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Innovative **Technology** for a **Connected** World

### **OVERVIEW**

This document is designed as a quick start guide for the Laird Technologies OEM ZB2430 family System Developer Kit (SDK). This guide will take you through the basics of reading the radio's configuration and performing a data throughput test between the Coordinator and a Router. For more detailed information on these steps refer to the SDK User Manual or the radio User Manual.

#### **INSTALL SOFTWARE**

Insert the Laird Technologies CD which came with the SDK into a Windows XP PC.

Install the OEM Configuration Utility under Design Kits and Software and follow the on-screen instructions.

#### **CONNECT THE RADIOS TO THE PC**

Connect the Coordinator to the PC with the provided USB cable. Make sure the power switch on the SDK board is on and allow Windows to automatically install the appropriate drivers. If using a module with a U.FL connector, connect the antenna.

Connect the AC power adapter to the Router eval board and power on the board with the power switch. Place the J9 Jumper to Loopback Mode. If using a module with a U.FL connector, connect the antenna. Place the Router board at least 5 feet from the Coordinator board.

At this point, the application should be installed on the associated PCs, the SDK board(s) should be properly connected to the PC(s), and the jumpers and power switch should be properly positioned.

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# QUICK START GUIDE

#### **RADIO CONFIGURATION**

- 1. Launch the Laird OEM software application by navigating to and selecting the product as follows: Start>All Programs>Laird Tech Wireless>Laird OEM.exe.
- 2. Click on the PC Settings tab at the top of the application window.
- 3. Locate the Product drop-down menu and select the ZB2430.
- 4. Locate and click on the Find Ports button.
- 5. A dialog box will appear with notification of the number of ports found. Click the OK button.
- 6. Locate the Port field and select the AeroComm Wireless USB port.
- 7. Change the Baud Rate to 38400.

### **PC SETTINGS TAB**

🗷 ZB2430 Configuration/Test Utility									
6	Configu		Banna Tart		Country of Market		Commond		
┝	Contigu	re	Range Test		erminal/Chat		Command	PC Settings	
	Port1 Settings			Options					
	USB / COM C TCD / ID Deer	Port /	Add Find Open Port	Save Save	Settings on Exit	nda			
	Port Status:	Open	ons rons close port	Use A	uto Baud/Port	ius			
	Port:	Port: COM7: AeroComm Wireless USB (C 💌		Auto Archive EEPROM Settings					
	Baud Rate:	38400	-		or UDP for new device	15			
	Parity:	None (recor	nmended) 💌	Product					
	Handshaking:	Hardware (	recommended)	Product:	ZB2430	•			
	Data Bits:	8 💌	Stop Bits: 1						
	Port2 Settings								
	Enabled:								
	C USB / COM	l Port t F	Add Find Open Port orts Ports Close Port						
	Port		<b>T</b>	Radio Upda	ite	race ell			
	Baud Rate:	57600	<b>T</b>	Load	Read Flash	pages			
	Parity:	None (recor	nmended)	<u>F</u> ilename:					
	Handshaking:	Hardware (	recommended)						
	<u>D</u> ata Bits:	8 💌	Stop Bits: 1						
						About			
P	ort1: Open [COM7	1 [38,400] [8-	N-1] RTS Port1: High	CTS	Port1: Low Port2	2: Unavailab	le RTS Port2: H	iqh CTS Port2: High	
Communications idle									

## QUICK START GUIDE

### **RADIO CONFIGURATION**

- 8. Click on the Configure tab.
- 9. Click on the Read Radio button; this will display the modules internal configuration.
- You can use this screen to make changes and write those changes to the module.
- 10. A dialog box will appear and will display one of two messages:
  - a. If "Read Successful" is displayed, click on OK and continue to step 12.
  - b. If "Unable to enter command mode. Would you like to try using Auto Baud?" is displayed, follow these steps: 1) Move the J9 jumper to the Force 9600 Baud position.
    - 2) Reset the radio module with the Reset button on the SDK
    - 3) In the OEM software go to the PC Settings Tab and change the baud rate to 9600
    - 4) Change back to the Configure Tab
    - 5) Click on the Read Radio button again.
    - 6) The Interface Baud field will now display the Baud setting of the module.
    - 7) Move the J9 jumper back to the Normal Operation position.
    - 8) Click on the PC Settings tab.
    - 9) Locate the Baud Rate field and set it to match the Baud setting of the module.
    - 10) Click on the Configure tab.
    - 11) Go back to step 10.

#### **CONFIGURE TAB**

🖳 ZB2430 Configuration/Test Utility									
Configure	Range Test	Terminal/Chat	Command	PC Settings					
Radio Interface	Radio Interface		•	Radio Features					
Interface Timeout:	9 Hex	RF Channel Number:	B Hex	- 🔽 Auto Channel					
RF Packet Size:	00 54 Hex	RF Channel Mask:	07 FF F8 00 Hex	Full Duplex					
CTS On	01 90 Hex	PAN ID	00 01 Hex	Transmit API					
CTS Off	01 80 Hex	Trapsmit Power:	Full Power 🔹	Send Data Complete					
MAC Retries:	3 Hex	RSSI Threshold	E0 Hex	RTS Enable					
MAK Retries:	2 Hex	End Device Poll Rate:	03 E8 Hex	Modern Mode					
ADS Retries:	3 Hex	End Device Make Time	00 64 Hex	Modify Wake Upon RX					
Broodcost Itterrete:	4 Hex	Lind Device Wake Time.	00 32 Hex	Reload Sleep					
Stop Bit Delev:	0 Hex	Beret Hold Message:	42 Hex	End-to-End Ack					
Stop bit belay.	]	Parent Hold Wessage.							
Info Center	Info Center  Copyright [28]:		Radio Other						
Copyright [28]: Address: 0x00			Calc Baud						
Version: All	Version: All		Hex						
		Type: Coordinator							
		MAC Address: 00 00 00 :	0 67 48 93 41						
		D.O.B.: 2/25/2008	.0						
	Full Part Number: ZB2430-003A-TTL-01								
GUI View EEPROM	CILI View EEPROM Archive Window								
Editor Viev	Editor View								
Port 1         Port 2         Show Default         Compare EE         Load File         Save to File         Print         Write Radio         Read Radio									
Port1: Unavailable RTS Port1: High CTS Port1: High Port2: Unavailable RTS Port2: High CTS Port2: High									
Communications idle									

## QUICK START GUIDE

#### **RANGE TEST**

- 11. Click on the Range Test tab.
- 12. Select the desired Port 1 Loopback in the Test Selection field.
- 13. Click on the Create Data button in the Transmit Packet Selection field. Enter the desired data.
- 14. Make sure that Continuous is selected in the Test Type field.
- 15. Set the TX Delay to 1000 and the RX Timeout to 2000 in the Timing field.
- 16. Click on the Run button or press F10 on the keyboard.
- 17. Range test, and radio setup is now complete.

## **RANGE TEST TAB**

ZB2430 Configuration/Test Utility								
Configure Range Test	Terminal/Chat	Command	PC Settings					
Test Selection         Port 1 -> Port 2       Port 1 Receive Only         Port 1 -> Port 1       Port 1 Receive Only         Port 1 -> Port 2       Port 1 Loopback         Transmit Packet Selection <ul> <li>Create Data</li> <li>Elename:</li> </ul> Test Type:       Receive Packet Display:         © Continuous <ul> <li>Timed</li> <li>Only Display Errors</li> <li>Packet Time Stamp</li> </ul> Number of Runs       Timing:         00       Timing:         © Single Step       Tot Delay         Test Results       Eurors: 0         Percentage Good: 100%       Approx. 0 bps         Time Remaining: 0	Port 1: View D123456789ABCDEFGHJJKLMNO Port 2: D123456789ABCDEFGHJJKLMNO S	v TX Packets	rets ppgrstuvwxyz01					
Port1: Unavailable RTS Port1: High C	TS Port1: High Port2: Unavaila	ible RTS Port2: High	CTS Port2: High					
Communications idle								

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