

Master Development System Programming Dock Board Data Guide

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 **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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Development System Programming Dock Board

Data Guide

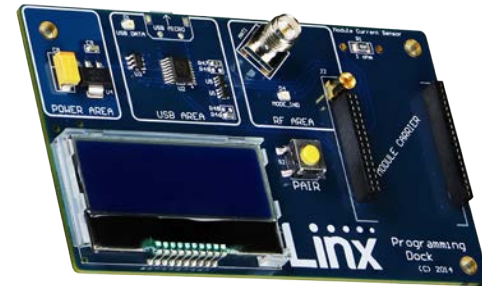


Figure 1: Master Development System Programming Dock Board

Description

The Master Development System Programming Dock provides a platform for connecting Linx RF modules to a PC for configuration and control. A socket accepts any Linx RF module carrier board. It connects the module's UART to a USB interface for use with software on a PC.

The board includes an LCD display that is used with Linx Development Software to identify the module on the board and in the software. This is useful when multiple programming docks are plugged into the same PC. The LCD links the physical module to one displayed in the software.

The Programming Dock provides a stable platform for demonstrating the command sets and performance of Linx RF modules.

Ordering Information

Ordering Information	
Part Number	Description
MDEV-PGDOCK	Development System Programming Dock
CON-SOC-EVM	EVM Module Socket Kit

Figure 2: Ordering Information

Absolute Maximum Ratings

Absolute Maximum Ratings					
Supply Voltage 5V USB	-0.3	to	+5.5	VDC	
Operating Temperature	-20	to	+70	°C	
Storage Temperature	-30	to	+80	°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

Electrical Specifications

Master Development System Programming Dock Board Specifications						
Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Power Supply						
Input Voltage	V_{USB}	4.5	5.0	5.5	VDC	
Input Current	I_{IN}		100		mA	1
Environmental						
Operating Temp. Range		-20		+70	°C	2,3
1. Board only with no module carrier attached		3.	Limited by operating temperature range of LCD display.			
2. Characterized but not tested						

Figure 4: Electrical Specifications

Programming Dock Objects

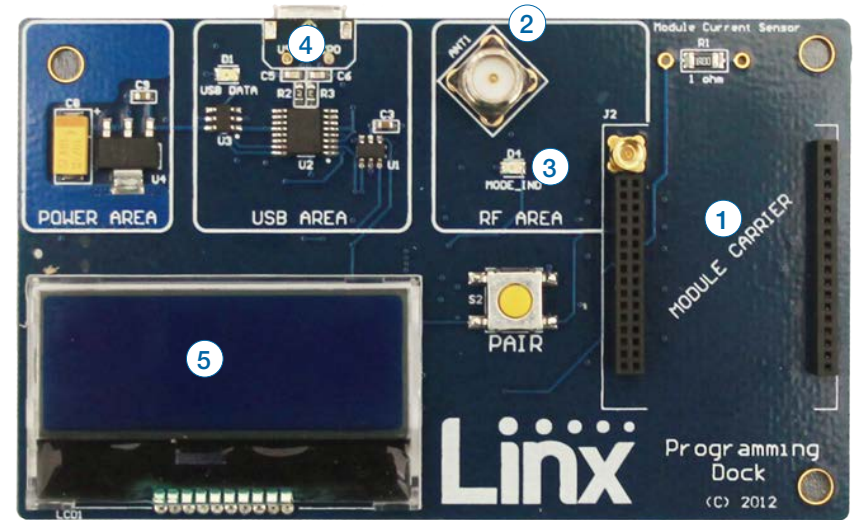


Figure 5: Programming Dock

1. Carrier Board Socket
2. RP-SMA Antenna Connector
3. MODE_IND LED
4. Micro USB Connector
5. LCD Display



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.

Carrier Board Pin Assignments

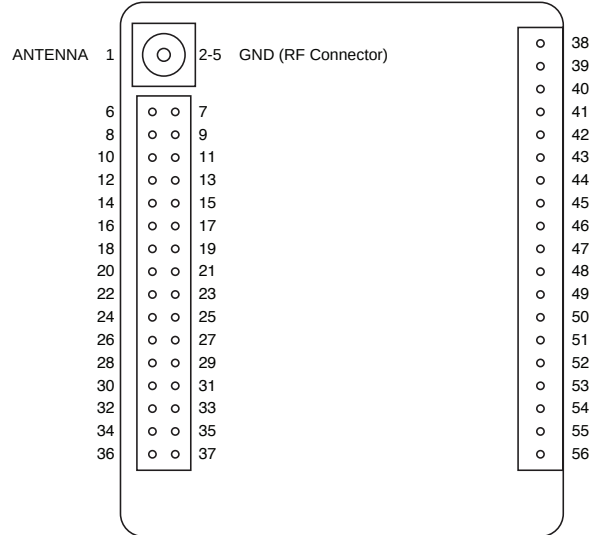


Figure 6: Carrier Board Pin Assignments

Dimensions

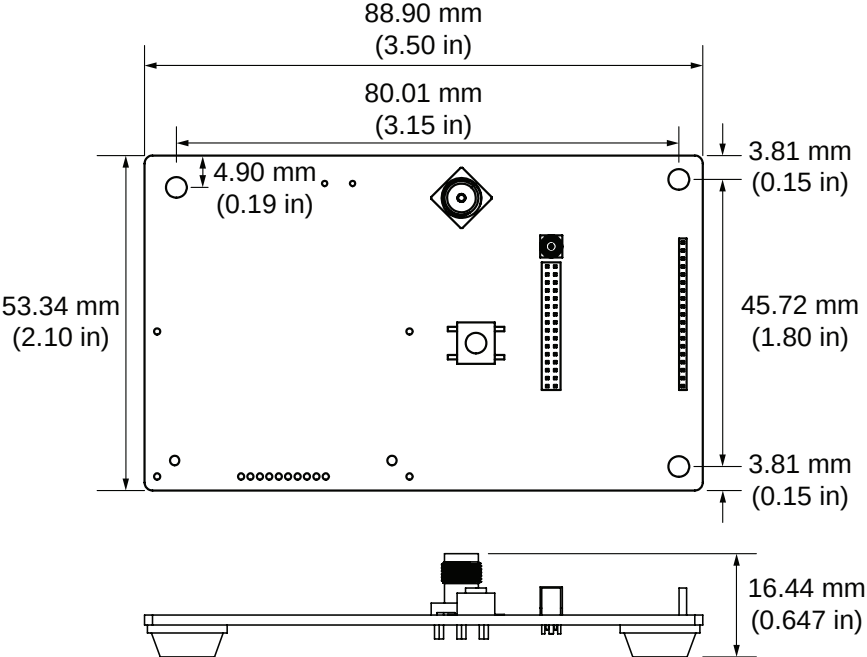


Figure 7: Programming Dock Dimensions

Using the Programming Dock

A Carrier Board plugs into the socket on the right of the Programming Dock Board.

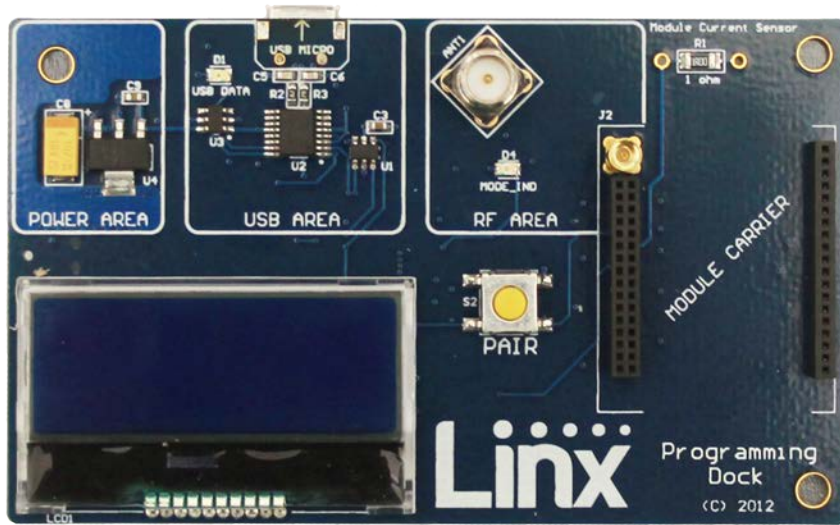


Figure 8: Programming Dock

Connect a micro USB cable into the connector at the top of the board. Plug the other end into a PC. The board is powered by the USB bus.

The Programming Dock connects the UART interface of Linx modules to a PC through a USB interface. It is typically used with Linx development kit software, but can also be used with standard terminal programs or custom application software. This allows the Linx RF module to be configured and controlled by the PC.

When used with the Linx development kit software, the LCD is used to display information about the module. This includes the module's local address and a custom nickname. The nickname is entered using the development kit software and can be any name that helps distinguish the modules from one another. This is convenient when multiple programming docks are connected to the same computer. Please see the development kit software documentation for more information.

Programming Dock Board Schematic

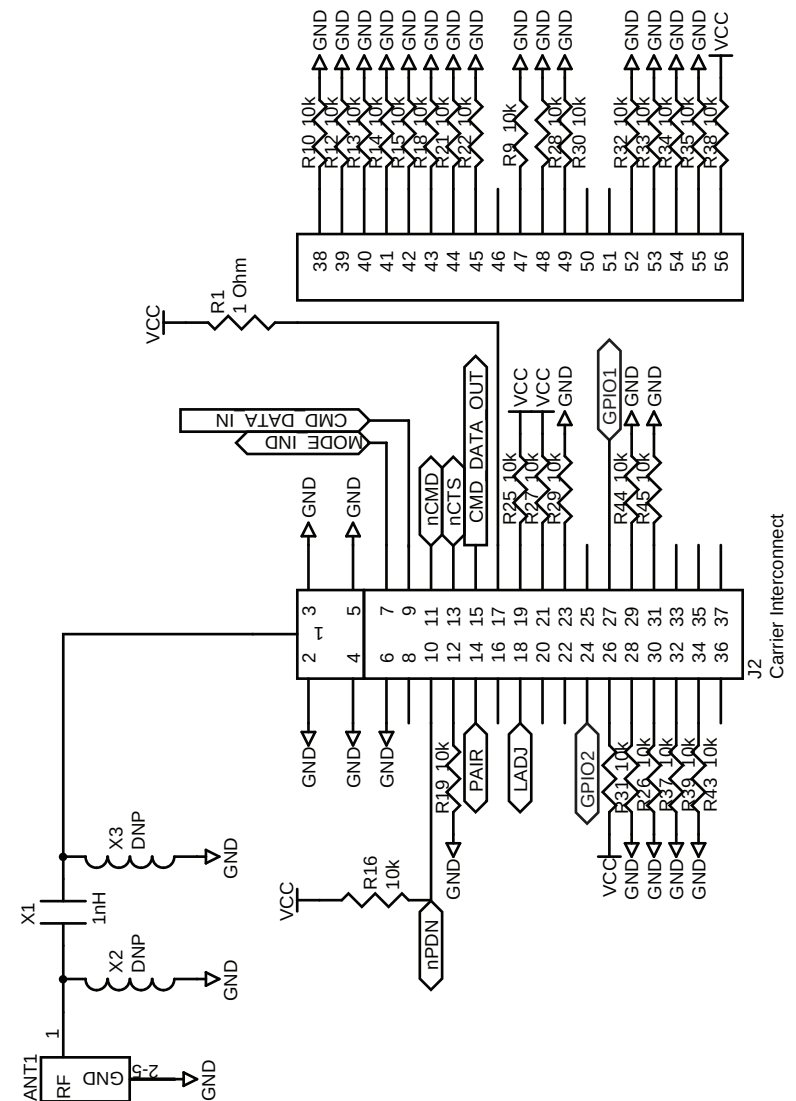


Figure 9: Programming Dock Board RF Carrier Area Schematic

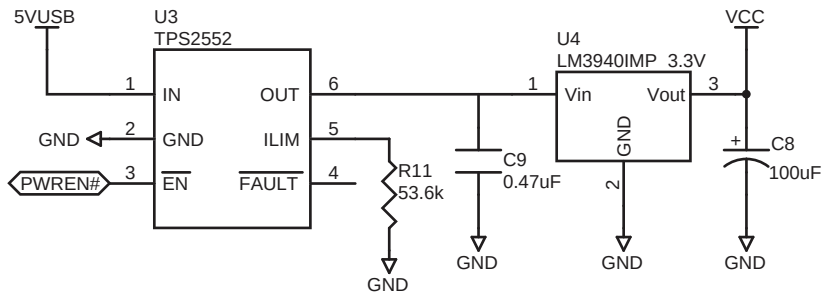


Figure 10: Programming Dock Board Power Supply Area Schematic

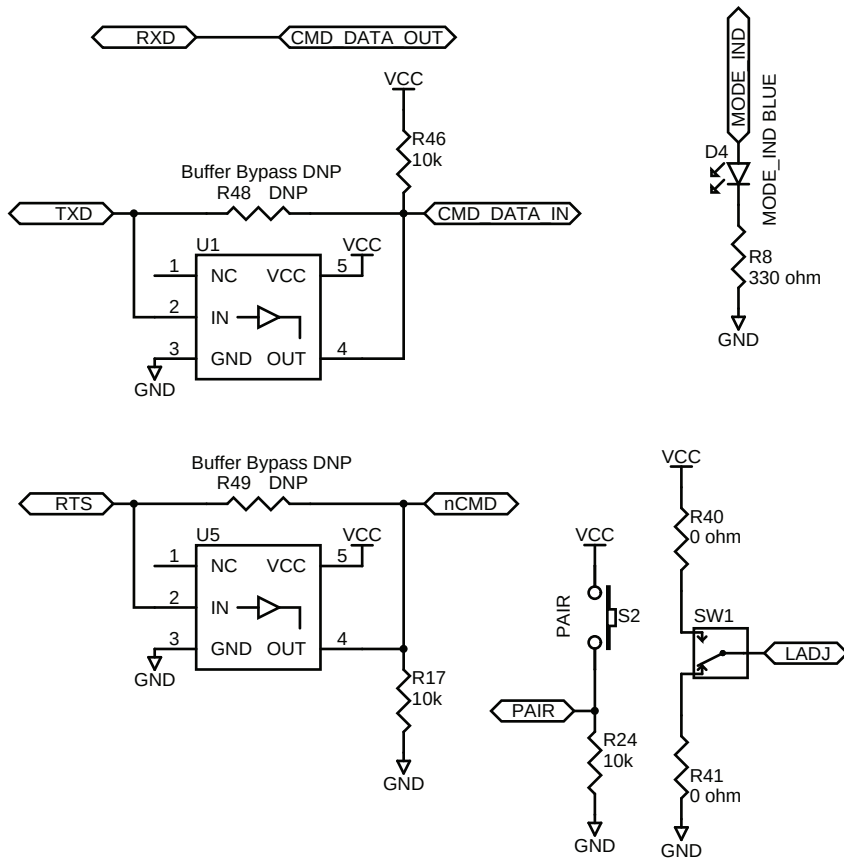


Figure 11: Programming Dock Board Signal Routing Schematic

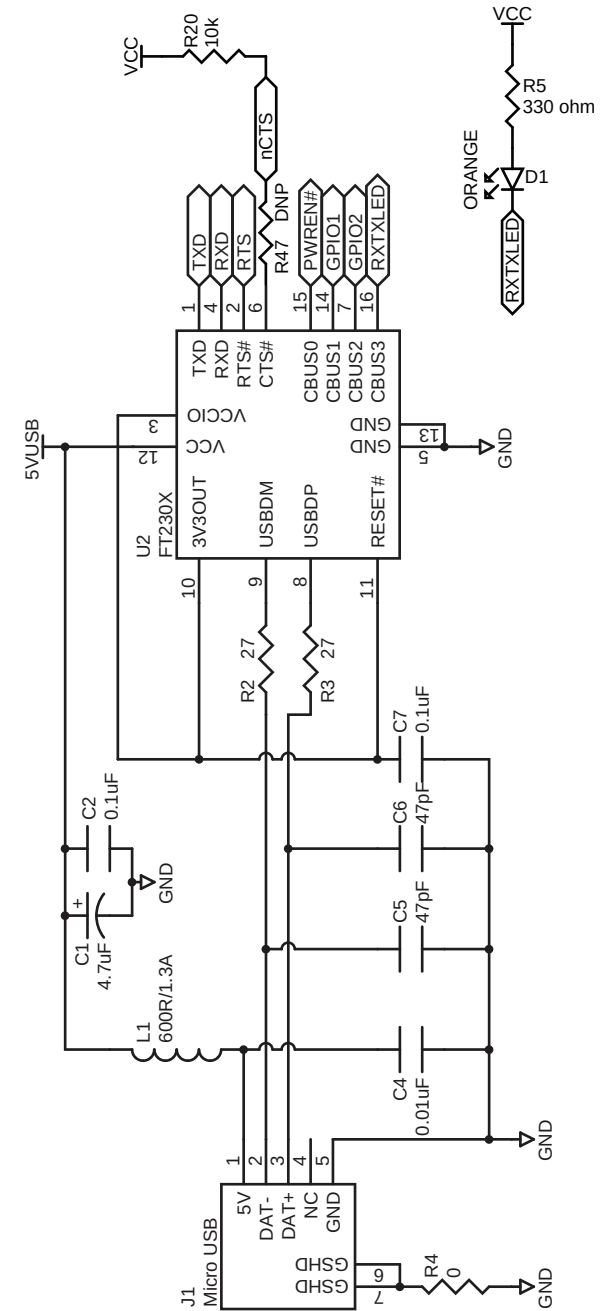


Figure 12: Programming Dock Board USB Area Schematic

Notes

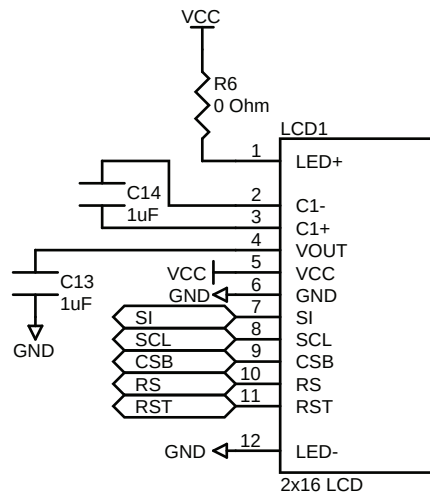
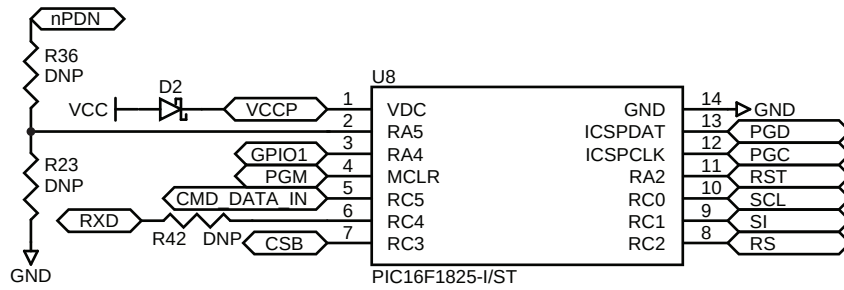


Figure 13: Programming Dock Board Microcontroller Area Schematic

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