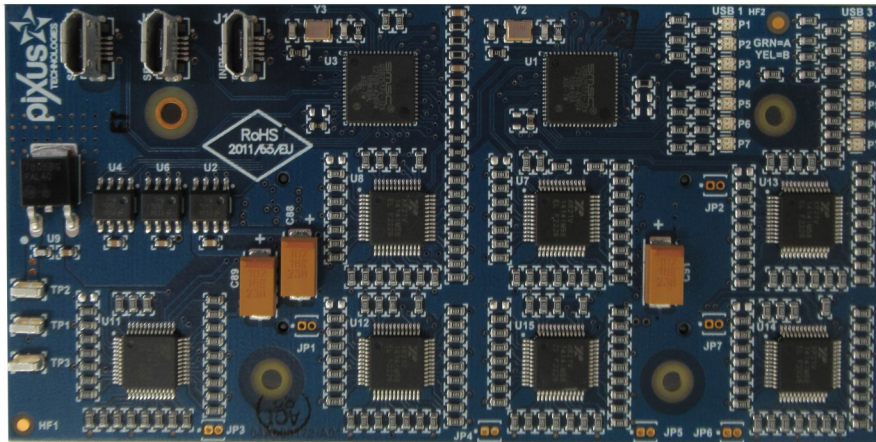# Serial MUX Boards

MUX00X KEY FEATURES

- Allows multiple RS-232 Ports and USB Ports to be put on a MUX to a single USB 2.0 Micro interface port
- Supports up to 28 MP Port (28 RS-232), 2 USB interfaces, and 1 Chassis Manager interface
- Affixes to the backplane like a mezzanine board
- Communication via the USB 2.0 Micro interface port or through the backplane
- Allows SBCs in the system to communicate through the MP ports to other boards in the system
- Can be ruggedized and conformal coated for MIL rugged applications
- Commonly used in SOSA aligned and OpenVPX architectures, but can be used in any architecture, space permitting
- Other configurations for JTAG MUX or special requests can be designed upon request
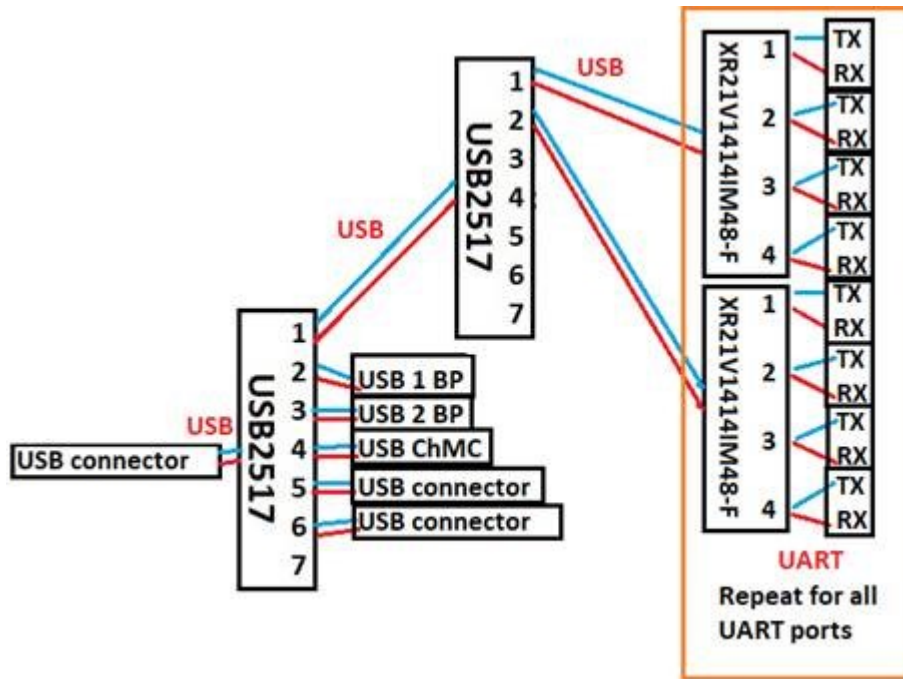
The Pixus Serial MUX boards provide for the condensing of multiple serial ports into one compact interface. This solution can save significant I/O panel space in a chassis platform. A single USB 2.0 Micro interface on the MUX mezzanine board allows 28 UART connections, 2 USB interfaces and a chassis manager interface.

Multiple configurations and similar designs are optional. Contact Pixus for your Serial MUX requirements.

Conformal coating and customization is also available. Pixus is IS09001:2015 and ITAR registered.
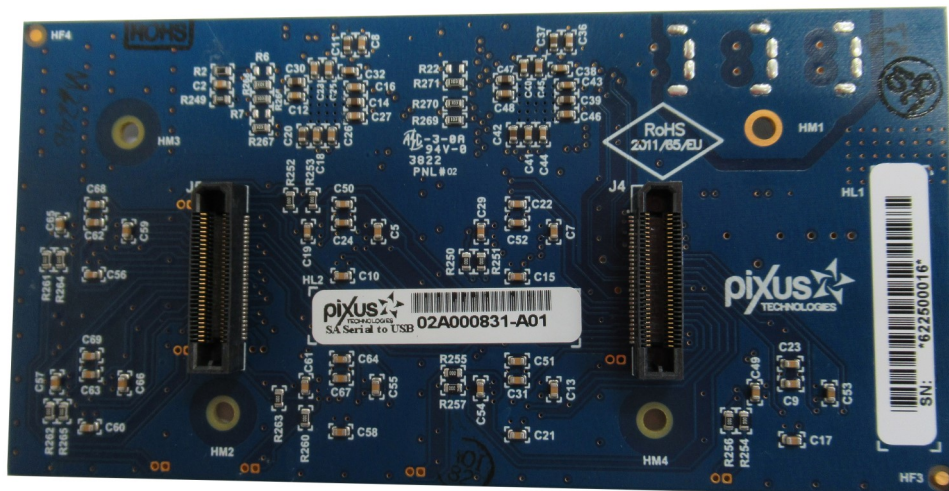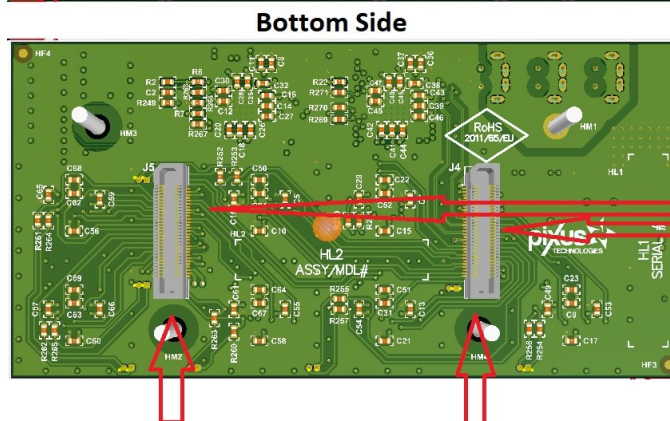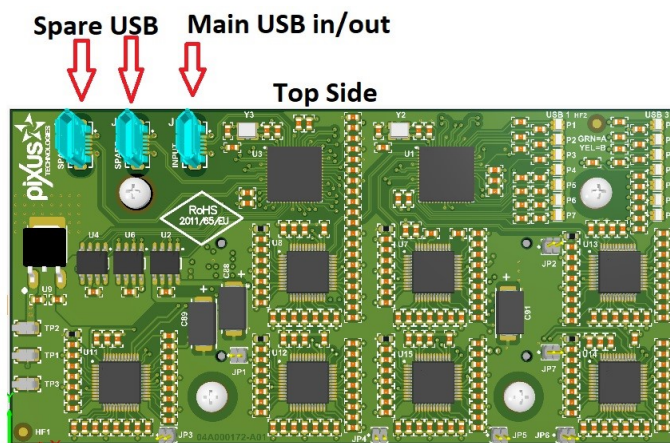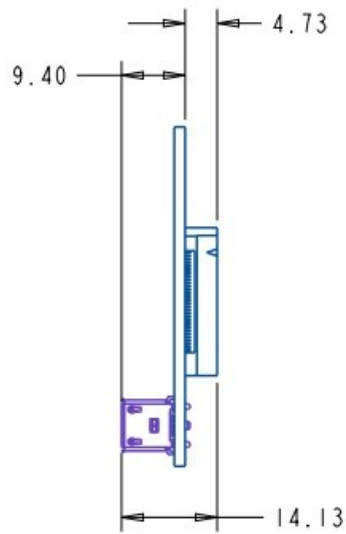
Block Diagram for MUX001

The diagram above shows the configuration for the signals. To safe space, this diagram is only showing 2 of the 7 connections from the second USB2517 to UART. Another 5 connections not shown add to the grand total of the 28 UART ports.

Photo of Rear Side of Board

Drawings—MUX 001

4.73

9.40

14.13

Spare USB **Main USB in/out**

Top Side

Bottom Side

Samtec ERF5-030-05.0-L-DV

**Backplane connectors for
28 RS232, 2 backplane USB, 1 Chassis Manager USB**

Dimensions: 50mm tall x 111.60 wide x 1.6mm thick (total thickness with top and bottom components is 14.13mm)

Specifications

Architecture		
Physical	Dimensions	50mm tall x 111.60 wide x 1.6mm thick (total thickness with top and bottom components is 14.13mm)
	Connectors	Samtec ERF5-030-05.0-L-DV
	Mating Backplane Connectors	Samtec ERM5-030-05.0-L-DV
Standards		
USB	Type	USB 2.0 Micro (Hirose P/N ZX80-B-5P(30))
Configuration		
Power		3.3V, 3.3V AUX, 5V, 12V options
Environmental	Temperature	Operating temperature: -40° to +80°C
		Storage temperature: -55° to +90°C
	PCB	FR-4 or equivalent
Conformal coating		Upon request (See page 6 selection "J" for available options)
Other		
MTBF	MIL Handbook 217-F @ TBD Hrs.	
Certifications	Designed to meet FCC, CE and EN/UL/TUV certifications where applicable	
Warranty	Two years	
Trademarks and logos	The Pixus Logo is a registered trademark of Pixus Technologies Inc. other registered trademarks are the property of their respective owners. Specs. subject to change without notice.	

Serial MUX Configuration Sheet

MUX00A-B

A = Type

     1 = USB input to USB/RS-232/Chassis Mgr MUX
     2 = RS-232 input to USB/RS-232/Chassis Mgr MUX
     3 = JTAG MUX (on roadmap)
     4 = Other

B = Conformal Coating

     0 = None
     1 = Humiseal 1A33 Polyurethane
     2 = Humiseal 1B31 Acrylic
     3 = Other

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