

Note: This document is a pictorial guide to install XCTU software in windows up to configuring the Xbee modules accordingly. XCTU is a free software provided by Digi to configure and test Xbee modules.

Sections:

- Download XCTU software, Driver for Xbee and installing: steps 1 to 9
- Detecting the Xbee device in the XCTU software and updating the firmware of the Xbee: steps 10 to 22
- Configuring the Xbee as Transmitter
- Configuring the Xbee as Receiver

Contents:

1. Download XCTU: <u>Download XCTU: https://www.digi.com/products/embedded-systems/digi-xbee/digi-xbee-tools/xctu#productsupport-utilities</u>

	KCTU -	• Next (Gen Configuration P X	+
←	\rightarrow (G	digi.com/produc	ts/embedded-systems/digi-xbee/digi-xbee-tools/xctu#productsupport-utilities
			 USB Drivers are require Linux and Mac C The USB interface I 	i to use XCTU with the XBIB-U (USB) interface board and the PKG-U Modems and Adapters. (<u>S X Drivers (provided by FTDI)</u>) wards Digi provides use FTDI chip drivers. Linux and Mac users are advised to download drivers directly from FTDI
			Note: Legacy drivers an	d installation instructions <u>can be found here.</u>
				UTILITIES
		DC	WNLOAD XCTU	
		C	XCTU v. 6.5.0 Wi XCTU v. 6.5.0 Ma XCTU v. 6.5.0 Lir XCTU v. 6.5.0 Lir XCTU v. 6.5.0 Lir XCTU License Ag XCTU v. 6.5.0 Re	ndows x86/x64 cOS X ux x64 ux x86 reement lease Notes



2. Install XCTU software

😽 Setup	- 🗆 ×				
	Welcome to the XCTU Setup Wizard				
	This wizard will guide you through the installation of XCTU 6.5.0.3.				
	Click Next to continue.				
DIGI XCTU					
Configuration & Test Utility Software					
© Copyright Digi International Inc.					
	< Back Next > Cancel				

😽 Setup	_		\times
Installing	ם	IG	7
Please wait while Setup installs XCTU on your computer.			
Installing			
Unpacking C:\Users\LE[]\radio_firmwares\xbee_dm24\xbp2	4-dm_8767.ehx2		
T - 1 10 - 1 1			
Installbuilder < Back	Next >	Can	ncel

3. Download Driver from the same above link



DRIVERS
GENERAL DRIVERS
Drivers Installer for Windows (XP, Vista, 7 and 8) USB Drivers are required to use XCTU with the XBIB-U (USB) Interface board and the PKG-U Modems and Adapters.
<u>Linux and Mac OS X Drivers (provided by FTDI)</u> The USB interface boards Digi provides use FTDI chip drivers. Linux and Mac users are advised to download drivers directly from FTDI
Note: Legacy drivers and installation instructions <u>can be found here.</u>

4. Connect XCTU to the PC then open device manager and open the serial port connected with the Xbee



5. Update the driver

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Computer Management – 🗆 🗙							
File Action View Help							
🜆 Computer Management (Local	> 🐺 Human Interface Devices	^	Actions				
✓ [№] System Tools	> 📷 IDE ATA/ATAPI controllers		Device Manager				
> (Task Scheduler	> 👔 Imaging devices		Mara Actions				
> 🔡 Event Viewer	Keyboards USB Serial Port (COM5) Properties		X				
> 👔 Shared Folders	Mice and other pointing de						
> N Performance	General Port Settings Driver Details Events						
Storage	Intervolte duapters Revise (Person						
Disk Management	Cisco AnyConnect Secul						
> Services and Applications	Qualcomm Atheros QC/						
- mover	💭 Realtek PCIe GBE Family Driver Provider: FTDI						
	WAN Miniport (IKEv2) Driver Date: 8/16/2017						
	WAN Miniport (IP) Driver Version: 2.12.28.0						
	WAN Miniport (IPv6) Digital Signer: Microsoft Windows Hardware Compatibilit	v .					
	Publisher	·					
	WAN Miniport (Network						
	WAN Miniport (PPPOE)						
	WAN Miniport (STP) Update Driver Update the driver for this device.						
	v Ports (COM & LPT)						
	Standard Serial over Blue Roll Back Driver If the device fails after updating the driver, ro						
	Standard Serial over Blue						
	Standard Serial over Blue Disable Device Disable the device.						
	💭 Standard Serial over Blue						
	USB Serial Port (COM5) Uninstall Device Uninstall the device from the system (Advance and the device from the system (Advance and the device from the system (Advance and the device from the system) uninstall the device from the system (Advance and the device from the system) uninstall the device from the system (Advance and the device from the system) uninstall the device from the system (Advance and the device from the system) uninstall the device from the system (Advance and the device from the system) uninstall the device from the system) uninstall the device from the system (Advance and the device from the system) uninstall the device from the system) units and the	ced).					
	> Print queues						
	> Processors	ancel					
	Software devices	ancel					
	Sound, video and game controllers						
	> 🍰 Storage controllers						
	> 🖕 System devices						
< >	> 🏺 Universal Serial Bus controllers	¥					
	2		,				

6. Browse the folder to select the driver downloaded above

)	×
~	Update Drivers - USB Serial Port (COM5)		
	How do you want to search for drivers?		
	→ Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.		
	→ Browse my computer for driver software Locate and install driver software manually.		
		Cancel	



7. After updating the driver check the port setting

USB Serial Port (COM5) Properties						
General Port Settings	Driver Details Events					
· · · · · ·						
	Bits per second: 9600 ~					
	Data bits: 8 ~					
	Parity: None ~					
	Stop bits: 1					
	Flow control: None ~					
	Advanced Restore Defau	lts				
	Check the Advance setting, screenshot below					
OK Cancel						

8. Then check the Advanced settings

Advanced Settings for COM5	?	Х	
COM Port Number: COM5 USB Transfer Sizes Select lower settings to correct performance problems at low to Select higher settings for faster performance. Receive (Bytes): 64 ~ Transmit (Bytes): 64 ~	vaud rates.	OK Cancel Defaults	3
BM Options	Miscellaneous Options		
Select lower settings to correct response problems. Latency Timer (msec):	Serial Enumerator Serial Printer Cancel If Power Off Event On Surprise Removal		
Timeouts	Set RTS On Close		
Minimum Read Timeout (msec): Minimum Write Timeout (msec): 0	Disable Modem Ctrl At Startup Enable Selective Suspend Selective Suspend Idle Timeout (secs): 5	□ □ ~



- 9. Now the software installation is complete. The Xbee module can be connected to the PC
- 10. Now let us see how to detect the device in XCTU. Open XCTU software and search for the device



11. Select the serial port where Xbee is connected

💦 хсти		×
XCTU Working Modes To	😽 Discover radio devices — 🗆 🗙	
Radio Modules	Select the ports to scan Select the USB/Serial ports of your PC to be scanned when discovering for radio modules.	P 4
Click on 😭 Ad Click on 😭 Ad Click on Click on	Select the ports to be scanned: Image: COM3 Standard Serial over Bluetooth link Image: COM4 Standard Serial over Bluetooth link Image: COM5 USB Serial Port Image: COM7 Standard Serial over Bluetooth link Image: COM7 Standard Serial over Bluetooth link Image: COM8 Standard Serial over Bluetooth link	Configuration , Network Iisplay their Yorking area.
	Refresh ports Select all Deselect all < Back]



12. Click next and select below settings and then finish to find the device

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XCTU Working Modes To	😽 Discover radio devices		$ \Box$	×
	Set port parameters			b 🖸 🤑
	Configure the Serial/USB port p	arameters to discover ra	dio modules.	
Radio Modules	Raud Rate: Dai	ta Rite:	Darity	
		7	None None	
	2400	28	Even	
Click on 📑 Ad	9600			lonfiguration,
Discover de	19200		Space	Network
radio modules	C D'			lisplay their
	Stop Bits: Flo	None	Select all	vorking area.
		Hardware	Deselect all	
		_ Xon/Xoff	Set defaults	
	Estimated discovery time: 00:10)		
	< Back	Next > Fi	nish Cancel	
l				
Diseasuring and is and	lular.			
Discovering radio mod	ules			
Discoveri	ng radio modules connect	ed to your machin	e	
R	l sere si si se tiss se 00.05			
	O devices (a) forward		Char	
	U device(s) found	C. C	stop	
Devices discovered:				
Select all	Deselect all			
Your device was not fo	ound? Click here			
	Classe	Add eaters	l de vie en	
	Close	Add selected	aevices	



13. If not found try adding the device with the Add radio module option



14. Select the corresponding Serial port and ensure the settings as in the screenshot, please make sure the box is ticked since the module is programmable

	😽 Add radio device 🛛 🗆 🔿	×
XCTU XCTU Working Modes Tools	Add a radio module Vou must select one Serial/USB port.	
Click on Add of Discover device	Select the Serial/USB port: COM3 Standard Serial over Bluetooth link COM4 Standard Serial over Bluetooth link COM5 USB Serial Port COM7 Standard Serial over Bluetooth link COM8 Standard Serial over Bluetooth link Refresh ports Provide a port name manually:	Configuration,
radio modules to t	Baud Rate: 9600 Data Bits: 8 Parity: None Stop Bits: 1 Flow Control: None The radio module is programmable. Set defaults Finish Cancel	e working area.



15. Click Finish and wait for the device to get connected

	😽 Add radio device — 🗆 🗙	
XCTU XCTU Working Modes Tools	Add a radio module Select and configure the Serial/USB port where the radio module is connected to.	- • ×
	Select the Serial/USB port:	
Radio Modules	Image: COM3 Standard Serial over Bluetooth link Image: COM4 Standard Serial over Bluetooth link Image: COM5 USB Serial Port Image: COM7 Standard Serial over Bluetooth link	
Click on 😭 Add	Discovering radio modules Discovering radio modules connected to your machine Estimated remaining time: 00:02	Configuration, Network display their working area.
	Parity: None Parity: None Flow Control: None The radio module is programmable. Set defaults	
	Finish Cancel	

16. If the device is not found maybe it is because of the old firmware, so update firmware. Choose Xbee Recovery from Tools. (If Device is detected then jump to step 20)







17. Then Choose the corresponding serial port with Xbee connected and select the firmware as in the screenshot

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XCTU Working Mo	odes Tools Help	
i 4 i Q	💦 Recover a Radio Module - 🗆 X	7 🧶
Radio Module	Recover a Radio Module This tool allows you to force a firmware update on radio modules with damaged firmware or recover a radio module from programming mode.	
Click on [Select the COM port containing the module to recover:	uration,
👩 Disco	Select the product family of your device, the new function set and the firmware version to flash:	vork
radio mod	Product family Function set Firmware version	their
	XB24 A 802.15.4 SMT 4061 (Newest) XB24-DM 802.15.4 TH 4060 4061 VB24C DigiMesh 2.4 SMT 4060 405F XB24CSE DigiMesh 2.4 SMT 405F 405E XB2-B-WF ZIGBEE Reg ZIGBEE TH Reg 405E	g area.
	Can't find your firmware? <u>Click here</u> View Release Notes Close <u>Recover</u>	1

- 18. Wait for dialog box indicating successful update of firmware
- 19. Then repeat the steps 13 to 15 accordingly



20. Once the device is recognized by XCTU then it will appear like in below screenshot

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XCTU Working Modes Tools Help	
Radio Modules	🔯 Radio Configuration [Coordinator - 0013A2004187D78C]
Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8/N/1/N - AT MAC: 0013A2004187D78C	Image: Second conduction Image: Second conduction Image: Second conduction Image: Second conduction Read Write Default Update Profile
	Product family: XB24C Function set: ZIGBEE TH Reg Firmware version: 4061
	Networking Change networking settings
	1 ID PAN ID 2019
	🧃 SC Scan Channels 🛛 C 🔤 Bitfield 🔛 🖌 😒 🚱
	i SD Scan Duration 3 exponent 🚫 📀
	i ZS ZigBee Stack Profile 0
	👔 NJ Node Join Time 🛛 FF x 1 sec 🔛 😒 🚱
	i NW Network Wg Timeout 0 x 1 minute 📰 😒 🔗
	i JV Channel Verification Disabled [0] V Channel Verification
	👔 JN Join Notification Disabled [0] 🗸 😒 🔗
	(i) OP Operating PAN ID 2019

21. (Skip this step if the firmware is already updated!) Update the firmware by choosing the device and Update option

XCTU XCTU Working Modes Tools Help	- 🗆 X
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Radio Modules	Radio Configuration [Coordinator - 0013A2004187D78C]
Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8/N/1/N - AT MAC: 0013A2004187D78C	Read Write Default Update Profile - Q Parameter + -
	Product family: XB24C Function set: ZIGBEE TH Reg Firmware version: 4061
	Change networking settings
	i ID PAN ID 2019
	i SC Scan Channels C Bitfield 🔢 🖌 😒 📀
	j SD Scan Duration 3 exponent 🥎 📀
	i ZS ZigBee Stack Profile 0
	i NJ Node Join Time FF x 1 sec 🖬 🚫 🕗
	i NW Network Wg Timeout 0 x 1 minute 🖬 🚫 📀
	i JV Channel Verification Disabled [0] V Channel Verification
	i JN Join Notification Disabled [0] V
	(i) OP Operating PAN ID 2019 🚫 🗸



22. Choose the Firmware and Update. Wait for it to complete successfully!

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XCTU Working Modes Tools	Help	
	🔆 Update firmware — 🗆 X	
Radio Modules	Update the radio module firmware Configure the firmware that will be flashed to the radio module.	
Function: ZIGBE Port: COM	Select the product family of your device, the new function set and the firmware version to flash:	arameter + -
CICB MAC: 00134	Product family Function set Firmware version	
	XB24C 802.15.4 TH 4061 (Newest) DigiMesh 2.4 TH 4060 2IGBEE TH Reg 405F 405F 405F 405F 405F	ware version: 4061
	Can't find your firmware? <u>Click here</u> View Release Notes	🖩 🔟 😒 🖉
	Force the module to maintain its current configuration Select current	S ()
	Update Cancel	<u> </u>
	j JN Join Notification Disabled [0]	✓ S S
	i OP Operating PAN ID 2019	Solution

23. Now the device is connected to the XCTU software and ready to configure them



Configuring the Xbee as Coordinator/ Transmitter

Update below fields

1. ID PAN ID

PAN ID should be same for all Xbees communicating each other irrespective of Tx

or Rx

Eg: 2019

2. Scan Channels

Scan channel should be same for all Xbee communicating each other irrespective of Tx and Rx

Eg: C

3. **CE** Coordinator Enable

Coordinator Enable should be Set to Enabled[1]

4. **DH** Destination Address High

Set to **0**

5. **DL** Destination Address Low

Set to FFFF

6. NI Node Identifier

Name of the device, it can be any name.

Eg: Coordinator

7. BD Baud Rate

Set to 9600 [3]

8. NB Parity

Set it to No Parity [0]

9. SB Stop Bits

Set to One stop bit [0]

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10. D7 Pin 12 – DIO7/...Configuration

Set to nCTS flow control [1]

11. AP API Enable

Set to Transparent mode [0]

Below are the screenshots of XCTU software configuring Xbee as a transmitter/ coordinator





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XCTU Working Modes Tools Help				> 20
Radio Modules	⊕ ⊕ - ⊗ ∲	Radio Configuration [Coordinator -	0013A2004187D78C]	
Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8, MAC: 0013A2004187D	/N/1/N - AT	Read Write Default Updat	e Profile	eter + –
Update Pand Id sar	me as receiver	duct family: XB24C Function	n set: ZIGBEE TH Reg Firmware	e version: 4061
Update Scan channel sar	me as receiver	Change networking settings	2019	
		i SC Scan Channels	C Bitfield	
		(i) SD Scan Duration	3 exponent	00
		i ZS ZigBee Stack Profile	0	
		i NW Network Wa Timeout	FF x 1 sec	
		i JV Channel Verification	Disabled [0]	00
	i	i JN Join Notification	Disabled [0]	80
		i OP Operating PAN ID	2019	0
		i OI Operating 16-bit PAN ID	713D	8
Upate coordina	ator to Enable	i NC Number ofg Children	14	8
		i CE Coordinator Enable	Enabled [1]	
XCTU XCTU Working Modes Tools Help				- 0 ×
XCTU XCTU Working Modes Tools Help			• 🔅	- • ×
XCTU XCTU Working Modes Tools Help	⊕⊕-⊗ ⇔	Radio Configuration [Coordinator	0013A2004187D78CJ	- • ×
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A20041870	(1) (1) - AT 78C → (2) - (2) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	Radio Configuration [Coordinator Radio Write Default Updat	0013A2004187D78CJ	×
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	(1) (1) - AT /N/1/N - AT /78C	Radio Configuration [Coordinator - Kadio Configuration [Coordinator - Write Default Updat i CE Coordinator Enable i DD Davies Octioner	0013A2004187D78CJ	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	(1) (1) - AT 778C (1) - AT (1) - AT	Radio Configuration [Coordinator Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls	0013A2004187D78C]	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	 (1) (1)	Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls	0013A2004187D78C]	
XCTU XCTU Working Modes Tools Help Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	(1) (1) - AT 178C ▼ A (1) (1) - AT (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Radio Configuration [Coordinator - Radio Configuration [Coordinator - Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls Modressing Change addressing settings i SH Serial Number High	0013A2004187D78CJ	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D		Radio Configuration [Coordinator Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls Mddressing Change addressing settings i SH Serial Number High i SL Serial Number Low	0013A2004187D78C] 0013A2004187D78C] Profile Profile Enabled [1] 8 B Bitfield 0 Bitfield	- C X
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A20041870	(1)√1/N - AT 7/8C (2)√1/N - AT 7/8C (2)√1/N - AT (2)√1/N - AT (2)√1/N - AT (2)√1/N - AT (3)√1/N - AT (4)√1/N - AT (4)√1/	Radio Configuration [Coordinator Write Default Updat Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls Modressing Change addressing settings i SH Serial Number High i SL Serial Number Low i MY 16-bit Network Address	0013A2004187D78CJ	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D		Radio Configuration [Coordinator Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls Mddressing Change addressing settings i SH Serial Number High i SL Serial Number Low i MP 16-bit Network Address i MP 16-bit Parent Address	0013A2004187D78CJ	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	€ DH to 0 ate DL to 0	Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Controls Mddressing Change addressing settings i SH Serial Number High i SL Serial Number High i SL Serial Number Low i MY 16-bit Network Address i MP 16-bit Parent Address i DH Destinationddress High i DI Destinationddress High	0013A2004187D78CJ 0013A2004187D78CJ Profile Q Param Profile Q Param Enabled [1] V 8 Bitfield B 13A200 4187D78C 0 FFFE 0 FFFE 0	X
XCTU Working Modes Tools Help XCTU Working Modes Tools Help Radio Modules Name: Coordinator Radio Modules Name: Coordinator Port: COM5 - 9600/8 MAC: 0013A2004187D Update Vupdate Update Update	(IN/1/N - AT 778C THE DH to 0 ate DL to 0 Coordinator	Radio Configuration [Coordinator Radio Configuration [Coordinator Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Options i DC Device Controls Middressing Change addressing settings i SH Serial Number High i SL Serial Number High i SL Serial Number Low i MY 16-bit Network Address i MP 16-bit Parent Address i DH Destinationddress High i DL Destination Address Low i NI Node Identifier	0013A2004187D78CJ	
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D	(1) (1) - AT 778C Tree DH to 0 ate DL to 0 Coordinator	Image: Second state of the second s	0013A2004187D78C] 0013A2004187D78C] Profile Profile Enabled [1] 8 Bitfield 13A200 4187D78C 0 FFFF 0 FFFF Coordinator 1E	- C X
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A20041870 Update Node Identifier to (IN/1/N - AT 78C TH to 0 ate DH to 0 Coordinator	Radio Configuration [Coordinator Write Default Updat Write Default Updat i CE Coordinator Enable i DO Device Options i DC Device Options i DC Device Controls Mdressing Change addressing settings i SH Serial Number High i SL Serial Number High i SL Serial Number Low i MY 16-bit Network Address i MP 16-bit Parent Address i DH Destinationddress High i DL Destinationddress High i DL Destinationddress High i DL Destinationddress High i MI Node Identifier i NH Maximum Hops i BH Broadcast Radius	0013A2004187D78CJ	X
XCTU XCTU Working Modes Tools Help Radio Modules Radio Modules Name: Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8 MAC: 0013A2004187D Update Node Identifier to ((1) (1) - AT 778C (2) (2) - (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	Image: Second system Radio Configuration [Coordinator Image: Second system Image: Second system <td>0013A2004187D78C] 0013A2004187D78C] Profile Q Profile Q Param Bitfield III 0 Bitfield 13A200 13A200 4187D78C 0 FFFE 0 FFFF Coordinator 1E 0 FFF Coordinator IE 0 FF x 10 sec</td> <td>- C X</td>	0013A2004187D78C] 0013A2004187D78C] Profile Q Profile Q Param Bitfield III 0 Bitfield 13A200 13A200 4187D78C 0 FFFE 0 FFFF Coordinator 1E 0 FFF Coordinator IE 0 FF x 10 sec	- C X

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Radio Modules	Radio Configuration [Coordinator - 0013A2004187D78C]	
REFICE Coordinator Function: ZIGBEE TH Reg Port: COM5 - 9600/8/N/1/N - AT MAC: 0013A2004187D78C	Read Write Default Update Profile Q Parameter	. 7 7
	i DD Device Type Identifier A0000	S 🖉 ^
	i NT Node Discovery Backoff 3C x 100 ms	8
	i NO Node Discovery Options 0	8
	(j) NP Maximum Nion Bytes 54	9
	i CR PAN Conflict Threshold 3	99
	 ZigBee Addressing Change ZigBee protocol addressing settings 	
	i SE ZigBee Source Endpoint E8	8
	i DE ZigBee Desn Endpoint E8	8
	i CI ZigBee Cluster ID 11	8
	i TO Transmit Options 0 Bitfield	8
	 RF Interfacing Change RF interface options 	
	(j) PL TX Power Level Highest [4]	8
	(j) PM Power Mode Boost Mode Enabled [1] V	8
	(j) PP Power at PL4 8	9
		~

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Radio Modules		Radio Configuration [Coordinator - 0013A2004187D78C]
Function: ZIGBE Port: COM MAC: 0013A	dinator EE TH Reg 5 - 9600/8/N/1/N - AT A2004187D78C	Read Write Default Update Profile Q Parameter +1 -1
		i PP Power at PL4 8
		Security Change security parameters
		i EE Encryption Enable Disabled [0]
		i EO Encryption Options 0 Bitfield 🔛 😒 🔗
		i KY Encryption Key 0 🖉 🛇
		i NK Network Encryption Key 0
		Serial Interfacing Change modem interfacing options
		i BD Baud Rate 9600 [3]
		i NB Parity No Parity [0] 🗸 😒 🔗
		🧃 SB Stop Bits One stop bit [0] 🗸 🚫 🚫
		i RO Packetization Timeout 3 x charar times 😒 📀
		i D6 Pin 16 - Dlnfiguration Disable [0]
		i D7 Pin 12 - Dlnfiguration nCTS flow control [1] V
		i AP API Enable Transparent mode [0] V



	- 🗆 X
XCTU Working Modes Tools Help	
Radio Modules	Radio Configuration [Coordinator - 0013A2004187D78C]
Name: Coordinator X Function: ZIGBEE TH Reg 20 Port: COM5 - 9600/8/N/1/N - AT 20 MAC: 0013A2004187D78C \bigtriangledown	Read Write Default Update Profile Q Parameter Image: Constraint of the second secon
	Serial Interfacing Change modem interfacing options
	i BD Baud Rate 9600 [3] - S
	i NB Parity No Parity [0] 🗸 😒 📀
	i SB Stop Bits One stop bit [0] 🗸 🛇 🔗
	i RO Packetization Timeout 3 x charar times 😒 📀
	(i D6 Pin 16 - Dlnfiguration Disable [0] V 🚫 📀
	i D7 Pin 12 - Dlnfiguration nCTS flow control [1] V
	i AP API Enable Transparent mode [0] V
	i AO API Output Mode Native [0]
	Change AT command mode behavior
	i CT AT Commane Timeout 64 x 100ms 🔛 😒 📀
	i GT Guard Times 3E8 x 1ms 🔛 🚫 📀
	i CC Command Se Character 2B RecommASCII) 😒 😒
	 Sleep Modes Configure low power options to support end device children
XCTU XCTU Working Modes Tools Help	
XCTU XCTU Working Modes Tools Help	× X• B © 0• 🔅 🔛 🦑
XCTU XCTU Working Modes Tools Help Radio Modules	×
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	(i D1 Pin 19 - Dinfiguration Disabled [0]	
	i D2 Pin 18 - Dinfiguration Disabled [0]	
	DA Pin 11 - DL nfinuration Disabled [0]	
	i DS Pin 15 - DL nfiguration Associated indicator [1]	
	i D8 Pin 9 - DIOnfiguration Sleep Rg [1]	
	i D9 Pin 13 - DInfiguration Awake/Asleep indicator [1] V	
	(i) P0 Pin 6 - DIOnfiguration RSSI PWM Output [1]	
	i P1 Pin 7 - DIOnfiguration Disabled [0] V	
	i P2 Pin 4 - DIOnfiguration Disabled [0] V 😒 📀	
	i P3 Pin 2 - DIOnfiguration DOUT [1] S	
	(i) P4 Pin 3 - DIOnfiguration DIN [1] 🗸 😒 🔗	
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Configuring the Xbee as End Device/Reveiver

Update below fields

1. ID PAN ID

PAN ID should be same for all Xbees communicating each other irrespective of Tx

or Rx

Eg: 2019

2. SC Scan Channels

Scan channel should be same for all Xbee communicating each other irrespective of Tx and Rx

Eg: C

- 3. JV Channel Verification
 - Set it to Enable [1]
- 4. CE Coordinator Enable

Coordinator Enable should be Set to **Didable[0]**

5. DH Destination Address High

Set to **0**

6. **DL** Destination Address Low

Set to **0**

7. NI Node Identifier

Name of the device, it can be any name.

Eg: EndDevice

8. BD Baud Rate

Set to 9600 [3]

9. **NB** Parity

Set it to No Parity [0]



10. SB Stop Bits

Set to One stop bit [0]

11. **D7** Pin 12 – DIO7/...Configuration

Set to nCTS flow control [1]

12. AP API Enable

Set to Transparent mode [0]

Below are the screenshots of XCTU software configuring Xbee as the receiver/end device





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	i SH Serial Number High 13A200
	👔 SL Serial Number Low 4187D79B 🛇
	i MY 16-bit Network Address FFFE S
	i MP 16-bit Parent Address FFFE
Update DH and DL to 0	i DH Destinationddress High 0
	i DL Destination Address Low 0
Update Node Identifier to Enddevice	i NH Maximum Hone 15
	i BH Broadcast Radius 0
	i) AR Many-to-Ondcast Time FF x 10 sec 🔛 😒 🖉
	i DD Device Type Identifier A0000
	Show parameter description 3C x 100 ms 🔛 😒 📀
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