Linx TECHNOLOGIES

Master Development System Remote Control Demo Boards

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.

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

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Figure 1: Master Development System Remote Control Demonstration Boards

Description

The Master Development System Remote Control Demonstration Boards are used with Linx remote control modules and mimic a handheld remote control device. Each board has buttons that activate LEDs on the other board. They are configured for bi-directional remote control, with LEDs and buttons on both boards.

The boards are powered by four AAA batteries. The lines are wired to plated through-holes for additional control and monitoring options. The boards are set up for hardware control, so no software is required.

The Remote Control Demo Boards provide an easy platform for range testing and demonstrate the capabilities of Linx remote control RF modules. They demonstrate the simplicity of creating remote control products with Linx modules.

Ordering Information

Ordering Information	
Part Number	**Description**
MDEV-DEMO-RC-A	Development System Remote Control Demo Board, Type A
MDEV-DEMO-RC-B	Development System Remote Control Demo Board, Type B
CON-SOC-EVM	EVM Module Socket Kit

Figure 2: Ordering Information

Absolute Maximum Ratings

Absolute Maximum Ratings				
Supply Voltage V_{cc}	–40	to	+7.5	VDC
Operating Temperature	–40	to	+85	ºC
Storage Temperature	–40	to	+85	ºC

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

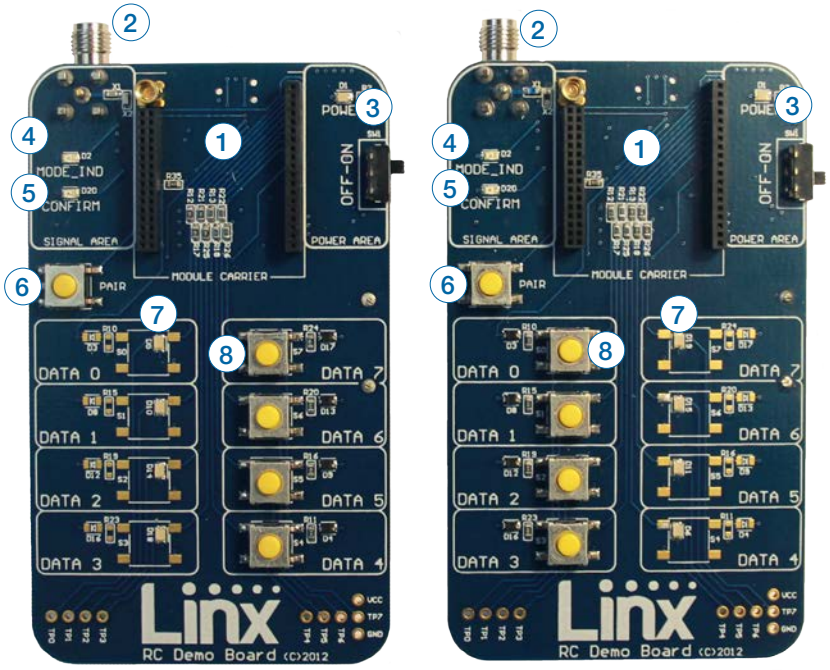
Electrical Specifications

Master Development System RC Demo Board Specifications						
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**	**Notes**
Power Supply						
Input Voltage	V_{BAT}		6		VDC	
Output voltage	V_{CC}		3.3		VDC	
Output Current	I_{CC}			1,000	mA	
Environmental						
Operating Temp. Range		–18		+50	ºC	1,2

1. Characterized but not tested
2. Limited by operating temperature range of AAA batteries.

Figure 4: Electrical Specifications

Remote Control Demo Board Objects



Board A Board B

Figure 5: Remote Control Demo Board

1. Carrier Board Socket
2. RP-SMA Antenna Connector
3. Power Switch
4. MODE_IND LED
5. CONFIRM LED
6. PAIR button
7. Status Line Output LEDs
8. Status Line Input Buttons
9. 4 AAA Batteries (Not shown, on the back of the boards)

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.

Pin Assignments

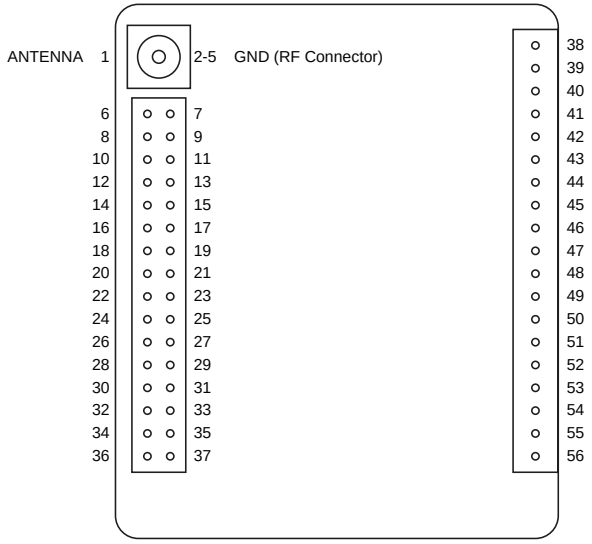


Figure 6: Carrier Board Pin Assignments

Dimensions

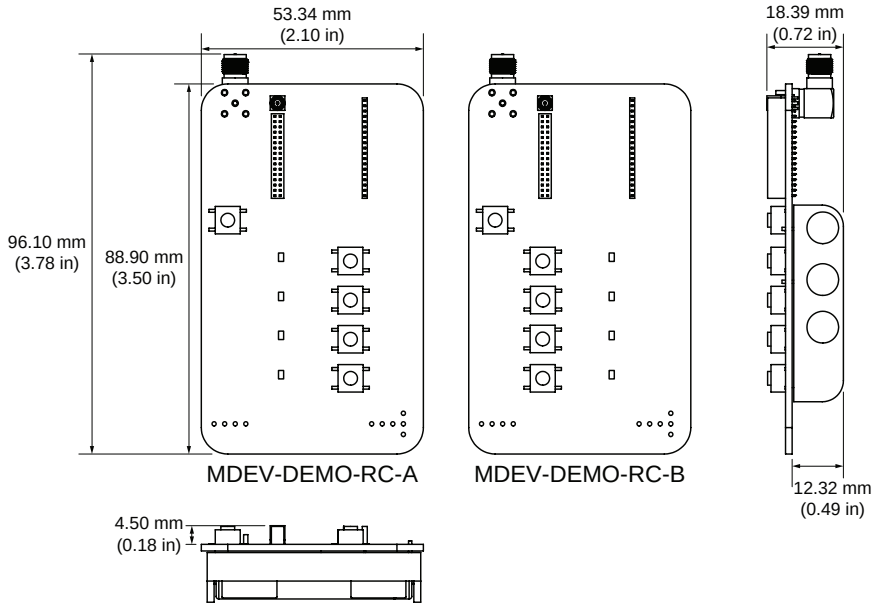


Figure 7: Remote Control Demo Board Dimensions

Using the Remote Control Demo Board

A Carrier Board plugs into the socket on the top of each Remote Control Demo Board.

Figure 8: Remote Control Demo Boards

Insert 4 AAA batteries into the holders on the back of each board, connect antennas and turn on power.

The process to pair the modules varies depending on which modules are being used, so consult the documentation for the module for instructions on how to pair them. Most will make use of the PAIR button and the MODE_IND LED.

Once the units are paired, pressing a button on one board activates an LED in the corresponding position on the other board.

Remote Control Demo Board Schematic

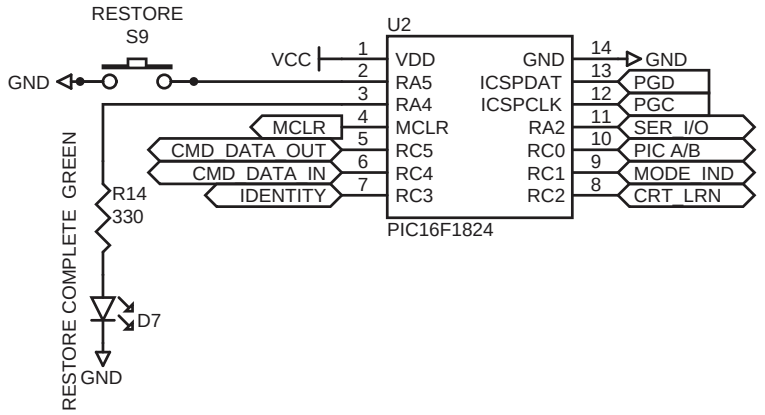


Figure 9: Remote Control Demo Board Microcontroller Area Schematic

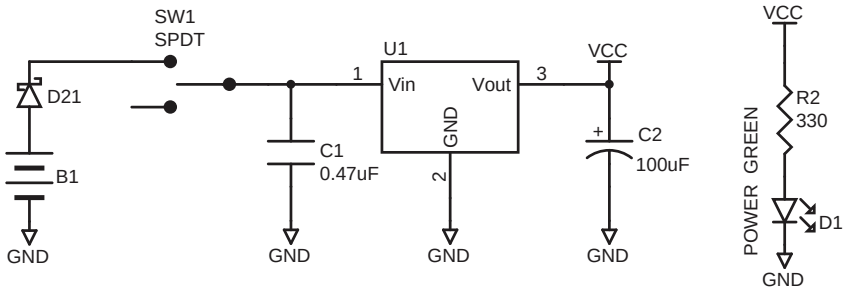


Figure 10: Remote Control Demo Board Power Supply Area Schematic

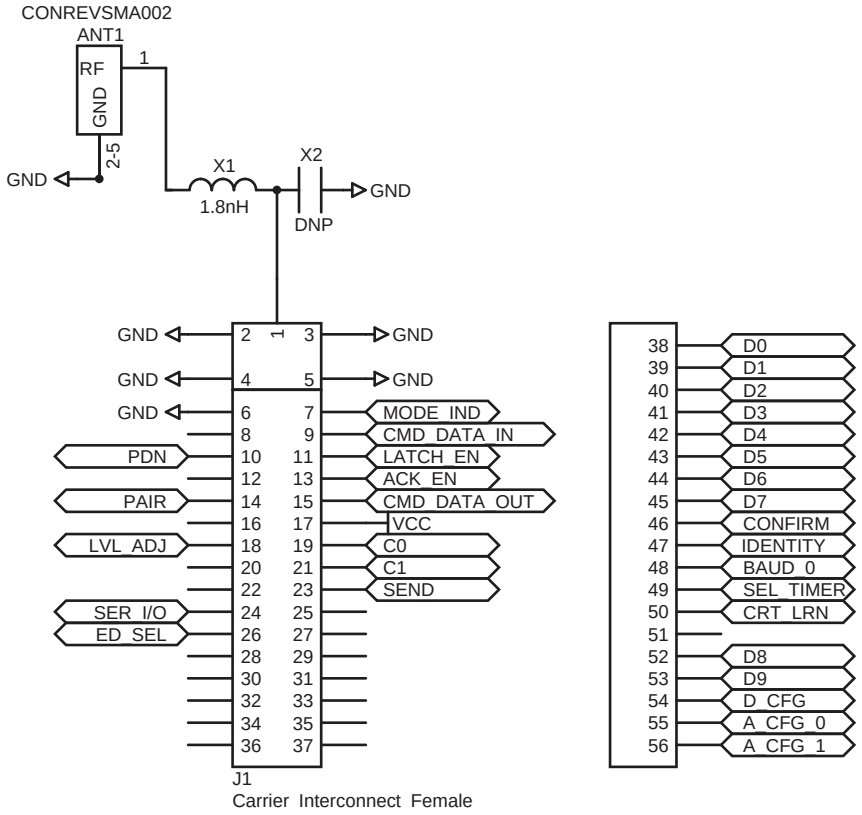


Figure 11: Remote Control Demo Board RF Carrier Area Schematic

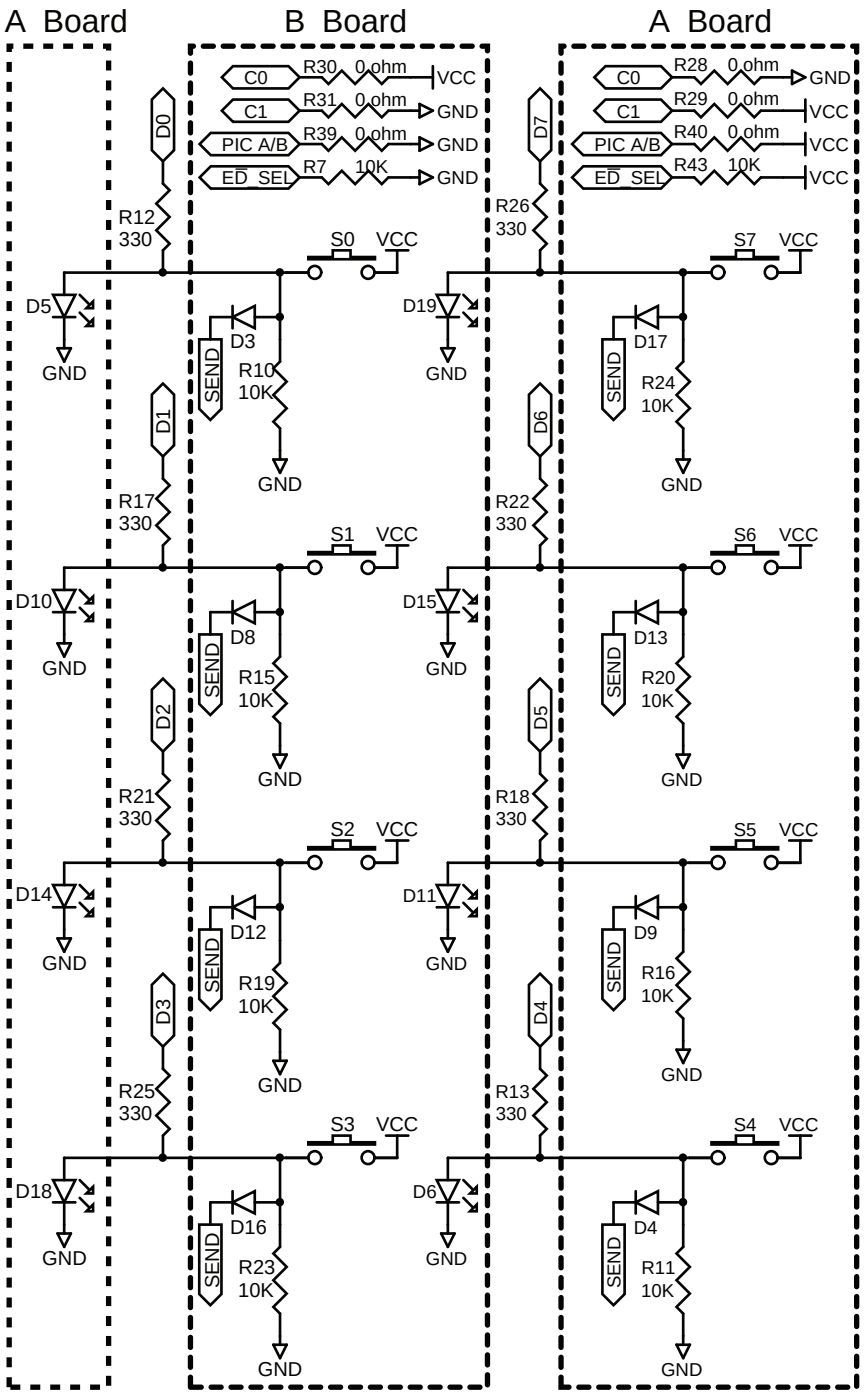


Figure 12: Remote Control Demo Board Remote Control Area Schematic

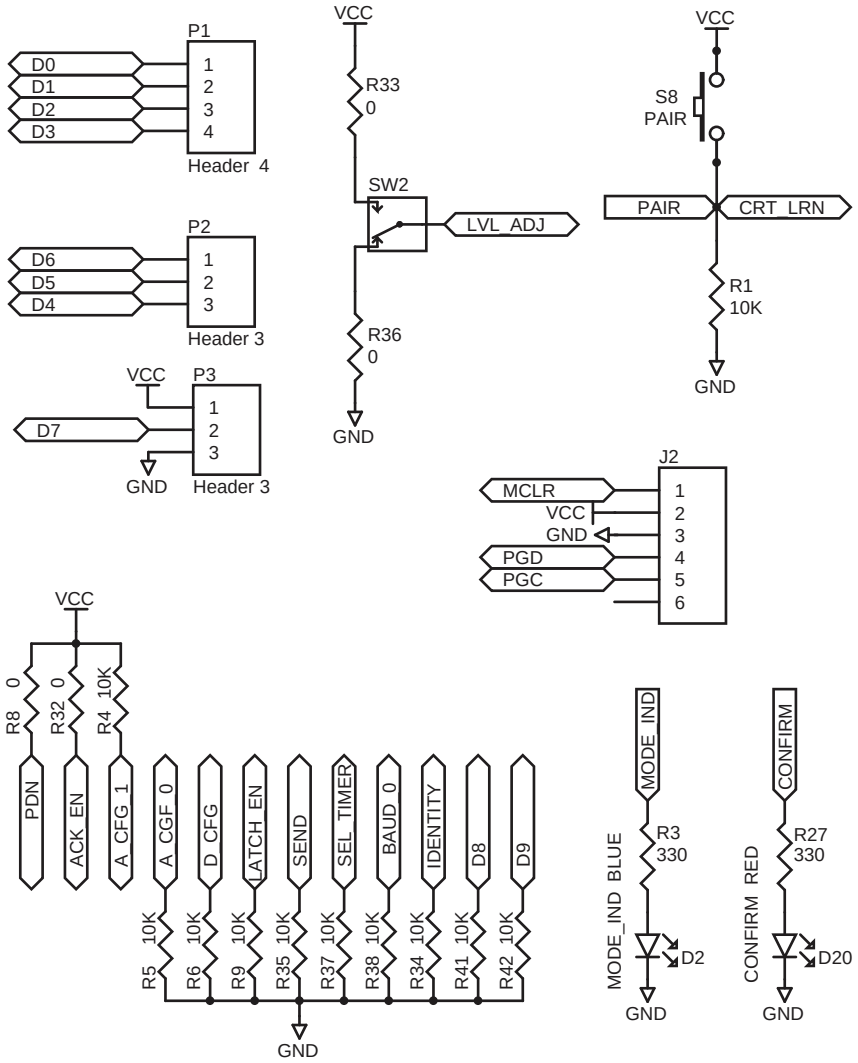


Figure 13: Remote Control Demo Board Miscellaneous Circuits Schematic

Notes

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