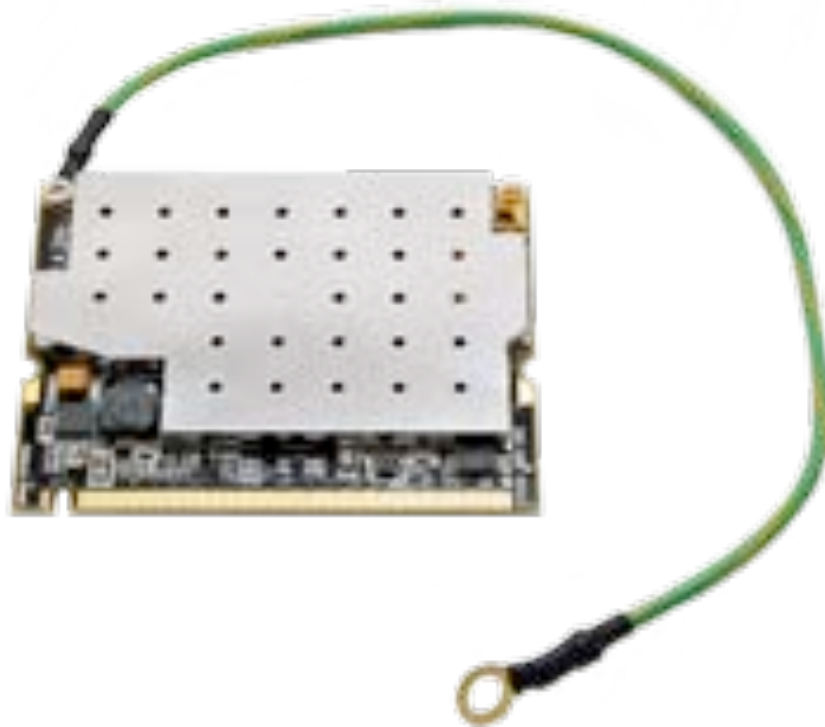




XTREMERange2

Carrier-Class 2.4GHz 802.11b/g Radio Module

OEM INTEGRATION GUIDE



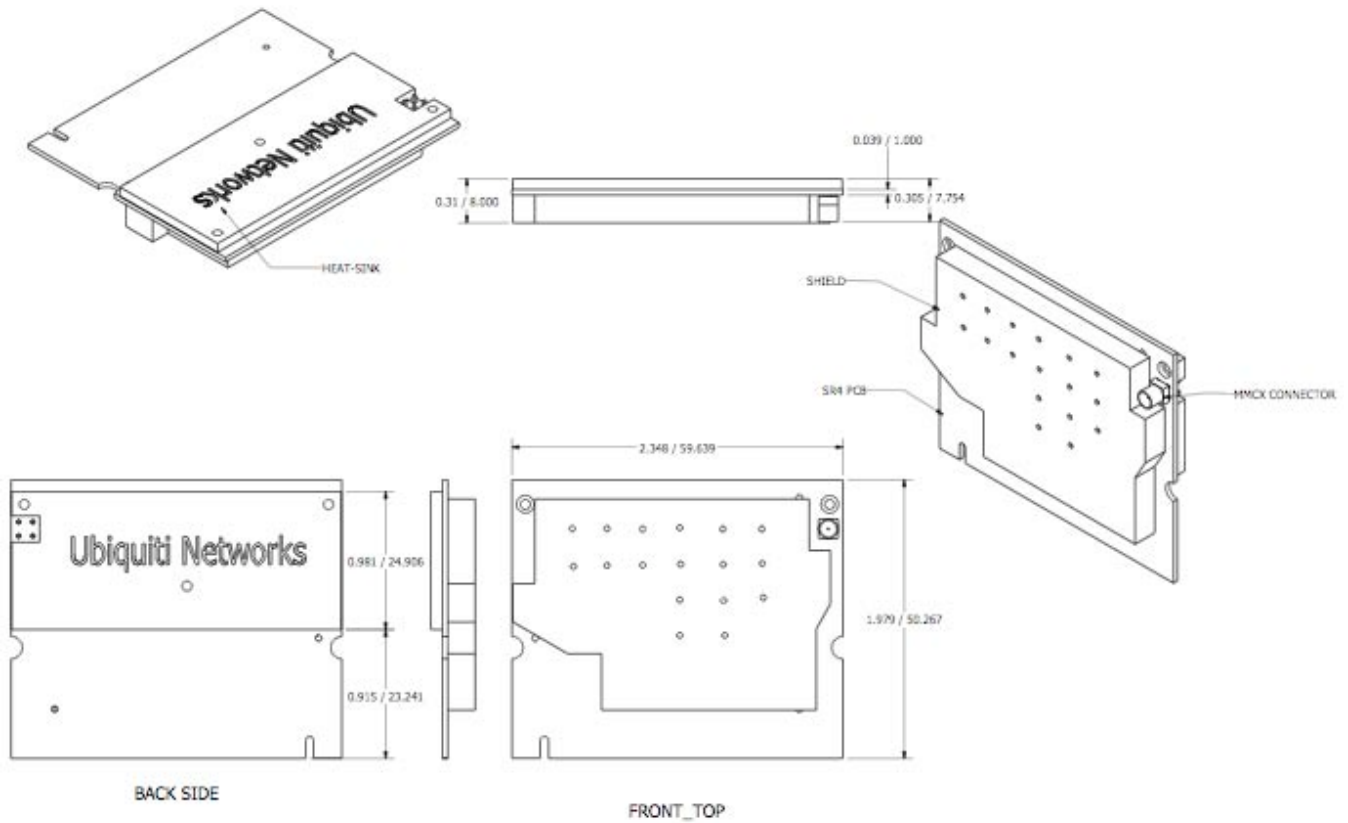
XTREMERange2

TECHNICAL SPECIFICATIONS

CARD INFORMATION								
Chipset	Atheros, 6th Generation, AR2316							
Radio Operation	IEEE 802.11b/g, 2.4GHz							
Interface	32-bit mini-PCI Type IIIA							
Operation Voltage	3.3VDC							
Antenna Ports	Single MMCX							
Temperature Range	-40C to +80C (extended temp version up to +95C)							
Security	WPA, WPA2, AES-CCM & TKIP Encryption, 802.1x, 64/128/152bit WEP							
Data Rates	6Mbps, 9Mbps, 12Mbps, 24Mbps, 36Mbps, 48Mbps. 54Mbps							
TX Channel Width Support	5MHz / 10MHz / 20MHz / 40MHz							
RoHS Compliance	YES							
REGULATORY INFORMATION								
Wireless Modular Approvals		FCC Part 15.247, IC RS210						
RADIO OPERATING FREQUENCY 2412-2462 MHz (2312-2732 MHz*)								
TX SPECIFICATIONS					RX SPECIFICATIONS			
802.11b	DataRate	TX Power	Tolerance		802.11b	DataRate	Sensitivity	Tolerance
	1Mbps	26 dBm	+/-1dB			1Mbps	-97 dBm	+/-1dB
	2Mbps	26 dBm	+/-1dB			2Mbps	-96 dBm	+/-1dB
	5.5Mbps	26 dBm	+/-1dB			5.5Mbps	-95 dBm	+/-1dB
11Mbps	26 dBm	+/-1dB	11Mbps	-92 dBm	+/-1dB			
802.11g OFDM	6Mbps	26 dBm	+/-1dB	802.11g OFDM	6Mbps	-94 dBm	+/-1dB	
	9Mbps	26 dBm	+/-1dB		9Mbps	-93 dBm	+/-1dB	
	12Mbps	26 dBm	+/-1dB		12Mbps	-91 dBm	+/-1dB	
	18Mbps	26 dBm	+/-1dB		18Mbps	-90 dBm	+/-1dB	
	24Mbps	26 dBm	+/-1dB		24Mbps	-86 dBm	+/-1dB	
	36Mbps	24 dBm	+/-1dB		36Mbps	-83 dBm	+/-1dB	
	48Mbps	23 dBm	+/-1dB		48Mbps	-77 dBm	+/-1dB	
	54Mbps	22 dBm	+/-1dB		54Mbps	-74 dBm	+/-1dB	
ADJUSTABLE CHANNEL SIZE SUPPORT (Increase Channel Capacity or Increase Throughput)								
5MHz		10MHz	20MHz	40MHz (Turbo)				
CURRENT CONSUMPTION INFORMATION								
TX CURRENT CONSUMPTION					RX CURRENT CONSUMPTION			
802.11b	DataRate	Current	Tolerance		802.11b	DataRate	Sensitivity	Tolerance
	1Mbps	1.30 A	+/-100mA			1Mbps	300 mA	+/-100mA
	2Mbps	1.30 A	+/-100mA			2Mbps	300 mA	+/-100mA
	5.5Mbps	1.30 A	+/-100mA			5.5Mbps	300 mA	+/-100mA
11Mbps	1.30 A	+/-100mA	11Mbps	300 mA	+/-100mA			
802.11g OFDM	6Mbps	1.30 A	+/-100mA	802.11g OFDM	6Mbps	300 mA	+/-100mA	
	9Mbps	1.30 A	+/-100mA		9Mbps	300 mA	+/-100mA	
	12Mbps	1.30 A	+/-100mA		12Mbps	300 mA	+/-100mA	
	18Mbps	1.30 A	+/-100mA		18Mbps	300 mA	+/-100mA	
	24Mbps	1.30 A	+/-100mA		24Mbps	300 mA	+/-100mA	
	36Mbps	1.10 A	+/-100mA		36Mbps	300 mA	+/-100mA	
	48Mbps	1.00 A	+/-100mA		48Mbps	300 mA	+/-100mA	
	54Mbps	0.90 A	+/-100mA		54Mbps	300 mA	+/-100mA	
ESD/EMP CABLE SPECIFICATIONS								
Cable Dimensions		8 in length, 0.55mm diameter (26AWG)						
Terminal Material / Dimensions		Copper / 4.3mm diameter						
Attachment Procedure		Ground end to enclosure point tied to Earth Ground						
RANGE PERFORMANCE								
Indoor (Antenna Dependent):		Up to 200meters						
Outdoor (Antenna Dependent):		Over 50km						
DRIVER INFORMATION								
Operating System Support		Linux MADWIFI, WindowsXP, Windows2000						

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MECHANICAL DIMENSIONS



495-499 Montague Expwy.
Milpitas, CA 95035
San Jose, CA 95112
T (408)-942-3085
F (408)-351-4973
<http://www.ubnt.com>

Compliance

FCC

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

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For MPE and antenna usage details, please visit our website at [**www.ubnt.com/compliance**](http://www.ubnt.com/compliance)

Industry Canada

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

En vertu des règlements d'Industrie Canada, cet émetteur radio ne peut fonctionner avec une antenne d'un type et un maximum (ou moins) approuvés pour gagner de l'émetteur par Industrie Canada.

Pour réduire le risque d'interférence aux autres utilisateurs, l'antenne type et son gain doivent être choisies de façon que l'équivalent puissance isotrope rayonnée équivalente (pire) n'est pas plus que cela autorisé pour une communication réussie.

Et Cet appareil est conforme à la norme RSS Industrie Canada exempts de licence norme (s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne peut pas provoquer d'interférences et
2. Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement du dispositif.

RF Exposure Warning

The transceiver described here emits radio frequency energy. Although the power level is low, the concentrated energy from a directional antenna may pose a health hazard. Do not allow people to come closer than 55.53 cm to the antenna when the transmitter is operating.

Additional information on RF exposure is available on the Internet at **www.fcc.gov/oet/info/documents/bulletins**

L'émetteur-récepteur décrit ici émet de l'énergie de fréquence radio. Bien que le niveau de puissance est faible, l'énergie concentrée à partir d'une antenne directionnelle peut présenter un danger pour la santé. Ne pas permettre aux gens de se rapprocher de 55.53 cm à l'antenne lorsque l'émetteur est en marche.

Des renseignements supplémentaires sur l'exposition aux RF est disponible sur Internet à **www.fcc.gov/oet/info/documents/bulletins**

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

Alert sign! Follows CE marking

Alert sign must be indicated if a restriction on use applied to the product and it must follow the CE marking.



NB-Identification number (if there is any)

Notified body number is indicated if it is involved in the conformity assessment procedure.



Please check the CE mark on the product label to find out which notified body was involved during assessment.

Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.



WARNING: Do not use this product in location that can be submerged by water.



WARNING: Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.
3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
 - a. Do not substitute the power cord with one that is not the provided approved type. Never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
 - b. The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.
 - c. Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.

General Warranty

UBIQUITI NETWORKS, Inc ("UBIQUITI NETWORKS") represents and warrants that the Products furnished hereunder shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by UBIQUITI NETWORKS under normal use and operation. UBIQUITI NETWORKS sole and exclusive obligation under the foregoing warranty shall be to repair or replace, at its option, any defective Product that fails during the warranty period. The expense of removal and reinstallation of any item is not included in this warranty.

The foregoing warranty is exclusive and in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose and any warranties arising from a course of dealing, usage or trade practice with respect to the products. Repair or replacement in the manner provided herein shall be the sole and exclusive remedy of Buyer for breach of warranty and shall constitute fulfillment of all liabilities of UBIQUITI NETWORKS with respect to the quality and performance of the Products. UBIQUITI NETWORKS reserves the right to inspect all defective Products (which must be returned by Buyer to UBIQUITI NETWORKS factory freight prepaid).

No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from UBIQUITI NETWORKS. Products returned without an RMA number will not be processed and will be returned to Buyer freight collect. UBIQUITI NETWORKS shall have no obligation to make repairs or replacement necessitated by catastrophe, fault, negligence, misuse, abuse, or accident by Buyer, Buyer's customers or any other parties. The warranty period of any repaired or replaced. Product shall not extend beyond its original term.

Warranty Conditions

The foregoing warranty shall apply only if:

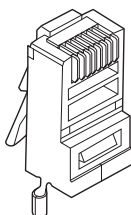
- (I) The Product has not been subjected to misuse, neglect or unusual physical, electrical or electromagnetic stress, or some other type of accident.
- (II) No modification, alteration or addition has been made to the Product by persons other than UBIQUITI NETWORKS or UBIQUITI NETWORK'S authorized representatives or otherwise approved by UBIQUITI NETWORKS.
- (III) The Product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation.
- (IV) All Ethernet cabling runs use CAT5 (or above) shielded cabling.

Disclaimer: UBIQUITI NETWORKS does not warrant that the operation of the products is error-free or that operation will be uninterrupted. In no event shall UBIQUITI NETWORKS be responsible for damages or claims of any nature or description relating to system performance, including coverage, buyer's selection of products for buyer's application and/or failure of products to meet government or regulatory requirements.

Returns

In the unlikely event a defect occurs, please work through the dealer or distributor from which this product was purchased.

TOUGH Cable™



English

We recommend that you protect your networks from the most brutal environments and devastating ESD attacks with industrial-grade shielded Ethernet cable from Ubiquiti Networks. For more details, visit **www.ubnt.com/toughcable**

Deutsch

Schützen Sie Ihre Netzwerke vor extremen Umwelteinflüssen und verheerender elektrostatischer Entladung (ESD), indem Sie abgeschirmte Ethernetkabel in Unternehmensqualität von Ubiquiti Networks verwenden. Weitere Informationen erhalten Sie unter **www.ubnt.com/toughcable**

Español

Le recomendamos que proteja sus redes de los entornos más hostiles y los devastadores efectos de las descargas electrostáticas utilizando cable Ethernet blindado con calidad-industrial de Ubiquiti Networks. Para obtener más información, visite **www.ubnt.com/toughcable**

Français

Nous vous recommandons de protéger vos réseaux contre les environnements les plus brutaux et les décharges électrostatiques les plus dévastatrices avec un câble Ethernet Ubiquiti Networks avec blindage renforcé. Pour en savoir plus, rendez-vous sur **www.ubnt.com/toughcable**

Italiano

Si consiglia di proteggere le reti dagli ambienti e dagli attacchi ESD più invasivi con il cavo Ethernet schermato-di tipo industriale di Ubiquiti Networks. Per ulteriori informazioni, visitare il sito Web **www.ubnt.com/toughcable**

Ubiquiti Networks Support

Email: **support@ubnt.com**

Phone (9 a.m. - 5 p.m. PST): **408-942-1153**

Online Resources

Wiki Page: **www.ubnt.com/wiki**

Support Forum: **www.ubnt.com/forum**

Knowledge Base: **www.ubnt.com/kb**

Downloads: **www.ubnt.com/support/downloads**

