

# HumRC<sup>™</sup> Series Evaluation Module Data Guide

Wireless made simple®

Warning: Some customers may want Linx radio frequency ("RF") products to control machinery or devices remotely, including machinery or devices that can cause death, bodily injuries, and/or property damage if improperly or inadvertently triggered, particularly in industrial settings or other applications implicating life-safety concerns ("Life and Property Safety Situations").

NO OEM LINX REMOTE CONTROL OR FUNCTION MODULE SHOULD EVER BE USED IN LIFE AND PROPERTY SAFETY SITUATIONS. No OEM Linx Remote Control or Function Module should be modified for Life and Property Safety Situations. Such modification cannot provide sufficient safety and will void the product's regulatory certification and warranty.

Customers may use our (non-Function) Modules, Antenna and Connectors as part of other systems in Life Safety Situations, but only with necessary and industry appropriate redundancies and in compliance with applicable safety standards, including without limitation, ANSI and NFPA standards. It is solely the responsibility of any Linx customer who uses one or more of these products to incorporate appropriate redundancies and safety standards for the Life and Property Safety Situation application.

Do not use this or any Linx product to trigger an action directly from the data line or RSSI lines without a protocol or encoder/decoder to validate the data. Without validation, any signal from another unrelated transmitter in the environment received by the module could inadvertently trigger the action.

All RF products are susceptible to RF interference that can prevent communication. RF products without frequency agility or hopping implemented are more subject to interference. This module does have a frequency hopping protocol built in, but the developer should still be aware of the risk of interference.

Do not use any Linx product over the limits in this data guide. Excessive voltage or extended operation at the maximum voltage could cause product failure. Exceeding the reflow temperature profile could cause product failure which is not immediately evident.

<u>Do not make any physical or electrical modifications to any Linx</u> <u>product.</u> This will void the warranty and regulatory and UL certifications and may cause product failure which is not immediately evident.

#### **Ordering Information**

Ordering Information				
Part Number	Description			
EVM-***-RC	HumRC™ Series Carrier Board			
HUM-***-RC	HumRC™ Series Remote Control Transceiver			
HUM-***-RC-MWA	HumRC™ Series Remote Control Transceiver with Antenna			
HUM-***-RC-MWC	HumRC™ Series Remote Control Transceiver with Connector			
MDEV-***-RC	HumRC™ Series Master Development System			
EVAL-***-RC	HumRC™ Series Basic Evaluation Kit			
MDEV-DEMO-RC-A	Development System Remote Control Demo Board, Type A			
MDEV-DEMO-RC-B	Development System Remote Control Demo Board, Type B			
MDEV-PGDOCK	Development System Programming Dock			
MDEV-PROTO	Development System Prototype Board			
CON-SOC-EVM	EVM Module Socket Kit			
*** = Frequency; 900MHz, 2.4GHz				

Figure 2: Ordering Information

### **Absolute Maximum Ratings**

Absolute Maximum Ratings							
Supply Voltage V <sub>cc</sub>	-0.3	to	+3.9	VDC			
Any Input or Output Pin	-0.3	to	V <sub>cc</sub> + 0.3	VDC			
RF Input		0		dBm			
Operating Temperature	-40	to	+85	°C			
Storage Temperature	-40	to	+85	°C			

Exceeding any of the limits of this section may lead to permanent damage to the device. Furthermore, extended operation at these maximum ratings may reduce the life of this device.

Figure 3: Absolute Maximum Ratings

Warning: This product incorporates numerous static-sensitive components. Always wear an ESD wrist strap and observe proper ESD handling procedures when working with this device. Failure to observe this precaution may result in module damage or failure.

Please see the  $HumRC^TM$  Series Transceiver module data guide for full electrical specifications.

#### Pin Assignments

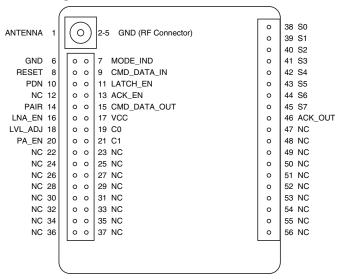


Figure 5: EVM-xxx-RC Pin Assignments

#### **Pin Descriptions**

Pin Descriptions					
Pin Number	Name	I/O	Description		
1	ANTENNA	_	50-ohm RF Antenna Port		
2, 3, 4, 5, 6	GND	_	Ground		
7	MODE_IND	0	This line indicates module activity. It can source enough current to drive a small LED, causing it to flash. The duration of the flashes indicates the module's current state.		
8	RESET	ı	This line resets the module when pulled low. It should be pulled high for normal operation.		
9	CMD_DATA_IN	I	Command Data In. Input line for the serial interface commands. If serial control is not used, this line should be tied to ground or POWER_DOWN to minimize current consumption.		
10	POWER_DOWN	I	Power Down. Pulling this line low places the module into a low-power state. The module is not functional in this state. Pull high for normal operation. Do not leave floating.		
11	LATCH_EN	I	If this line is high, then the status line outputs are latched (a received command to activate a status line toggles the output state). If this line is low, then the output lines are momentary (active for as long as a valid signal is received).		

#### **Schematic**

Figure 7 shows the schematic diagram for the evaluation module.

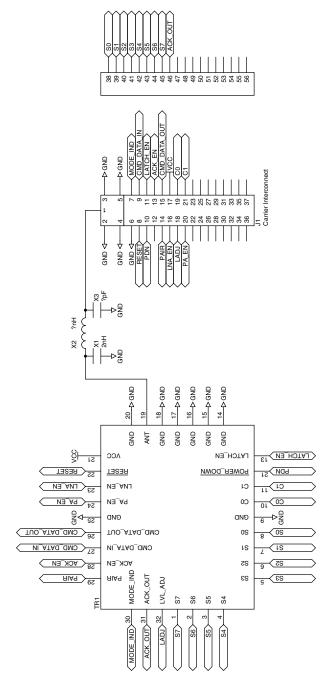


Figure 7: EVM-xxx-RC Schematic



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