

# 2400 Wireless

## 2.4 GHz Transceiver

Part Number: CC15380-1

### Features

The Zebra 2400 Wireless is a 2.4 GHz radio designed for OEM applications that operate in the unlicensed FCC band between 2.4-2.5 GHz. The 2400 Wireless can be used for communications where physical connection is not desired. The following objectives can be achieved with the 2400 Wireless, (i) provides a limited range radio (20-30 feet line of sight), (ii) minimizes parts count and associated cost, (iii) acts as a cable replacement when used together with Zebra Wireless printers. When combined with Zebra's Intelligent Wireless Controller (part number CQ13867-1), the 2400 Wireless can be attached to any RS232C port.

To minimize integration headaches, the 2400 Wireless has modular FCC approval, which means that no additional FCC approval is required by the OEM providing an approved antenna is used.

*Note: The modular approval for this radio only applies for battery powered equipment. Installation of this radio into A.C. connected equipment requires additional regulatory approval. Please contact Zebra Technologies Corporation for details.*



Actual Size

### Electrical

Input Voltage:	Vcc = 5 Volts +,-10%
Power Dissipation:	250 mW (receive mode) 350mW (transmit mode) <5 mW (sleep mode)
Current Consumption:	50 mA (receive mode) 70 mA (transmit mode) <1 mA (sleep mode)

Operating Frequency:	2.482 GHz
Transmit Power Output:	-10 dBm (typical)
Receiver Sensitivity:	-85 dBm (typical)
Out of band interfering signal rejection:	60 dB (typical)
Baud rate:	user selectable

J1 Pin Assignments:	<table><thead><tr><th>Pin #</th><th>Signal Name<sup>1</sup></th><th>Description</th></tr></thead><tbody><tr><td>Pin 1</td><td>sleep/awake*</td><td>1 = sleep</td></tr><tr><td>Pin 2</td><td>Vcc</td><td></td></tr><tr><td>Pin 3</td><td>RXD</td><td>Receive Data</td></tr><tr><td>Pin 4</td><td>TX/RX*</td><td>1 = transmit</td></tr><tr><td>Pin 5</td><td>No connect</td><td></td></tr><tr><td>Pin 6</td><td>TXD</td><td>Transmit Data</td></tr><tr><td>Pin 7</td><td>GND</td><td></td></tr><tr><td>Pin 8</td><td>GND</td><td></td></tr></tbody></table>	Pin #	Signal Name <sup>1</sup>	Description	Pin 1	sleep/awake*	1 = sleep	Pin 2	Vcc		Pin 3	RXD	Receive Data	Pin 4	TX/RX*	1 = transmit	Pin 5	No connect		Pin 6	TXD	Transmit Data	Pin 7	GND		Pin 8	GND	
Pin #	Signal Name <sup>1</sup>	Description																										
Pin 1	sleep/awake*	1 = sleep																										
Pin 2	Vcc																											
Pin 3	RXD	Receive Data																										
Pin 4	TX/RX*	1 = transmit																										
Pin 5	No connect																											
Pin 6	TXD	Transmit Data																										
Pin 7	GND																											
Pin 8	GND																											

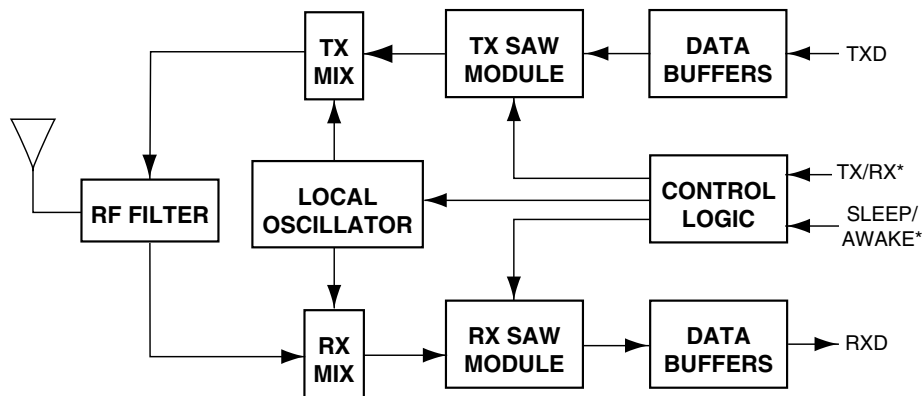
J2 Pin Assignments: (Optional)	<table><thead><tr><th>Pin #</th><th>Signal Name<sup>1</sup></th><th>Description</th></tr></thead><tbody><tr><td>Pin 1</td><td>GND</td><td></td></tr><tr><td>Pin 2</td><td>GND</td><td></td></tr></tbody></table>	Pin #	Signal Name <sup>1</sup>	Description	Pin 1	GND		Pin 2	GND	
Pin #	Signal Name <sup>1</sup>	Description								
Pin 1	GND									
Pin 2	GND									

J3 Pin Assignments: (Optional)	<table><thead><tr><th>Pin #</th><th>Signal Name<sup>1</sup></th><th>Description</th></tr></thead><tbody><tr><td>Pin 1</td><td>GND</td><td></td></tr><tr><td>Pin 2</td><td>GND</td><td></td></tr></tbody></table>	Pin #	Signal Name <sup>1</sup>	Description	Pin 1	GND		Pin 2	GND	
Pin #	Signal Name <sup>1</sup>	Description								
Pin 1	GND									
Pin 2	GND									



1. All signals are at CMOS levels

# 2400 Wireless Block Diagram



## Software

When the Intelligent Wireless Controller (P/N CQ13967-1) is not used, Zebra can provide C source code for a CS/CDMA collision avoidance communications protocol. This software supports multiple radio pairs operating in proximity to each other, and implements error detection, retries and radio address association. The radio address association algorithm is based on radio or product serial number.

## Regulatory

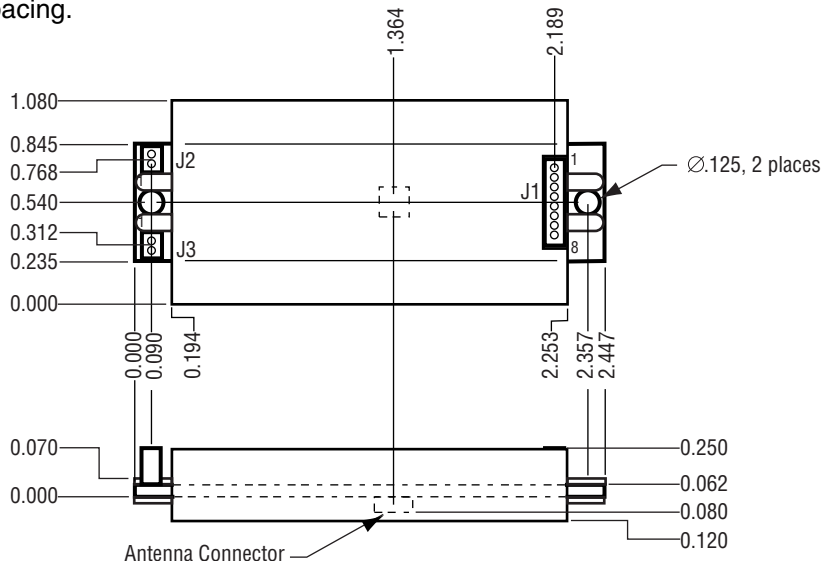
Approvals: FCC Modular, ID Number: I28MD-TRCV-24GHZ  
 Canada: Canada RSS210 Certification # 37981032228A  
 Product Labelling Requirements: Any final product that contains this radio must have a permanently affixed label visible from the outside of the product that says the following: "Contains FCC ID: I28MD-TRCV-24GHz."

## Physical

Connectors: Antenna - SSMT, M/A-COM part number 2367-5002-54  
 Data (J1) - 8 pin female, Samtec part number SLM-108-01-S-S  
 Optional ground connectors (J2, J3)- 2 pin female, Samtec part number SLM-102-01-S-S

Connectors mate with Samtec MTMS family. Part number is dependent on desired board spacing.

Dimensions:



**Zebra Technologies Corporation**  
 30 Plan Way  
 Warwick, RI 02886.1012 U.S.A.  
 Telephone +1.401.739.5800 / 800.556.7266  
 Facsimile +1.401.732.0145  
 www.comtecinfosys.com

©2000 Zebra Technologies Corporation all rights reserved.  
 Specifications for information purposes and are subject to change.  
**WARNING: Changes or modifications to this radio not expressly approved by Zebra Technologies Corporation may void the user's authority to operate the equipment under the modular approval with FCC ID# I28MD-TRCV-24GHZ.**  
 Likewise, the antenna used with this radio must be approved by Zebra for the modular approval to be valid.  
 All products and brand names are trademarks of their respective companies.