

## RN-24 Class 1 “SuperModule”

### FEATURES-Embedded Firmware Stacks

- Bluetooth Version 2.0 compliant. (also compatible with 1.2 /1.1 )
- Embedded stacks support Serial Port Profile, no host or processor stacks required.
- Simple ASCII command interface, over local UART and remote from any Bluetooth client.
- Master and Slave modes, auto connect mode, connect on RX data (trigger) modes.
- “instant” cable replacement feature for creating quick wireless links.

### FEATURES – Hardware

- Accepts Wide range DC power input , 4Vdc to 24Vdc.
- Serial Port signals on both TTL and RS232 levels.
- UART baud rate speeds: 1200bps up to 921.6Kbps
- Sustained data rates of 240-300 kbps.
- Status LEDs.
- 330ft standard range class1, or longer depending on Antenna selection.
- Low power consumption (40mA connected,, <10mA idle mode)
- Small-form factor 24 Pin DIP radio modem package (0.1” pitch X 0.9” socket width)

### FEATURES-Optional Applications

- 9 General Purpose Input/Output Pins (4ma source/sink) controlled via remote commands
- 2 Channel 8 Bit AD converter (5Hz, 0- 1.8VDC )
- 2 MOSFET software switched outputs provides VOUT=VIN at up to 500mA continuous

## SPECIFICATIONS

| Item                             | Specifications                                                    |
|----------------------------------|-------------------------------------------------------------------|
| Frequency                        | 2402 ~ 2480MHz                                                    |
| Modulation                       | FHSS/GFSK                                                         |
| Channel intervals                | 1MHz                                                              |
| Number of channels               | 79CH                                                              |
| Power supply voltage             | 3.3Vdc ± 0.1V and 10mVp -p max. noise<br>Or 4-24VDC unregulated . |
| Current consumption              | 50mA worst case peak                                              |
| Transmission rate (over the air) | 721k-3Mbps                                                        |
| Receive sensitivity              | -80dBm typ.                                                       |
| Output level Class1              | 12dBm max.                                                        |
| Dimensions                       |                                                                   |
|                                  | With Antenna                                                      |

## RN-24S DIP Module

### PIN DEFINITIONS

#### ● RN-24S (With Antenna)



*Note:* SPI is for internal use only.  
 Part is not 5Vdc tolerant.  
 Reset is active high; pulse >5msec  
 Use a 10K $\Omega$  series resistor on input  
 PIO Sink Current is 4mA max.  
 Unused pins can float.

|    | Pin Name | Function           |            |
|----|----------|--------------------|------------|
| 1  | RESET    | Optional input     | Active LOW |
| 2  | GND      | GND                |            |
| 3  | VCC      | 3.3V power IN      |            |
| 4  |          | NC-factory test    |            |
| 5  |          | NC-factory test    |            |
| 6  |          | NC-factory test    |            |
| 7  |          | NC-factory test    |            |
| 8  | CTS      | TTL input          |            |
| 9  | TX       | TTL output         |            |
| 10 | RTS      | TTL output         |            |
| 11 | RX       | TTL input          |            |
| 12 | VIN      | 4-24VDC input      |            |
| 13 | UART_RX  | RS-232 level       |            |
| 14 | UART_TX  | RS-232 level       |            |
| 15 | UART_RTS | RS-232 level       |            |
| 16 | UART_CTS | RS-232 level       |            |
| 17 | GPIO -7  | Default baudrate   | USER-GPIO  |
| 18 | GPIO -6  | Master mode        | USER-GPIO  |
| 19 | GPIO -4  | Factory Reset      | USER-GPIO  |
| 20 | GPIO -3  | Instant cable mode | USER-GPIO  |
| 21 | GPIO -2  | Connection status  | USER-GPIO  |
| 22 | NC       |                    |            |
| 23 | NC       |                    |            |
| 24 | GND      | GND                |            |
| 25 | GPIO -11 |                    | USER-GPIO  |
| 26 | NC       |                    |            |
| 27 | NC       |                    |            |
| 28 | GPIO -10 |                    | USER-GPIO  |
| 29 | NC       |                    |            |
| 30 | NC       |                    |            |
| 31 | NC       |                    |            |
| 32 | GND      | GND                |            |

#### ● RN-24E (Without Antenna, SMA end launch jack)

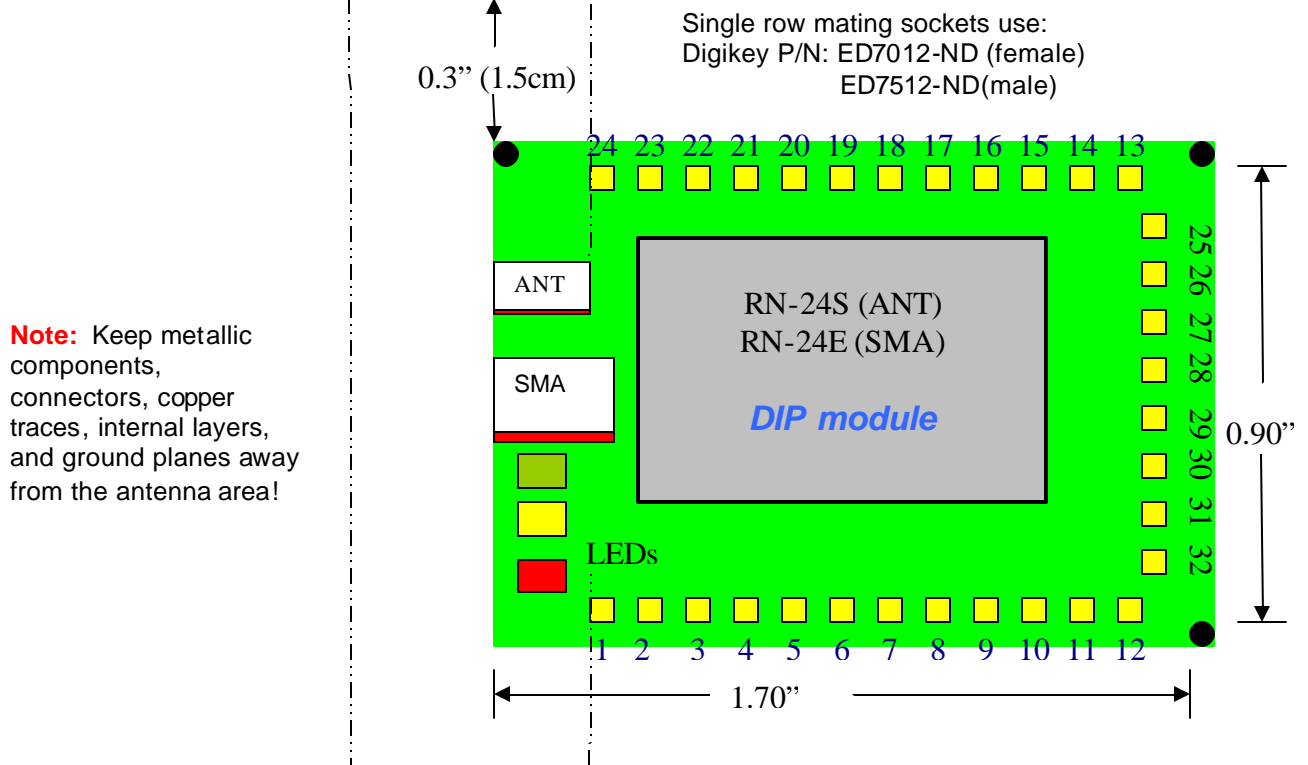


## RN-24DIP Module

### STANDARD PIN DIMENSIONS

- RN-24S (With Antenna) or E (without Antenna)

#### 24 Pin DIP (Through-hole) 0.1" Pitch and 0.9" Wide Socket



### ORDERING INFORMATION

PART NUMBERS:           RN-24S with CHIP ANT  
                                   RN-24E with SMA jack

MATCHING Antennae:    RN-SMA-S        1" short stubby  
                                   RN-SMA-RA      2" Right angle  
                                   RN-SMA-4       4" swivel high performance.