

# 11 Mbps RF Module



## "No more Wires"

### Features

- Utilizing Intersil Prism II Technology
- 2.4 ~ 2.5 GHz ISM band operations
- Data rate up to 11 mbps
- Single heterodyne conversion
- Direct Sequence Spread Spectrum Technology
- +10 to +27 dBm transmitter power out
- Includes additional LNA for receiver front end.
- Diversity ANT for better receiver signal
- System targeting IEEE 802.11b standard except Tx power out. Set Tx power out as required by Application or per Country Regulation.
- Small size :  
3.40" x 2.05" x 0.750"  
(86 x 52 x 19 mm).
- All Spec FCC part 15 ISM Band Non License compliant Radio.



### Overview

The GINA-2011 is a small, versatile high performance RF Module that delivers data up to speeds of 11Mbps/s. The Module is designed to provide up to 0.5 watt ( 27dBm) output power. The GINA-2011 RF Module is available as a plug-in module for those Researcher who wish to interface it with their own designed controllers.

GINA-2011 operates at 2.4 GHz Direct Sequence Spread Spectrum (DSSS) Modulation physical layer can be compliant with IEEE 802.11b standard insures interoperability with other Wireless LAN products.

GINA-2011's highly integrated digital modulation transceiver module can also be used for factory automation equipment and barcode readers, embedded systems, and other applications.

### APPLICATIONS

- |                            |                                     |                            |
|----------------------------|-------------------------------------|----------------------------|
| • Wireless Network         | • Last-Mile Telephone               | • PLC / Router Connections |
| • Wireless Internet        | • Camera Surveillance Control (PTZ) | • Computer Data Links      |
| • Mobile Scanner           | • Industrial Automation             | • Traffic Controls         |
| • Remote Guidance Vehicles | • GPS Data Link                     | • Remote Networking        |
| • Robotic Remote Control   | • Power & Gas Utilities             | • High Speed File Transfer |

## 11 Mbps RF Module

### RECEIVER

#### Frequency Range :

- ▶ 2.4 ~ 2.4965 GHz

#### Data Rate :

- ▶ 1 ~ 11 Mbits/s

#### Sensitivity 10-6 @ :

- ▶ -96 dBm for 1 Mbit/s
- ▶ -93 dBm for 2 Mbits/s
- ▶ -89 dBm for 5.5 Mbits/s
- ▶ -87 dBm for 11 Mbits/s

#### Noise Figure :

- ▶ Less than 10 dB

#### Supply Current :

- ▶ 150 mA without sleep mode
- ▶ 100 mA with sleep mode

## "No more Wires"

### TRANSMITTER

#### Frequency Range :

- ▶ 2.4 ~ 2.4965 GHz

#### Data Rate :

- ▶ 1 ~ 11 Mbits/s

#### Output Power :

- ▶ +10 ~ +27 dBm (adjustable)

*Note : Tx supply voltage requires at least 6.0V DC for 25 ~ 27 dBm typical power output*

#### Spurious Output :

- ▶ FCC Part 15

#### Supply Current :

- ▶ 650 mA at Maximum Out.

### UNIT SPECIFICATION

#### Supply Voltage

- ▶ 3.3v DC required for basic voltage
- ▶ 6.0 v DC TX section to get MAX power 27 dBm
- ▶ 5.0 v DC to operate for TX section, but TX power will be 24 dBm

#### Supply Current :

- ▶ 300 mA for 3.3v line required at TX condition
- ▶ 500 mA for 6.0v or 5.0v line when TX is ON

#### TX Duty Cycle :

- ▶ 30 % for TX 70 % for RX

#### Temperature Range :

- ▶ -20°C ~ +60°C

#### Antenna Connector :

- ▶ 2x MMCX connector (for Diversity)

#### Interface Connector :

- ▶ 50 PIN 1.27 mm standard female connector  
(.050"x.050" SAMTEC SOCKET SFM Series)  
P/N : SFML-125-T1-S-D-A

#### LED Indicator :

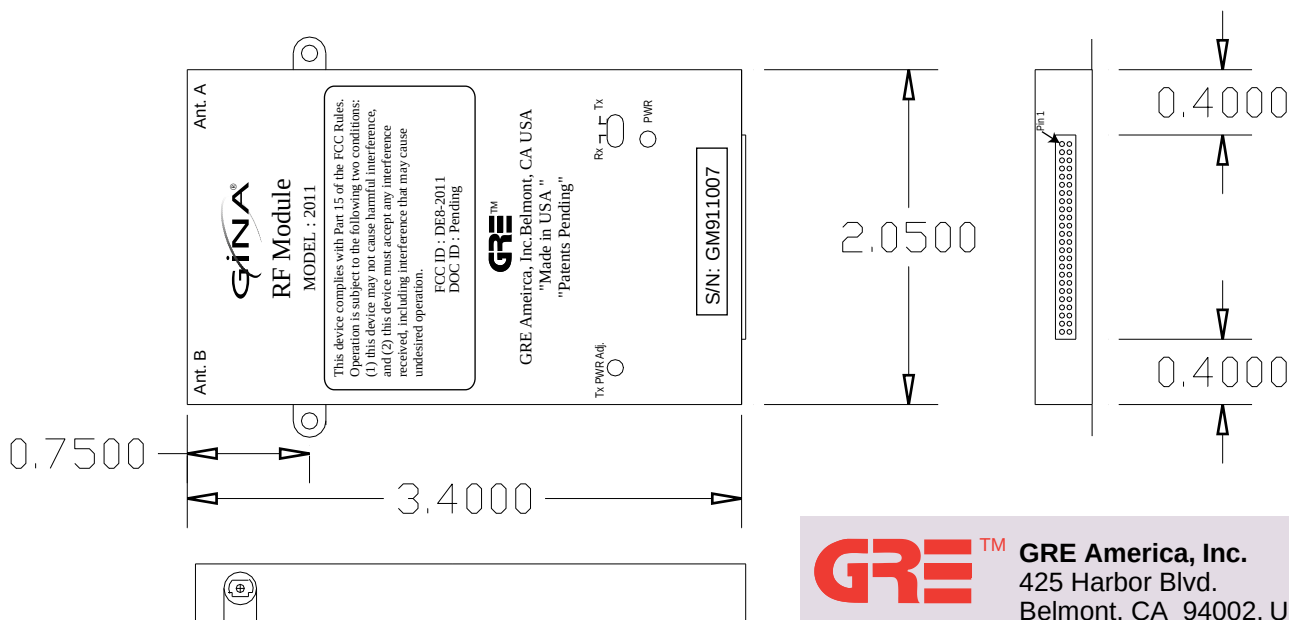
- ▶ DC PWR, TX ON, RX Receiver

#### Adjustment :

- ▶ TX power adjustment by POT volume

#### Approvals :

- ▶ Pending FCC



**GRE America, Inc.**  
425 Harbor Blvd.  
Belmont, CA 94002. USA.  
Ph : (650) 591-1400  
Fax : (650) 591-2001  
Toll Free : (800) 233-5973  
Email : sales@greamerica.com