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1 : Wi-Fi → TX/RX  CH2 : Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating humidity	Bus Interface Data Rate Modulation Scheme	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)	
Receiver Sensitivity  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software  Bluetooth Suite  Electronics characteristics  Operating Voltage  OS Supported  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  CH3: Bluetooth → TX/RX  CH3: Bluetooth → TX/RX  Ch3: Bluetooth → TX/RX  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)	
Sensitivity  GFSK: -88 dBm (Typical)  ### /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software  Bluetooth Suite  Electronics characteristics  Operating Voltage  OS Supported  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  CH3: Bluetooth → TX/RX  CH3: Bluetooth → TX/RX  Ch3: Bluetooth → TX/RX  Ch4: Wi-Fi → TX/RX  CH5: Wi-Fi → TX/RX  CH7: Wi-Fi → TX/RX  CH7: Wi-Fi → TX/RX  CH8: Bluetooth → TX/RX  CH9: Wi-Fi → TX/RX	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz	
π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Software Bluetooth Suite  Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz	
8-DPSK: -83 dBm (Typical)  Software Bluetooth Suite  Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Commercial: 0°C ~ +70°C  Storage Temperature Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2:0~6 dBm	
Software Bluetooth Suite  Electronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Commercial: 0°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2:0~6 dBm  GFSK: -88 dBm (Typical)	
Plectronics characteristics  Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Commercial: 0°C ~ +70°C  Storage Temperature Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)	
Operating Voltage 3.3 V  OS Supported Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature Commercial: 0°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)	
OS Supported  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi \rightarrow TX/RX  CH2: Wi-Fi \rightarrow TX/RX  CH3: Bluetooth \rightarrow TX/RX  Environmental  Operating Temperature  Commercial: 0°C \circ +70°C  Storage Temperature  Commercial: -40°C \circ +85°C  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)	
Antenna Type  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite	
Antenna Type	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics	
Antenna Type  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature  Storage Temperature  Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2:0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V	
CH2: WI-FI → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Operating Temperature  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2:0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows	
Commercial: 0°C ~ +70°C	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), П/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz Class 2:0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)	
Commercial: 0°C ~ +70°C	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported	USB2.0  Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX	
Operating Temperature  Commercial: 0°C ~ +70°C  Storage Temperature  Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX	
Temperature Commercial: 0°C ~ +70°C  Storage Temperature Commercial: -40°C ~ +85°C  Operating Humidity  Operating Humidity  Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported	USB2.0  Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX	
Operating Humidity  Operating Humidity: <85%	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported  Antenna Type	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental	
Operating Humidity	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported  Antenna Type	USB2.0 Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental	
storage humidity: <60%	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported  Antenna Type	USB2.0  Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Commercial: 0°C ~ +70°C	
	Bus Interface Data Rate Modulation Scheme Frequency Range Transmit Output Power Receiver Sensitivity  Software  Operating Voltage OS Supported  Antenna Type  Operating Temperature Storage Temperature	USB2.0  Bluetooth 2.1+EDR data rates of 1,2, and 3Mbps  GFSK (1Mbps), ⊓/4 DQPSK (2Mbps) and 8DPSK (3Mbps)  2402~2480MHz  Class 2: 0~6 dBm  GFSK: -88 dBm (Typical)  π /4-DQPSK: -89 dBm (Typical)  8-DPSK: -83 dBm (Typical)  Bluetooth Suite  Electronics characteristics  3.3 V  Microsoft Windows  I-PEX MHF4 Connector Receptacle (20449)  CH1: Wi-Fi → TX/RX  CH2: Wi-Fi → TX/RX  CH3: Bluetooth → TX/RX  Environmental  Commercial: 0°C ~ +70°C  Commercial: -40°C ~ +85°C	

### Product quick glance





#### ME Drawing/placement 22±0.15 (11) 3 129 3.80±0.15 TOP SIDE TOP SIDE BOTTOM SIDE /COMPONENT/ 30±0.15 (20.20) AREA heminine (Tyle Cool 4.50±0.15



### Ordering Information

PART NUMBER	DESCRIPTION
TFGA-DGF307R0-11	Finished non packaing,Bointec,DGF307R
TFGA-DGF307R1-11	Finished non packaing,Bointec,DGF307R-1





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**Bointec Authorized Distributer**