# LANTRONIX®
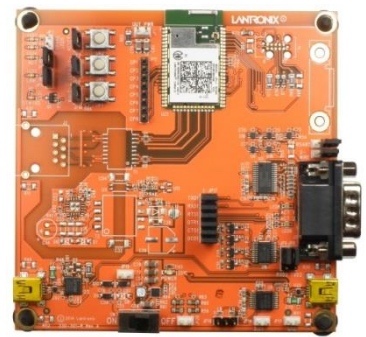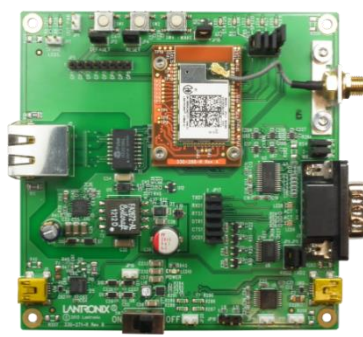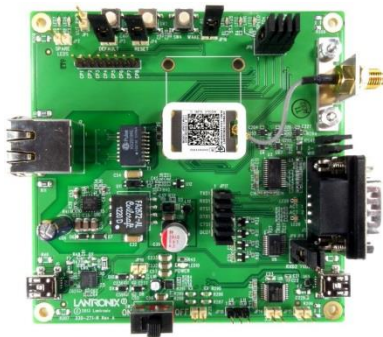


## xPico® Wi-Fi®
# Embedded Device Server
# Evaluation Kit User Guide

## Copyright and Trademark

© 2019 Lantronix, Inc. All rights reserved. No part of the contents of this book may be transmitted or reproduced in any form or by any means without the written permission of Lantronix.

*Lantronix* and *xPico* are registered trademarks of Lantronix, Inc. in the United States and other countries. U.S. patents:  7,309,260; 7,698,405; 8,024,446; 8,219,661.  Additional patent(s) pending.

*Windows* is a trademark of Microsoft Corporation.  *Wi-Fi* is a registered trademark of the Wi-Fi Alliance Corporation.  All other trademarks, servicemarks and trade names are the property of their respective owners.

## Warranty

For details on the Lantronix warranty policy, please go to our Web site at www.lantronix.com/support/warranty.

## Contacts

**Lantronix, Inc.**
167 Technology Drive  Irvine, CA 92618, USA
Phone:  949-453-3990
Fax:       949-453-3995

**Technical Support**
Online: www.lantronix.com/support

**Sales Offices**
For a current list of our domestic and international sales offices go to the Lantronix web site   at www.lantronix.com/about/contact.

## Disclaimer and Revisions

*Note: This product has been designed to comply with the limits for a Class B digital  device pursuant to Part 15 of FCC and EN55022 Rules when properly enclosed and  grounded. These limits are designed to provide reasonable protection against radio  interference in a residential installation. This equipment generates, uses, and can  radiate radio frequency energy, and if not installed and used in accordance with this  guide, may cause interference to radio communications. Changes or modifications to  this device not explicitly approved by Lantronix will void the user's authority to  operate this device. The information in this guide may change without notice. The   manufacturer assumes no responsibility for any errors that may appear in this guide.*

# Revision History

| Date | Rev. | Comments |
|------|------|----------|
| July 2013 | A | Initial document. |
| August 2013 | B | Added xPico Wi-Fi module information. |
| August 2013 | C | Updated pin number information. |
| December 2014 | D | Updated Lantronix evaluation board information; added the new evaluation board schematic for SMT part with on-module antenna. |
| May 2019 | E | Clarified that RS485 is not available on the xPico Wi-Fi. |

# Table of Contents

# List of Figures

# List of Tables

# 1:    Introduction

## About this Guide

This guide provides the information needed to use the Lantronix® xPico® embedded device server with the evaluation kit. The intended audience is the engineers responsible for integrating the xPico and xPico Wi-Fi into their product. In this document, "xPico" refers to all xPico Ethernet only modules, "xPico Wi-Fi" refers to all xPico modules which have a Wi-Fi interface and "xPico Wi-Fi SMT" refer to those modules with a surface mount mounting.

*Notes: Everything required to evaluate the xPico turnkey application is provided in the Evaluation Kit.  See xPico Wi-Fi Evaluation Kit Contents for more information.*

## Additional Documentation

Visit the Lantronix web site at www.lantronix.com/support/documentation for the latest documentation and the following additional documentation.

| Document | Description |
|---|---|
| *xPico Wi-Fi Embedded  Device Server Evaluation Kit  Quick Start Guide* | Instructions for getting the xPico module up and running  on the evaluation board. |
| *xPico Embedded Device  Server Integration Guide* | Provides information for integrating the xPico module on a customer platform. |
| *xPico Wi-Fi SMT Embedded Device Server Integration Guide* | Provides information for integrating the xPico Wi-Fi SMT module on a  customer platform. |
| *xPico Embedded Device  Server Product Brief* | Provides a quick reference to xPico technical  specifications. |
| *xPico Wi-Fi Embedded  Device Server Product Brief* | Provides a quick reference to xPico Wi-Fi technical  specifications. |
| *xPico Wi-Fi SMT Embedded  Device Server Product Brief* | Provides a quick reference to xPico Wi-Fi SMT technical specifications. |
| *xPico Wi-Fi SMT Embedded Device Server Datasheet* | Provides a detailed reference to xPico Wi-Fi SMT technical specifications. |
| *xPico Embedded Device  Server User Guide* | Provides information needed to configure, use, and build applications on the xPico. |
| *xPico Wi-Fi Embedded  Device Server User Guide* | Provides information needed to configure, use, and build applications on the xPico Wi-Fi. |

# 2: Evaluation Kit

The xPico Embedded Device Server family of products can be evaluated using several available Evaluation Kits depending upon the type of PCB mounting and interface.

The xPico Embedded Device Server Evaluation Kit (part number XPW100100K-01) is for evaluating the xPico and xPico Wi-Fi modules with 40-pin connector interface. The xPico Wi-Fi SMT module with on module antenna (XPCW1003100) module uses the XPCW1003100K. The xPico Wi-Fi SMT module with U.FL connector comes on a carrier board that uses the same board as the used for the connector versions of the module. This Evaluation Kit is the XPCW1002100K. All of these kits can help you get familiar with your xPico module so that you may understand how to integrate your xPico embedded device server into a given product design.

*Table 2-1  xPico Wi-Fi Evaluation Kit Contents*

| XPW100100K-01 | XPCW1002100K | XPCW1003100K |
|---|---|---|
| ◆ xPico Wi-Fi Module<br>◆ xPico Evaluation Board<br>◆ 5V Wall Adaptor<br>◆ xPico Mounting Quick Clip<br>◆ 40-pin Connector Sample<br>◆ 2 dBi Swivel Type Antenna and U.FL to RP SMA Cable<br>◆ 2.5 dBi PCB Strip Antenna with U.FL cable | ◆ xPico Wi-Fi SMT W1002 Module on Carrier Board<br>◆ xPico Evaluation Board<br>◆ 5V Wall Adaptor<br>◆ 2 dBi Swivel Type Antenna and U.FL to RP SMA Cable<br>◆ 2.5 dBi PCB Strip Antenna with U.FL cable | ◆ xPico Wi-Fi SMT W1003 Module<br>◆ xPico SMT Evaluation Board<br>◆ 5V Wall Adaptor |

## Evaluation Board Description

The xPico Wi-Fi evaluation board provides a test platform for the Lantronix xPico device server products. The evaluation board uses either 5V power from a USB device port connector or power supplied to the Ethernet connector via PoE (XPW100100K-01 only). The evaluation board also provides a header for connection to a 2.2V to 5.5V external source, such as a battery. The Evaluation Kit includes a 5V wall adapter with a USB plug to allow powering the evaluation board from a standard power strip. The evaluation board includes all necessary regulators to power the 3.3V xPico module. The evaluation board has the following features:

♦ One DB9 serial port connector with a multi-protocol RS232, RS422, RS485 transceiver at rates up to 1Mbps. Serial port modes are configured by on-board jumpers. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico.

♦ A second RS232 serial port is available on a header.

♦ One RJ45 10/100 Ethernet port with an integrated PoE regulator to allow powering from standard POE PSE. (POE works with Ethernet xPico modules only) ( XPW100100K-01 only)

♦ One Mini-Type B USB device port connector for 5V input power. This port also has an integrated USB-to-serial converter. The USB-to-serial converter can be connected to the xPico second serial port via a board jumper setting.

♦ A second Mini-type B USB device port is available for connection to the xPico module

USB device port.  (Currently available on xPico Wi-Fi only)

♦ LEDs for the xPico Ethernet, WLAN, and System status outputs along with two additional LEDs that can be driven via jumper wire are provided.

♦ Access to all logic level IO signals on the xPico via header pins for measurements and connections to other places.

The figure below shows the xPico evaluation board and highlights all of the various  connectors and configuration jumpers.  The following table lists each of the connectors and  jumper headers along with their function.  Further description and pin assignments are  included in subsequent sections.

**Figure 2-1  xPico Wi-Fi Evaluation Board XPW100100K-01 Connectors and Jumpers**
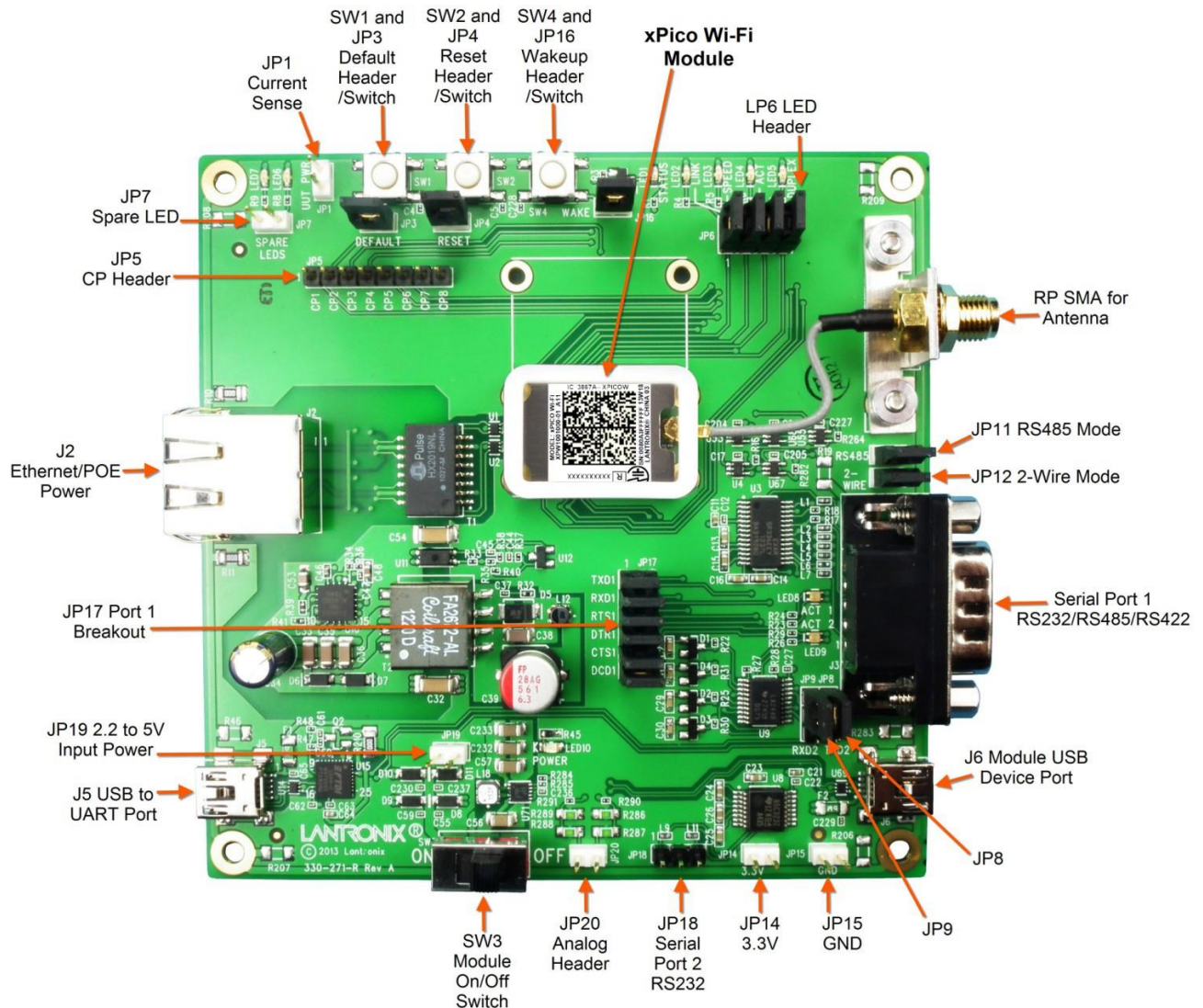
**Figure 2-2  xPico Wi-Fi SMT Evaluation Board XPW100300K – Connectors and Jumpers**
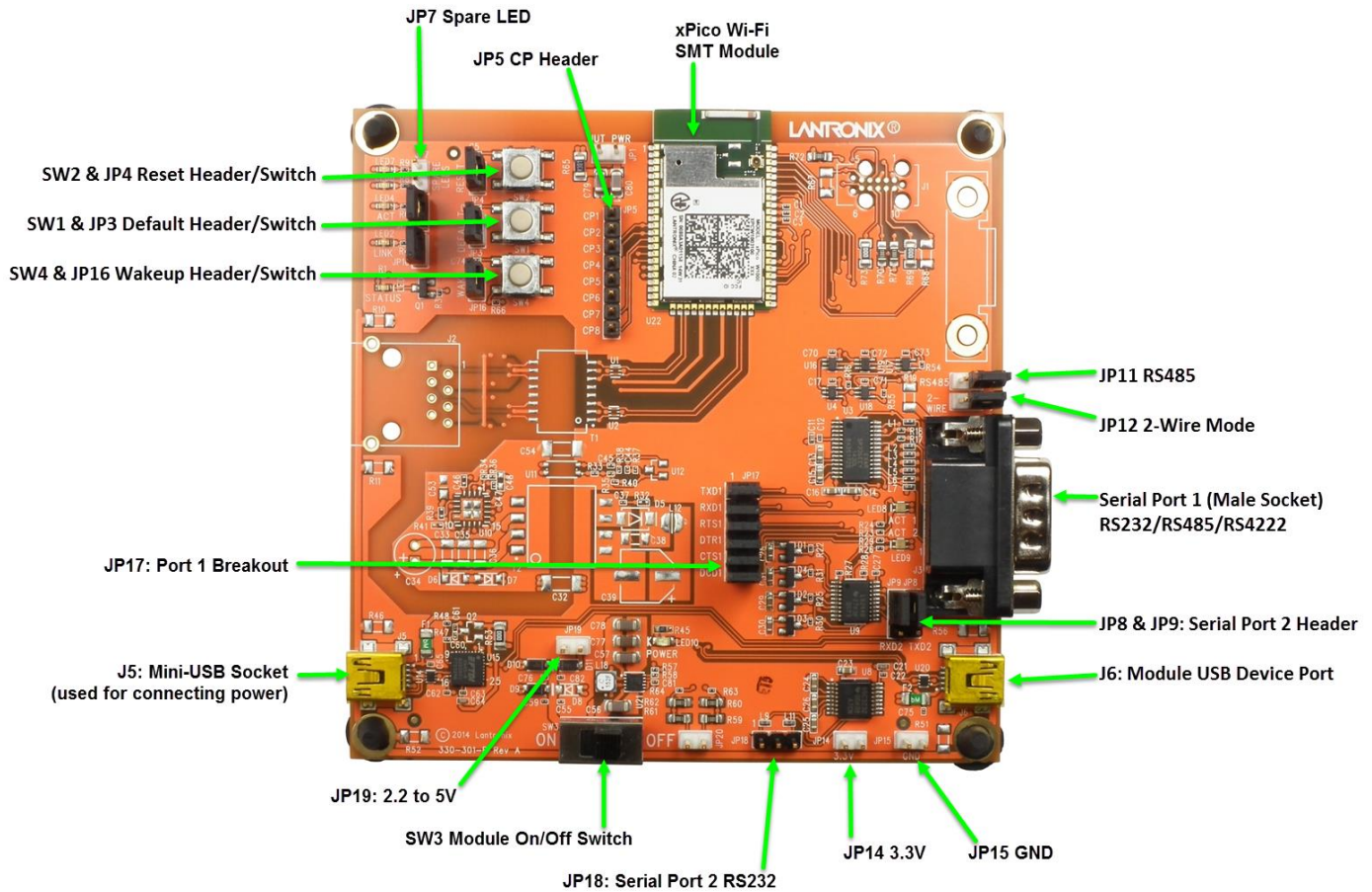


***Table 2-2  Evaluation Board Connectors, Header and Switches***

| Ref Des. | Connector/Header Function |
|----------|---------------------------|
| J1 | **xPico Module Socket**<br>40 pin socket for xPico module or SMT carrier board. XPW100100K-01 and XPCW1002100K only. |
| J2 | **RJ45 Connector**<br>10/100Mbps Ethernet connector.  PoE powered device port.  Functional for xPico  Ethernet modules. XPW100100K-01 and XPCW1002100K only. |
| J3 | **Serial Port 1 DB9**<br>Standard RS232/RS422/RS485 DB9 serial port connector. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico. |
| J5 | **Mini USB Connector**<br>Standard USB device port that can be used to power the evaluation board and/or drive  the evaluation board USB-to-serial converter.  The USB serial port converter can be  connected to the module second serial port via a jumper setting. |
| J6 | **Mini USB Connector**<br>Standard USB device port that can be used to power the evaluation board and/or drive  the xPico Module USB device port.  Functional for xPico Wi-Fi module. |

| Ref Des. | Connector/Header Function |
|---|---|
| JP1 | **Module Power Jumper**<br>Allows for voltage measurement of the xPico module current sense resistor. The current sense resistor is 0.301 ohms. |
| JP3 | **Default Button Jumper**<br>Allows access to module reset to default signal and SW1 push button. Install to use SW1 as reset to default button. |
| JP4 | **HW Reset Button Jumper**<br>Allows access to module HW reset signal and SW2 push button. Install to use SW2 as HW reset button. |
| JP5 | **Configurable Pin Header**<br>Provides access to xPico module configurable pins CP1 to CP8 |
| JP6 | **Ethernet/WLAN LED Header**<br>Allows access to Ethernet/WLAN LED signals. Install to drive evaluation board Ethernet/WLAN LEDs with module LED signals. XPW100100K-01 and XPCW1002100K only. |
| JP6 | **Reserved for future Ethernet activity LED (XPCW1003100k)** |
| JP7 | **Spare LED Header**<br>Provides two additional LEDs. Jumper to desired active low signal to light LED6 and LED7 |
| JP8 | **Serial Port 2 TX Source Header**<br>Install jumper to select between DB9 serial port or USB-to-serial. |
| JP9 | **Serial Port 2 RX Source Header**<br>Install jumper to select between DB9 serial port or USB-to-serial. |
| JP10 | **WLAN LED Header (XPCW1003100K)**<br>Allows access to WLAN LED signal. Install to drive evaluation board WLAN LEDs with module LED signals. |
| JP11 | **Serial Port 1 RS232/RS422/RS485 Mode Jumper**<br>Leave open for RS232 mode. Install for RS422/RS485. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico. |
| JP12 | **Serial Port 1 RS422/RS485 Mode Jumper**<br>Leave open for RS232 or 4-wire mode. Install for 2-wire mode. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico. |
| JP14 | **3.3V Power Header**<br>Provides access to the internal 3.3V power rail. |
| JP15 | **Ground Header**<br>Provides access to the internal signal ground rail. |
| JP16 | **WAKE Header**<br>Allows access to module WAKE signal and SW4 push button. Install to use SW4 to wake up the xPico module when in low power modes. |
| JP17 | **Serial Port 1 Breakout Header**<br>Install jumpers to connect xPico Serial Port 1 flow control signals to the RS232/RS422/RS485 transceiver for Serial Port 1. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico. |

| Ref Des. | Connector/Header Function |
|---|---|
| JP18 | **Serial Port 2 Signal Header**<br>Provides access to the module second serial port. The signals on this header have been buffered by an RS232 transceiver. |
| JP19 | **External Power Header**<br>Provides connection point for an external 2.2V to 5.5V power source, such as a battery. This is connected to a 3.3V step up/down regulator that will power the evaluation board and module circuitry. |
| SW1 | **Module Reset to Default**<br>When pushed asserts the xPico module reset to default function. |
| SW2 | **Module Hardware Reset**<br>When pushed asserts the xPico module hardware reset to reboot the module. |
| SW3 | **Board Power Switch**<br>Switches ON or OFF the logic power rails. |
| SW4 | **WAKE Button**<br>When pushed asserts the xPico module WAKE signal. Functional for xPico Wi-Fi module only. |

# Serial Port 1 RS232/RS485 and Serial Port 2 RS232 Interface

The evaluation board has one multiprotocol RS-232/RS422/RS485 port and one RS232 port for connection to the xPico internal UARTs. Serial port 1 is a DB9 type connector labeled J3. Serial Port 2 is a 3-pin header, JP18. The null modem cable can be used to connect J3 directly to a standard PC RS232 serial port.

*Note: The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico.*

The tables below list the RS232/RS422/RS485 signals and corresponding pins on the evaluation board DB9 connectors. All signals at J3 are level-shifted by a multiprotocol transceiver. JP18 is an RS232 port only.

*Table 2-3 RS-232 Signals on J3 Serial Port*

| xPico Evaluation Board PIN FUNCTION SERIAL PORTS | DB9 Pin # |
|---|---|
| TX_232 (Data Out) | 3 |
| RX_232 (Data In) | 2 |
| CTS_232 (HW Flow Control Input) | 8 |
| RTS_232 (HW Flow Control Output) | 7 |
| DTR_232 (Modem Control Output) | 4 |
| DCD_232 (Modem Control Input) | 1 |
| GND (Ground) | 5 |

*Table 2-4  RS-422 4-Wire Signals on J3 Serial Port*

| xPico Evaluation Board  PIN FUNCTION SERIAL PORTS | DB9 Pin # |
|---|---|
| TX- (Data Out) | 3 |
| RX+ (Data In) | 2 |
| TX+ (Data Out) | 7 |
| RX- (Data In) | 8 |
| GND (Ground) | 5 |

*Table 2-5  RS-485 2-Wire Signals on J3 Serial Ports*

| xPico Evaluation Board  PIN FUNCTION SERIAL PORTS | DB9 Pin # |
|---|---|
| TX-/RX- (Data IO) | 3 |
| TX+/RX+ (Data IO) | 7 |
| GND (Ground) | 5 |

The J3 DB9 port is configured for RS232, RS422 (4-wire), or RS485 (2-wire) by jumper  settings on JP11 and JP12.  *Table 2-5*  lists the correct jumper installation for each mode. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico.

*Table 2-6  JP11 and JP12 Jumper Settings for Serial Port 1 (J3)*

| xPico Evaluation Board Serial Port 1 Mode (J3) | JP11 | JP12 |
|---|---|---|
| RS232 (Default) | OUT | OUT |
| RS485 2-wire | IN | IN |
| RS422 4-wire | IN | OUT |

JP18 is for connection to the module second serial port through an RS232 transceiver.  The  pin assignments for JP18 are listed below. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico.

*Table 2-7  JP18 Serial Port 2 RS232 Connections*

| xPico Evaluation Board Serial Port 2 | JP18 pin |
|---|---|
| TX RS232 output | 1 |
| Signal Ground | 2 |
| RX RS232 input | 3 |

All of the xPico module serial port signals can be used as configurable pins. Jumper headers JP17, JP8 and JP9 have been included to allow for each of the serial port signals to be connected or disconnected from the serial port transceiver. The tables below list the JP17, JP8, and JP9 serial port signal connections. Install jumper or remove as needed for desired function. In addition, the second serial port on the xPico module can be connected to either the serial port on J18 or to the USB on J5 via the on board USB-to-serial converter. Jumpers JP8 and JP9 allow for the selection of sending the JP18 or J5 USB-to-Serial converter to Serial Port 1.

In order to access the unit through the J5 USB port, you will need to install the USB-to-serial VCP driver from FTDI on your PC. It is available in the installation directory of DeviceInstaller

and later versions, for installation. It can also be obtained from the FTDI website provided below. Once installed, you will be able to view the xPico boot messages as well as provide command inputs through any PC terminal program, such as Tera Term.

Download FTDI USB-to-serial drivers at this website:  http://www.ftdichip.com/Drivers/VCP.htm

*Table 2-8  JP17 Serial Port 1 Flow Control Break Out Header*

| xPico Module J1 Pin | xPico Module PIN FUNCTION | JP17 Pin # | JP17 Pin # | JP3 Evaluation Board Function |
|---|---|---|---|---|
| 10 | Serial Port TX (output) | 2 | 1 | RS232, RS485 TX |
| 7 | Serial port RX (input) | 4 | 3 | RS232, RS485 RX |
| 5 | Serial port RTS1 or TX enable or configurable pin | 6 | 5 | RS232 RTS, RS485 TX Enable |
| 28 | Configurable pin CP3 or Serial port DTR1 | 8 | 7 | RS232 DTR |
| 16 | Serial port CTS1 or configurable pin | 10 | 9 | RS232 CTS |
| 30 | Configurable pin CP4 or Serial port DCD1 | 12 | 11 | RS232 DCD |

*Note: JP17 jumpers 7 to 8 and 11 to 12 are not installed by default.  All other JP17   jumpers are installed at the factory. The xPico Wi-Fi does not support RS485. RS485 is applicable only to the xPico.*

*Table 2-9  JP8 and JP9 Port 2 Serial or USB/Serial Selection Headers*

| Serial Port 1 External Connection | JP8 | JP9 |
|---|---|---|
| Serial Port 2 to JP18 for RS232 (Default) | Jumper pins 1 to 2 | Jumper pins 1 to 2 |
| Serial Port 2 to J5 USB via USB-to-serial converter | Jumper pins 2 to 3 | Jumper pins 2 to 3 |

**Figure 2-3  JP8, JP9, and JP17 Headers**
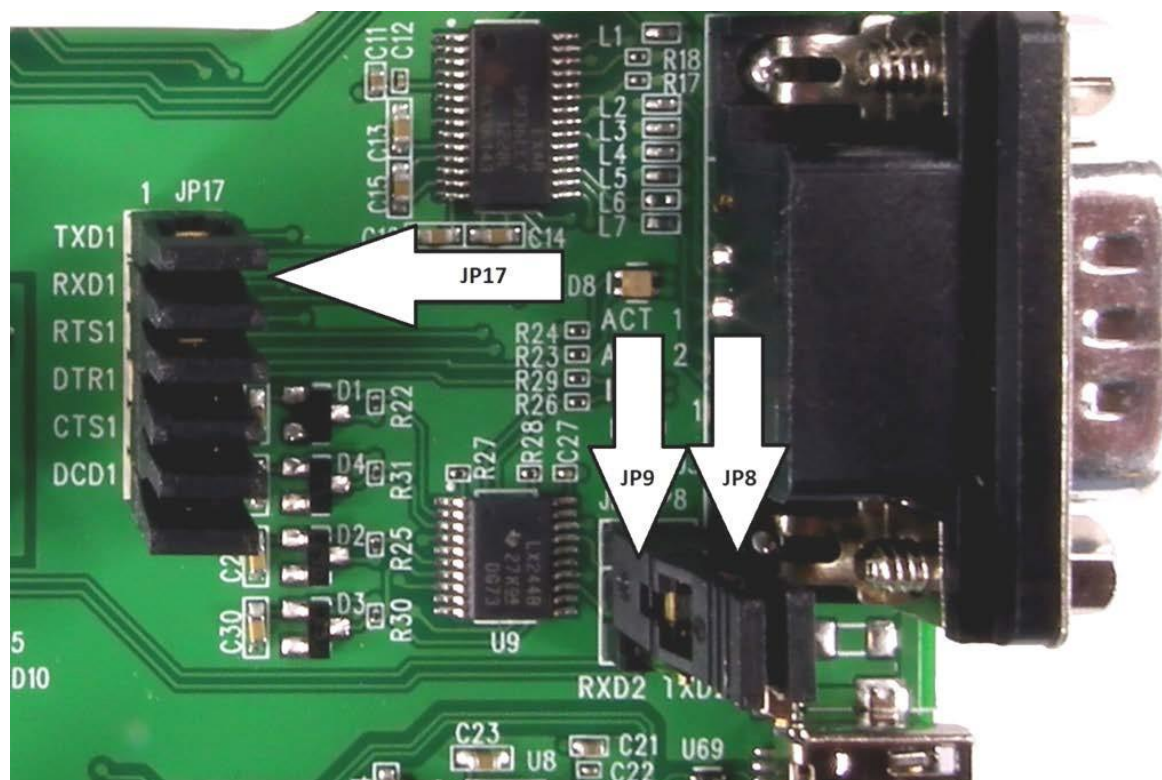


## Antenna Port

The xPico evaluation boards (XPW100100K-01 and XPCW1002100K ) includes a bracket for mounting the U.FL to Reverse Polarity SMA RF cable included with the kit. Follow the procedure below when installing the antenna cable. The same procedure applies when using the PCB strip antenna, with the exception that the swivel antenna does not need to be connected to the RF cable.

1. Attach the U.FL cable to the antenna prior to installing the xPico Wi-Fi module on the  J1 socket.

2. Attach the plastic mounting clip to the module.

3. Install the module/SMT module on carrier board into the J1 socket.

4. Install the external antenna to the SMA end of the RF cable.

*Note:  Install or remove the antenna connections only while the module is powered  off.*

## Ethernet Port

The xPico evaluation board XPW100100K-01 includes one RJ45 with on-board magnetics for connection to the   xPico module 10/100Mbps Ethernet interface. Connector J2 is the Ethernet port.

*Note:*  *The Ethernet port is functional for xPico Ethernet modules only.*

## Power Supply

The evaluation board provides several options for input power.  Included with the kit is a 5V wall adapter.  The 5V wall adapter plugs into USB connector J5.  In addition to powering from the wall adapter, the evaluation board can be powered from a standard PC USB Host port by connecting a USB cable between the PC and J5 or J6.  The XPW100100K-01 evaluation board can also be   powered via Power-Over-Ethernet (PoE).  The integrated PoE regulator accepts power from   the Ethernet port on J2.  The final option is to connect DC power to header JP19.

*Table 2-10  Evaluation Board Power Options*

| Input Power Option | Description |
|---|---|
| 5V Wall Cube | Connect 5V wall cube to J5 or J6 USB port. <br> *Note:  USB-to-serial and USB device port not available in this option.* |
| USB | Connect J5 or J6 USB power to a PC USB Host Port. <br> *Note:  For J5 connection, PC Host port can communicate with serial port 2   via on-board USB-to-serial converter.  See Table 2-1 for JP8 and JP9  jumper pin selection.* <br> *Note: For J6 connection, PC can communicate with module device port on xPico Wi-Fi module.* |
| PoE | Connect J2 Ethernet port to external PoE PSE switch or PoE injector. XPW100100K-01 only |
| JP19 | Connect a 2.2V to 5.5V DC power source to JP19 pin 1 (+). Connect the power supply DC ground to JP19 pin 2 (-). |

## LEDs

The xPico evaluation board includes several LEDs for signal and unit status.  The table below lists all of the LEDs and their functions.

*Table 2-11  LEDs Signals*

| J1 Pin | LED Ref Design | Color | LED Function |
|--------|----------------|-------|--------------|
| 20 | LED1 | Orange | **xPico Status**<br>LED blinks with patterns indicating module status.  See the  xPico user guide for a full description of the status LED blink  patterns. |
| 4 | LED2 | Orange | **Ethernet Link/WLAN Status**<br>LED is ON when the device is associated with an access point  (on the STA interface.)<br>LED is OFF when the device is not associated with an access  point.<br>LED is ON when there is a valid Ethernet link (XPW100100K-01) |
| 6 | LED3 | Orange | **Ethernet Speed (XPW100100K-01)**<br>LED is ON when Ethernet is in 100Mbps mode, xPico with  Ethernet only. |
| 8 | LED4 | Orange | **Ethernet Activity (XPW100100K-01)**<br>LED blinks when there is activity on the Ethernet port, xPico  with Ethernet only. |
| 14 | LED5 | Orange | **Ethernet Duplex (XPW100100K-01)**<br>LED is ON when Ethernet is in half duplex mode, xPico with  Ethernet only. |
|  | LED6 | Orange | **Spare LED**<br>LED is ON when JP7 pin 1 is driven low |
|  | LED7 | Orange | **Spare LED**<br>LED is ON when JP7 pin 2 is driven low. |
| 10 | LED8 | Green | **Serial Port 1 TX Activity**<br>LED is ON for activity on the Serial Port 1 transmit line |
| 7 | LED8 | Orange | **Serial Port 1 RX Activity**<br>LED is ON for activity on the Serial Port 1 receive line |
| 25 | LED9 | Green | **Serial Port 2 TX Activity**<br>LED is ON for activity on the Serial Port 2 transmit line |
| 23 | LED9 | Orange | **Serial Port 2 RX Activity**<br>LED is ON for activity on the Serial Port 2 receive line |
|  | LED10 | Blue | **3.3V Power LED**<br>LED is ON when the evaluation board power supply is  generating 3.3V |

*Table 2-12  JP6 LED Header Connections (XPW100100K-01 and XPCW1002100K)*

| Jumper Position | Description |
|---|---|
| **Pins 1 to 2** | Install to connect module Ethernet link/WLAN status signal to LED2 |
| **Pins 3 to 4** | Install to connect module Ethernet Speed signal to LED3 |
| **Pins 5 to 6** | Install to connect module Ethernet Activity signal to LED4 |
| **Pins 7 to 8** | Install to connect module Ethernet Duplex signal to LED5.<br>Remove when using xPico Wi-Fi module to prevent conflict with module wake up signal.<br>This jumper is not stuffed by default. |

*Table 2-13  JP6 LED Header Connections (XPW100300K)*

| Jumper Position | Description |
|---|---|
| **Pins 1 to 2** | Install to connect module WLAN status signal to LED2 |

## Additional Headers

The table below lists the pin functionality of the additional evaluation board headers.

*Table 2-14   Additional Headers*

| J1 Pin | Header Pin | Signal | Function |
|---|---|---|---|
| **36** | JP3 pin 1 | Module reset to defaults (active low) | Install jumper (JP3 pins 1 to 2) to use SW1 for asserting default function. |
| **38** | JP4 pin 1 | Module hardware reset (active low) | Install jumper (JP4 pins 1 to 2) to use SW2 for asserting hardware reset. |
| **14** | JP16 pin 1 | Module wake up (rising edge triggered) | Install jumper (JP16 pins 1 to 2) to use SW4 for asserting module wake up.<br>Do not install when using xPico (wired) Ethernet Duplex LED signal. |
| **35** | JP5 pin 1 | CP1, configurable pin | Test point |
| **26** | JP5 pin 2 | CP2, configurable pin | Test point |
| **28** | JP5 pin 3 | CP3, configurable pin | Test point |
| **30** | JP5 pin 4 | CP4, configurable pin | Test point |
| **32** | JP5 pin 5 | CP5, configurable pin | Test point |
| **34** | JP5 pin 6 | CP6, configurable pin | Test point |
| **27** | JP5 pin 7 | CP7, configurable pin | Test point |
| **3** | JP5 pin 8 | CP8, configurable pin | Test point |

# Evaluation Board Schematic (XPW100100K-01 and XPCW1002100K)
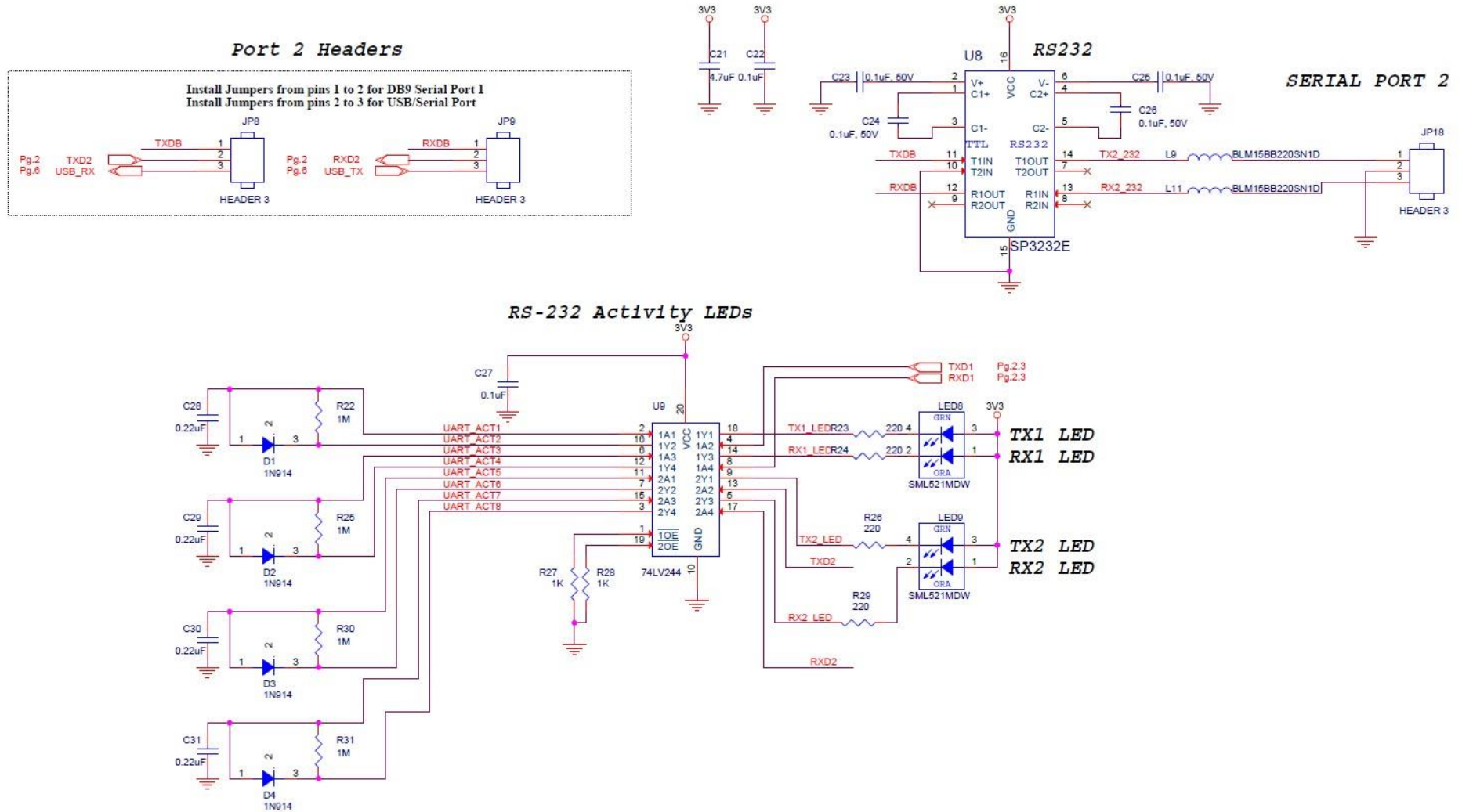
**Figure 2-4  Evaluation Board Schematic for XPW100100K-01 and XPCW1002100K, Part 1 of 5**

**Figure 2-5  Evaluation Board Schematic for XPW100100K-01 and XPCW1002100K, Part 2 of 5**

**Figure 2-6  Evaluation Board Schematic for XPW100100K-01 and XPCW1002100K, Part 3 of 5**

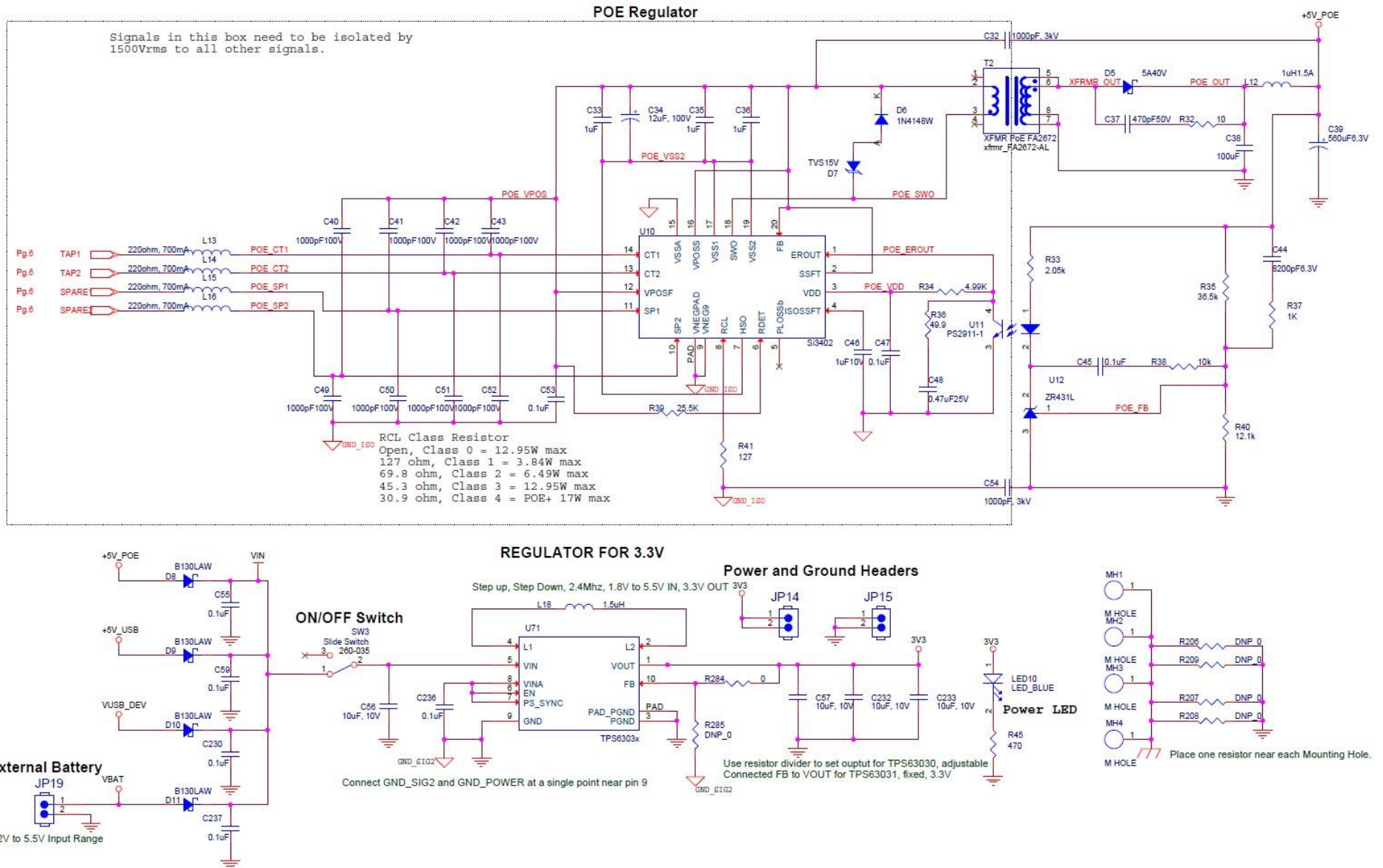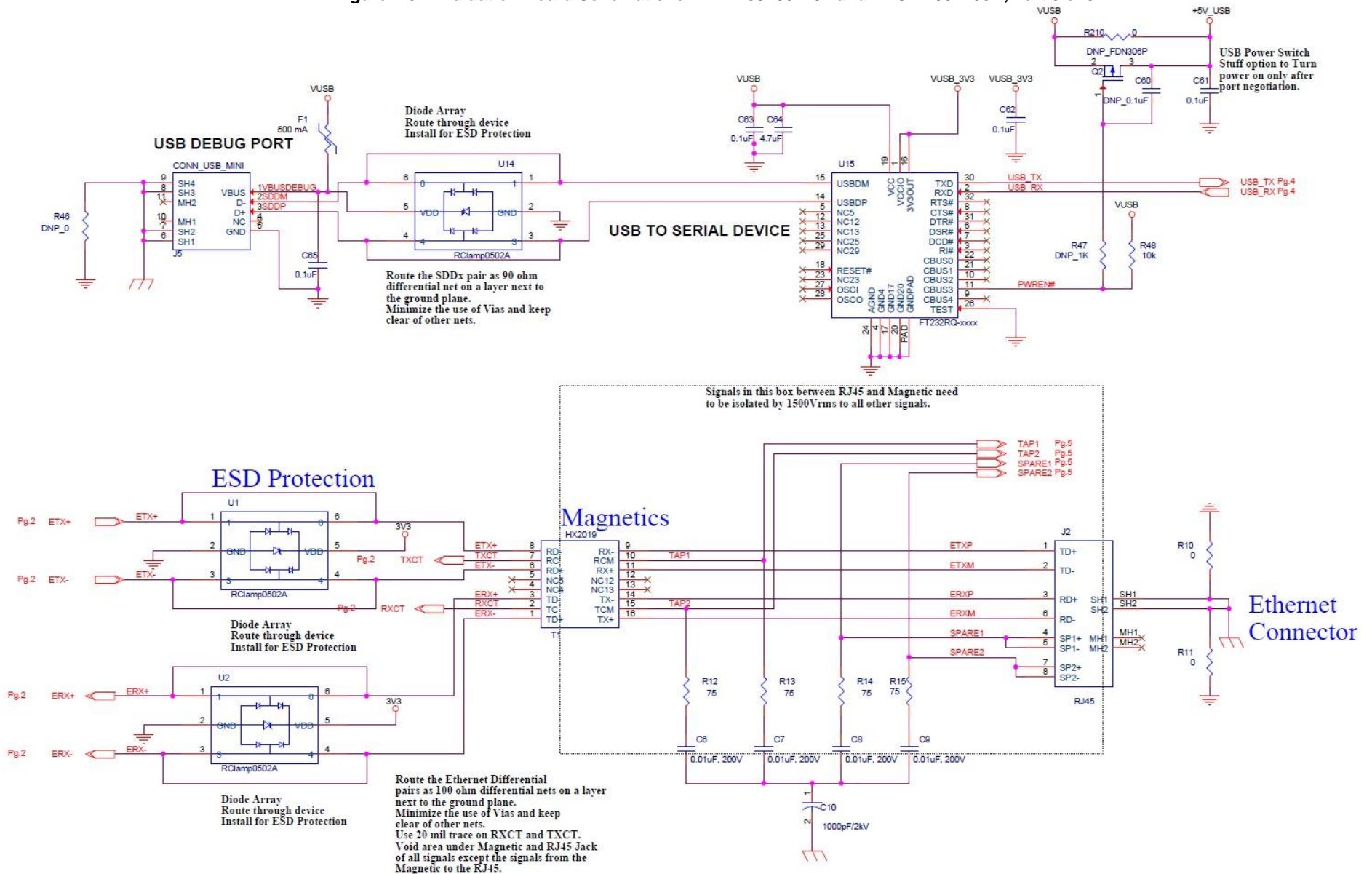**Figure 2-7   Evaluation Board Schematic for XPW100100K-01 and XPCW1002100K, Part 4 of 5**

**Figure 2-8   Evaluation Board Schematic for XPW100100K-01 and XPCW1002100K, Part 5 of 5**

# Evaluation Board Schematic (XPCW1003100K)

**Figure 2-9  Evaluation Board Schematic for XPCW1003100K, Part 1 of 7**
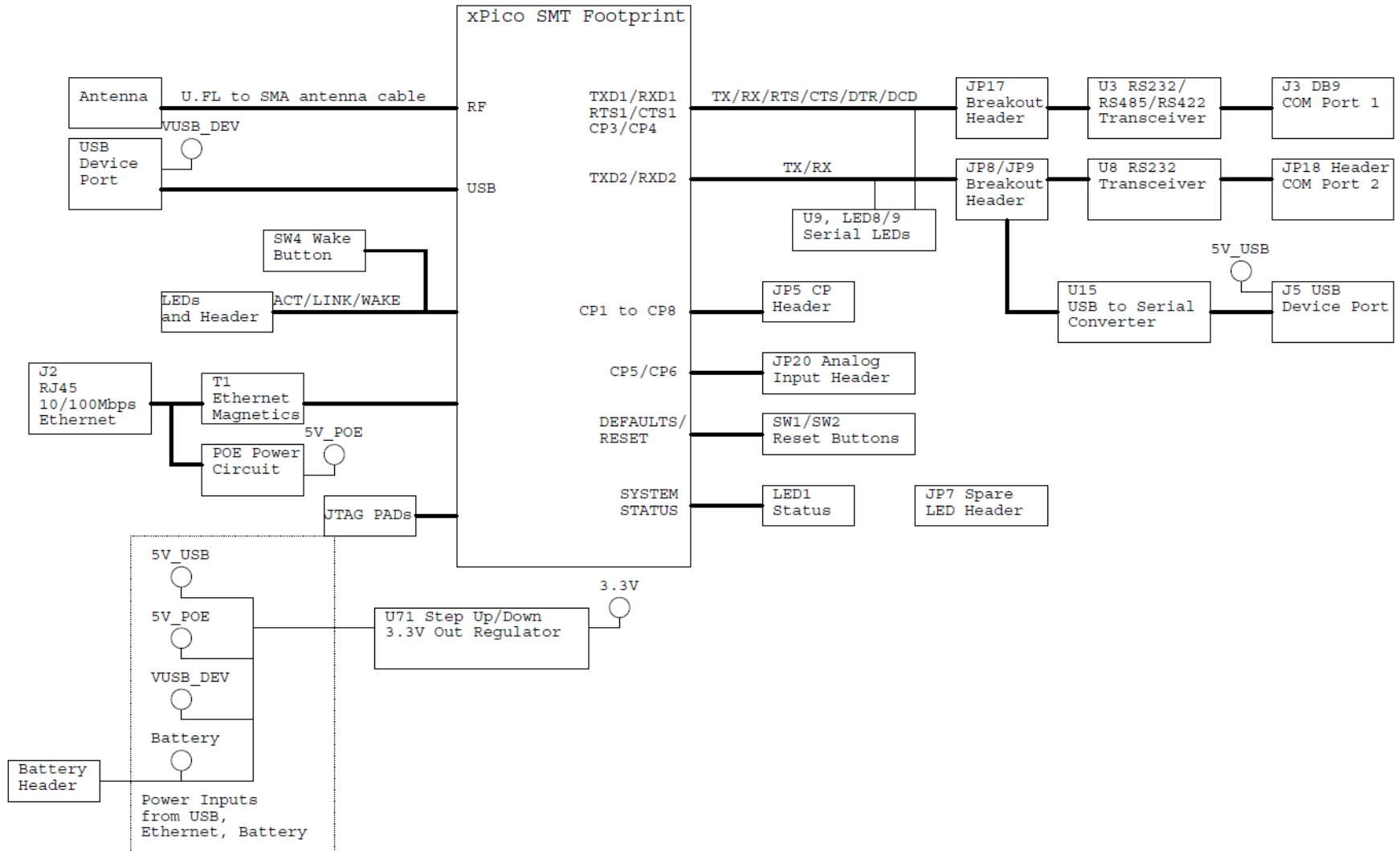
**Figure 2-10  Evaluation Board Schematic for XPCW1003100K, Part 2 of 7**
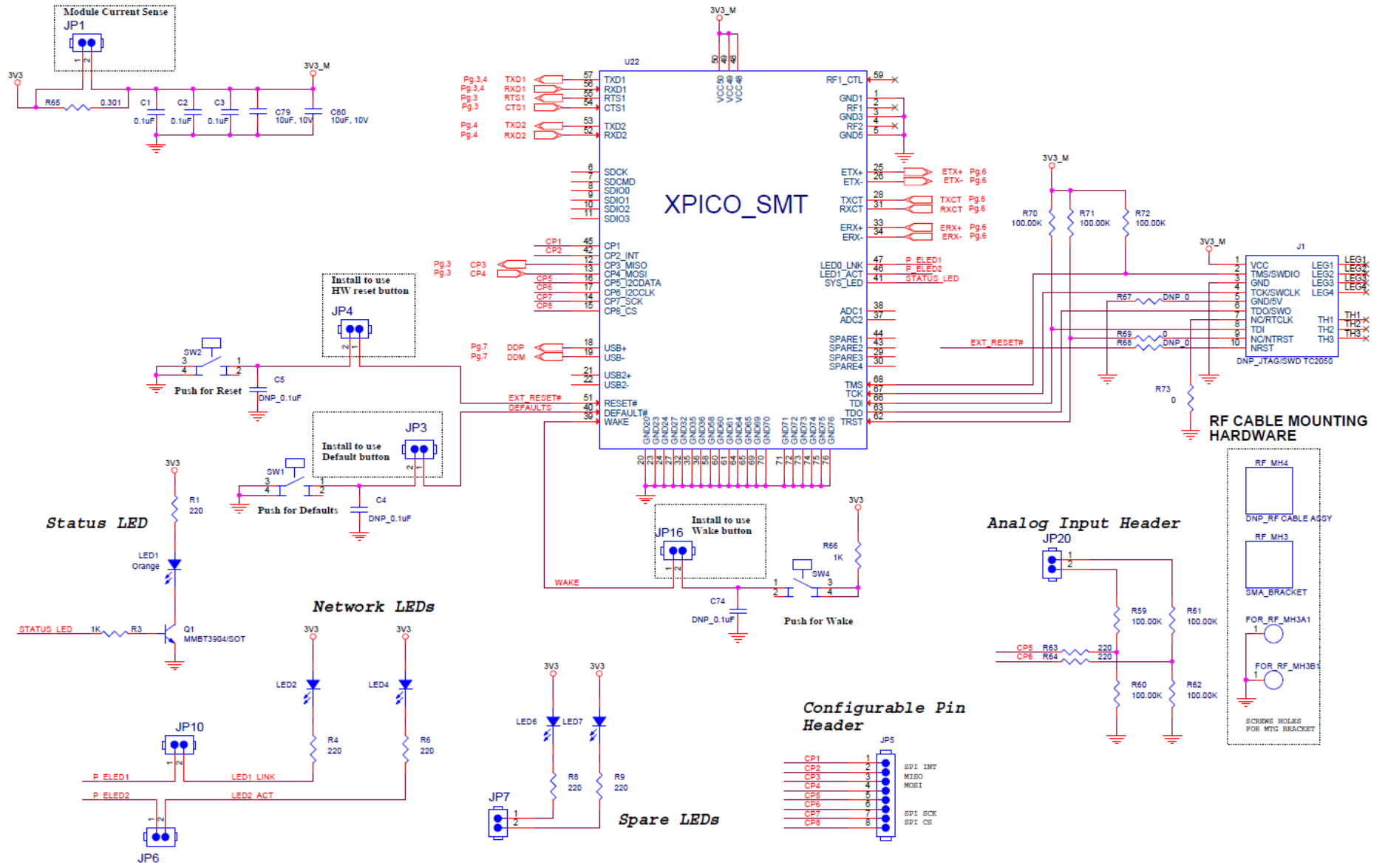
**Figure 2-11  Evaluation Board Schematic for XPCW1003100K, Part 3 of 7**
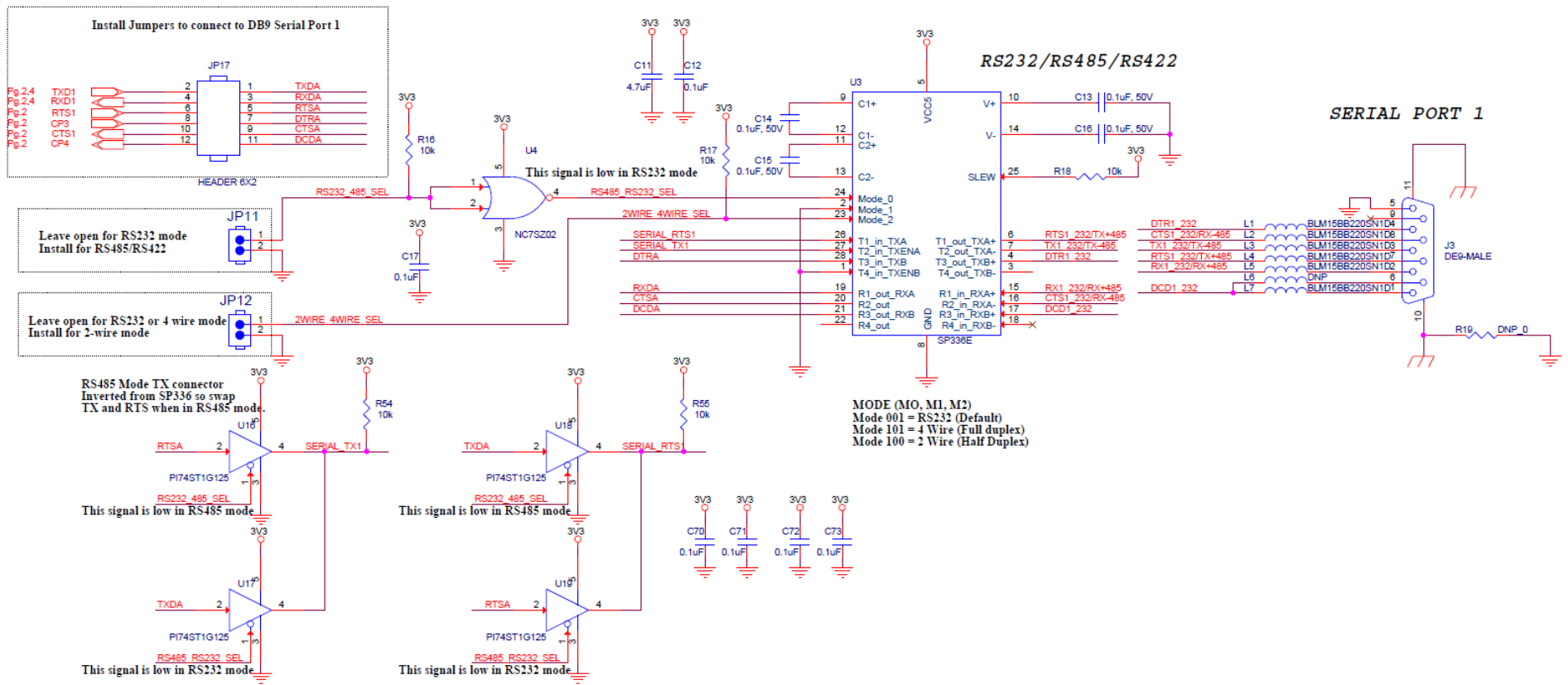
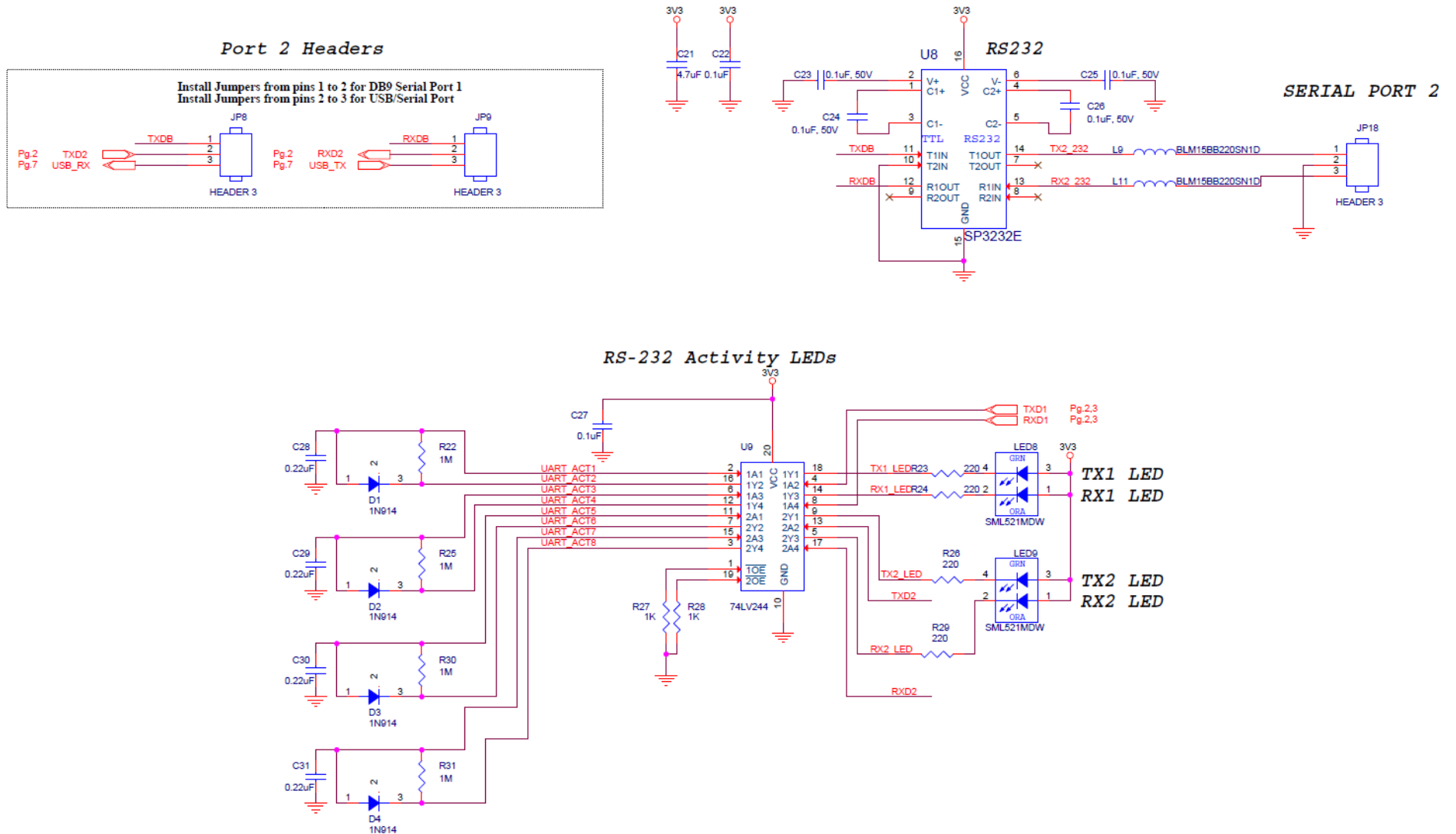**Figure 2-12  Evaluation Board Schematic for XPCW1003100K, Part 4 of 7**

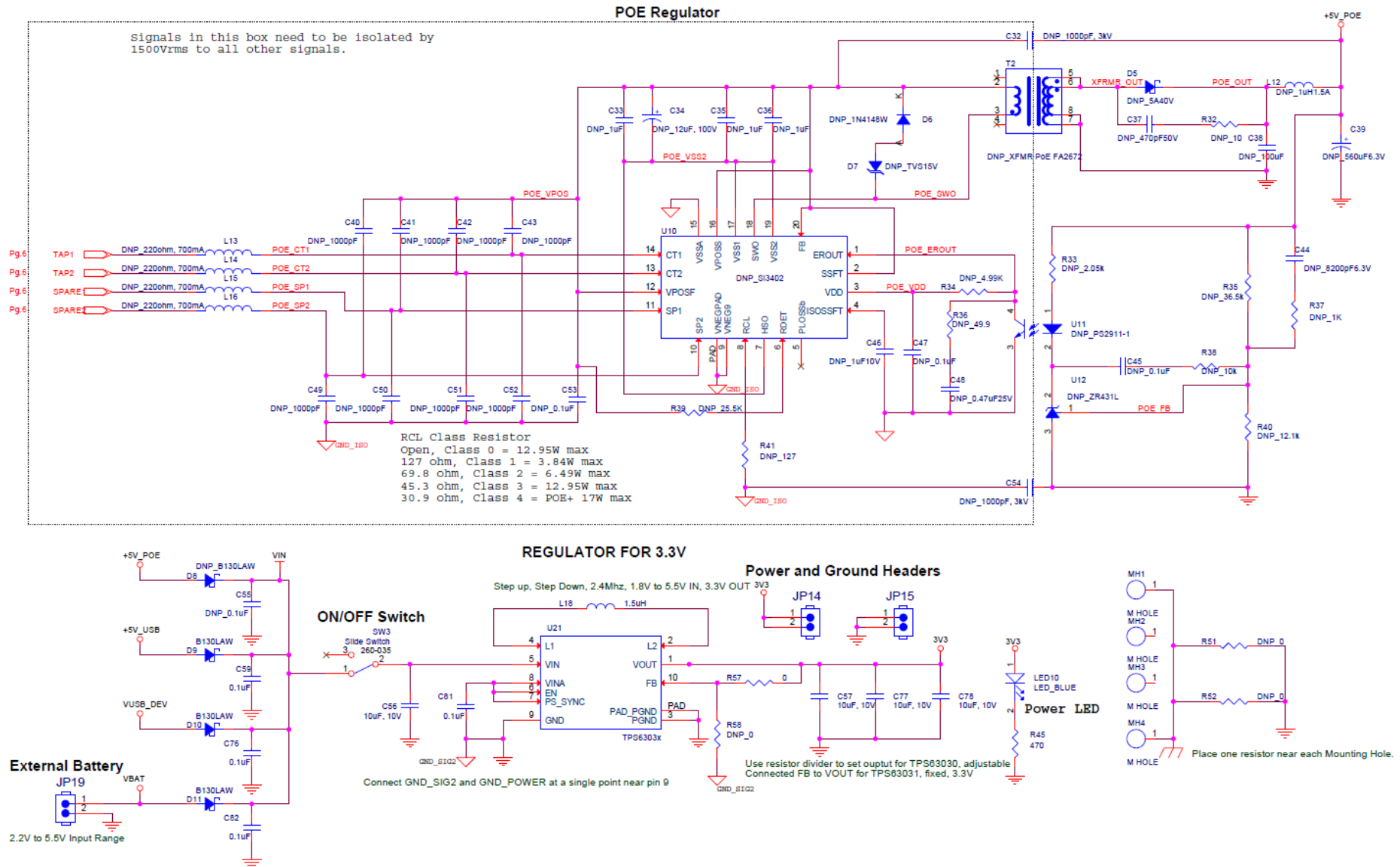**Figure 2-13  Evaluation Board Schematic for XPCW1003100K, Part 5 of 7**

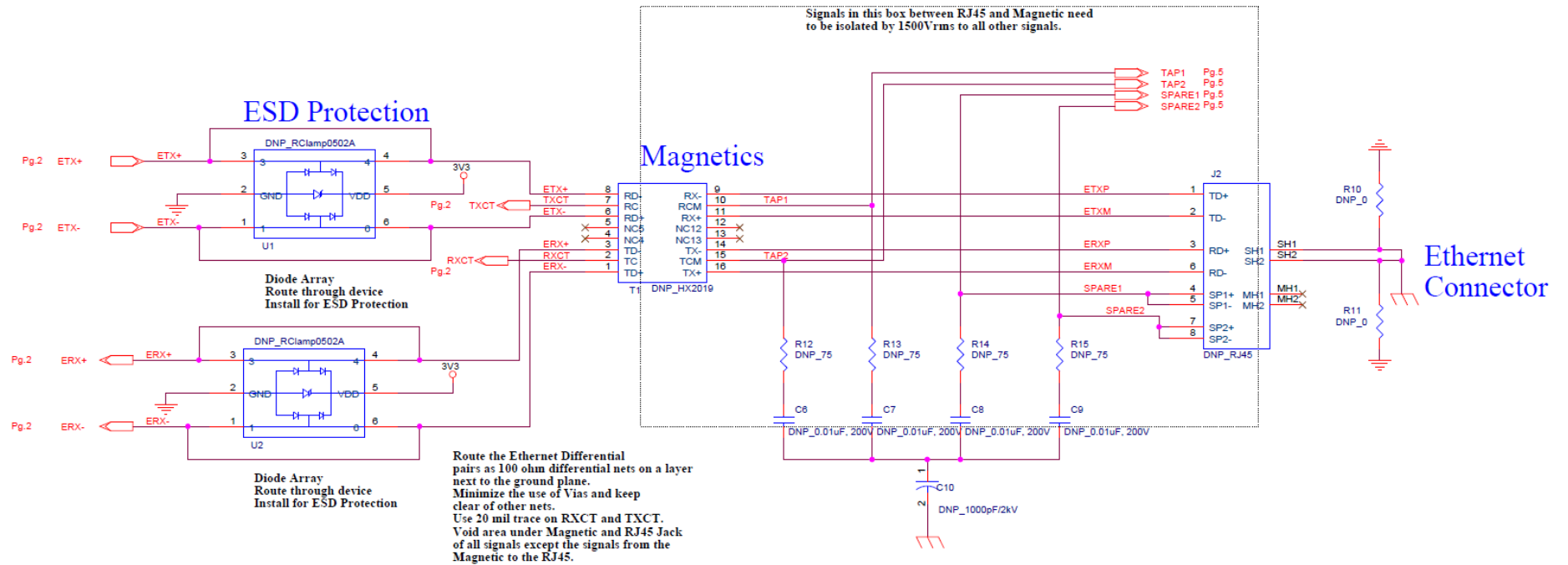**Figure 2-14  Evaluation Board Schematic for XPCW1003100K, Part 6 of 7**

**Figure 2-15  Evaluation Board Schematic for XPCW1003100K, Part 7 of 7**