

General Description

IRF303U, Dual band triple mode Wireless LAN module, is compliant with 802.11a/b/g standard.

IRF303U is designed for AV transmission, and it's high performance enable 54Mbps high-bit data rate communication.

Feature

- Support QoS
- Hardware-Based MAC Access Protocol
- Low packet error rate



Specifications

- Host Interface : Mini PCI Standard 1.0
- Standard : IEEE802.11a/b/g compliant
- Radio Signal Type : Direct Sequence Spread Spectrum (DSSS)
Orthogonal Frequency Division Multiplexing (OFDM)
- Wireless Data Rate : 802.11b=1/2/5.5/11Mbps
802.11g/a=6/9/12/18/24/36/48/54Mbps
- Frequency Band : 2400-2483.5MHz / 5150-5350MHz / 5725-5825MHz
- Channel Support : ch1-ch11 / ch34-ch64ch / ch149-ch161
- Data Modulation Techniques : BPSK (1Mbps), QPSK (2Mbps), CCK (5.5/11Mbps)
OFDM (6/9/12/18/24/36/48/54Mbps)
- Operating Range : 660ft (Outdoor, Line of sight)
100ft (Indoor)
- Media Access Protocol : Ad-Hoc (Peer-to-Peer)
Infrastructure
- Security : WEP (Key Length 40/128/256bit) / AES / WPA (PSK)
- Power Voltage : 3.3V (+/- 5%)
- Dimensions : 90.0 x 32.0 x 4.6mm
- Weight : Approx.12g
- Operating Temperature Range : -0C to +50C

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NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For customers in the United States

This product contains mercury. Disposal of this product may be regulated if sold in the United States.

For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance (<http://eia.org>).

This device complies with Part 15 of the FCC Rules.

Operation is subjected to the following two conditions:

(1) This device may not cause harmful interference,
and

(2) This device must accept any interference received, including interference that may cause undesired operation

*This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

*When using the unit with 802.11a (5GHz), use in doors.

FCC Radiation Exposure Statement:

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. IRF302U has been tested and found to comply with the Federal Communications Commission (FCC) guidelines on radio frequency energy (RF) exposures. The maximum SAR levels tested for IRF302U has been shown to be 1.31W/kg at Body.

Electrical Characteristics

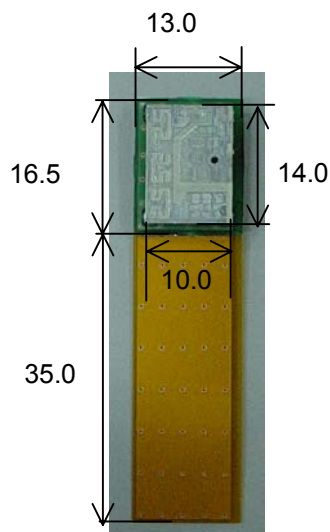
V_{dd}=3.3V, T_a=25°C

Parameter		Symbol	Min	Typ	Max	Units	
Output power	2.4GHz (54Mbps)	Pout2	-	20	-	dBm	
	5GHz (54Mbps)	Pout5	-	18	-	dBm	
Supply current	Tx	2.4GHz	I _{ddtx2}	-	650	-	mA
		5GHz	I _{ddtx5}	-	760	-	mA
	Rx	I _{ddrx}	-	370	400	mA	
Center Frequency Tolerance		ftol	-10	0	+10	ppm	
Modulation Accuracy (64QAM)	2.4GHz (54Mbps)	EVM2	-	4.3	-	%	
	5GHz (54Mbps)	EVM5	-	5.0	-	%	
Sensitivity	2.4GHz (54Mbps)	Rx_Sens2	-	-71	-	dBm	
	5GHz (54Mbps)	Rx_Sens5	-	-70	-	dBm	
Packet Error Rate (-65dBm input)	2.4GHz (54Mbps)	PER2	-	0	-	%	
	5GHz (54Mbps)	PER5	-	0	-	%	

Antenna

Antenna1

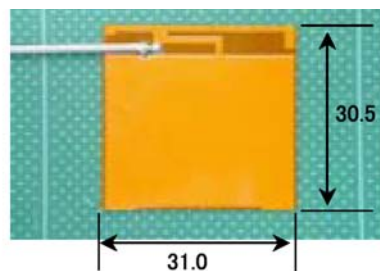
- Model Name : EA5800
- Type : Chip Antenna
- Gain (Peak) : 2.4GHz_Band : +3.5dBi(Typ)
5GHz_Band : +3.5dBi(Typ)
- Connector Type : U.FL



Unit:mm

Antenna2

- Model Name : HFT18
- Type : Film Antenna
- Gain (Peak) : 2.4GHz_Band : +1.0dBi(Typ)
5GHz_Band : +1.9dBi(Typ)
- Connector Type : U.FL



Unit:mm

Dimension

