



XJTAG[®]

MAC Panel Scout Interface

User Guide

Version 1



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1. Introduction

XJTAG's MAC Panel™ Interface PCBA integrates XJTAG boundary scan into the SCOUT mass interconnect system. It is supplied with a customised MAC Panel DAK adapter and will connect a PXI-XJLink2 to the SCOUT interface.

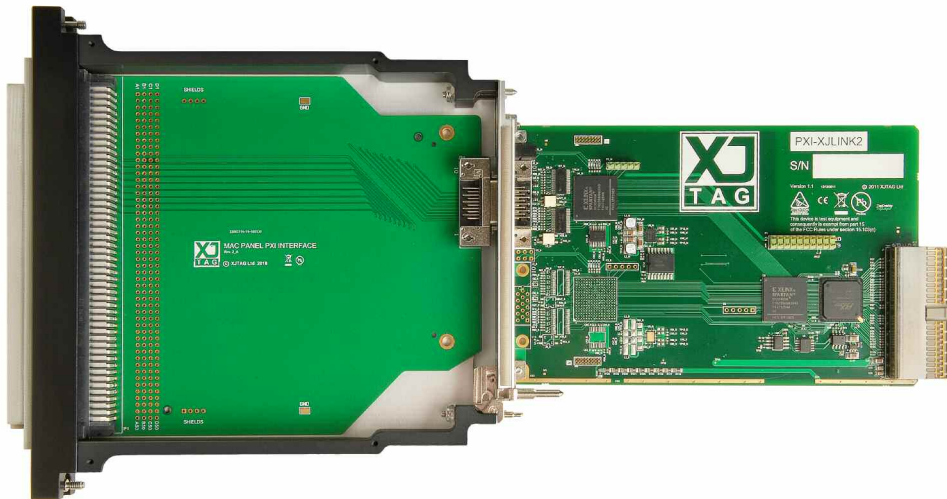


Figure 1 – MAC Panel interface board connected to a PXI-XJLink2

2. Connections

The PXI-XJLink2's twenty pins are connected to pins A1 – A20 of the SCOUT interface as described in Table 1.

XJLink2 pin	SCOUT interface pin	XJLink2 pin	SCOUT interface pin
1	A1	2	A2
3	A3	4	A4
5	A5	6	A6
7	A7	8	A8
9	A9	10 (GND)	A10
11	A11	12	A12
13	A13	14	A14
15	A15	16	A16
17	A17	18	A18
19	A19	20 (GND)	A20

Table 1 – XJTAG MAC Panel interface PCBA pinout

Additional connections to the XJLink2's GND are provided on pins B1 – B20 of the SCOUT interface and can be used to create twisted pairs for each XJLink2 signal.

3. Assembly

The following assembly process is used to prepare the DAK adapter for use. It is designed to be used with an XJLink2 PXI card that is purchased separately.

Parts Supplied

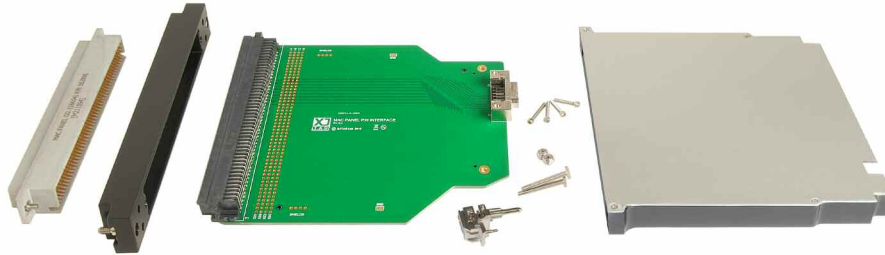


Figure 2 – Items supplied

Qty	Part	Description
1	MAC Panel 561003X	Receiver carrier, 1 Slot, PXI
4	MAC Panel bolts for 561003X	Socket head bolts
1	MAC Panel 561447X	Receiver adapter, extended DAK, single, custom XJTAG, including modified bottom bracket
8	MAC Panel bolts for 561447X	Countersunk bolts (pre-fitted)
1	MAC Panel 561527	Receiver module, 200-Position, 100x 1 mm loaded rows
2	MAC Panel T bolts	
2	MAC Panel 1/4" Nyloc nuts	
1	XJTAG XJ1005	XJTAG MAC Panel Interface PCBA

Table 2 – Bill of materials

Tools Required

- 1/4" wrench
- 2 mm Allen key
- 3/32" Allen key
- T bolt wrench
- Ejector pin extraction tool
- Nut extraction tool
- Small Phillips-head screwdriver
- Torx T8 screwdriver

NB: MAC Panel sell a tool kit containing all the necessary tools, part number 561211.

Assembly Process

The following steps are required to prepare the MAC Panel assembly for use and are described in detail below.

1. Remove black plastic handle from the PXI-XJLink2.
2. Remove bottom bracket from the PXI-XJLink2 and replace with the supplied alternative bracket.
3. Fit the receiver module to the customised DAK housing.
4. Fit the XJTAG MAC Panel Interface PCBA into the DAK housing.
5. Fit the PXI-XJLink2.
6. Reassemble the DAK adapter.

Removal of the black plastic handle:

- a) Remove the PXI-XJLink2's front plate by unscrewing the two T8 bolts on the PXI-XJLink2's underside as indicated in Figure 4. Keep the bolts as you will need them later to reassemble the front plate.

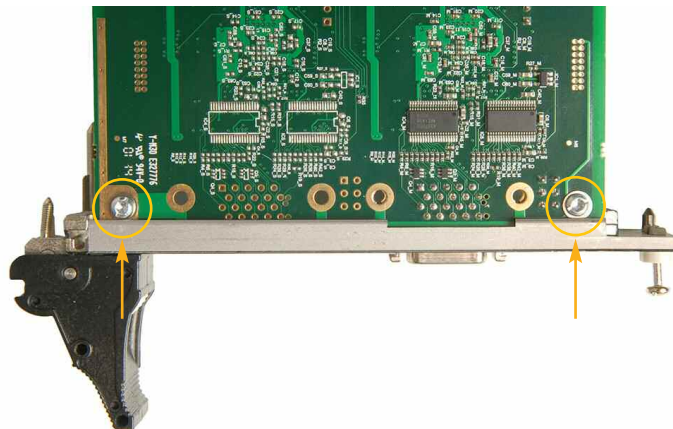


Figure 3 – Removing the PXI-XJLink2's front plate

- b) Use the ejector pin extraction tool to remove the ejector pin from the black handle.
- c) Use the nut extraction tool to remove the bolt on the opposite side of the handle.



Figure 4 – Disassembled PXI-XJLink2 front plate

- d) Remove bottom bracket and fit replacement part using the same screw.
- e) Reattach the front plate to the PXI-XJLink2 using the two T8 bolts you removed earlier.

Fitting the receiver module:

- a) Attach the MAC Panel receiver module (561527) to the MAC Panel carrier (516003X) using the two 3/32" Allen bolts as illustrated in Figure 6. Ensure it is orientated with receiver row A as shown.



Figure 5 – Fitting the MAC Panel module to the carrier

- b) Remove the four countersunk Phillips-head bolts from the side of the DAK adapter that does not have the cut-outs as shown in Figure 7. Keep the bolts ready for reassembly later.

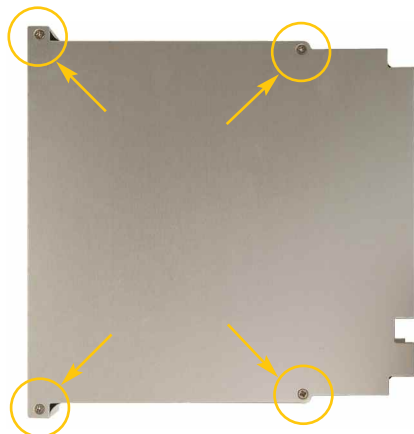


Figure 6 – Preparing to fit the carrier into the adapter

- c) Fit the combined receiver module and carrier to the DAK adapter using the four 2 mm Allen bolts supplied as shown in Figure 8. Ensure row A of the receiver module is against the bottom face when the DAK adaptor is flat on the bench.

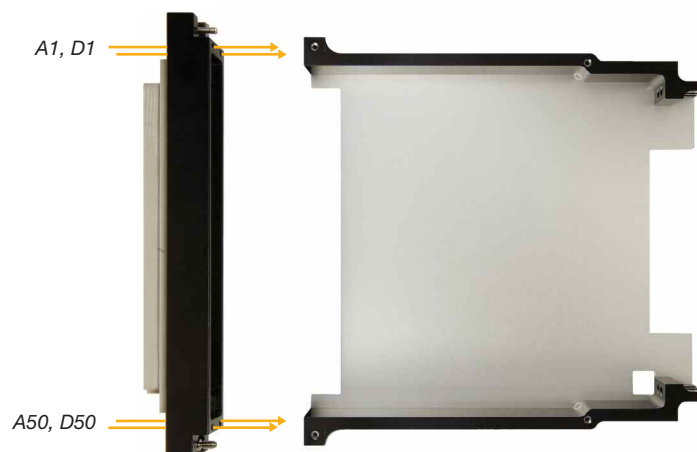


Figure 7 – Assembling carrier to adapter looking down

- d) Push the XJTAG MAC Panel interface PCBA into the carrier so that it sits inside the adapter with its through-hole solder joints facing downwards into the cover's cut-outs.



Figure 8 – Fitting the XJTAG interface board into the adapter

Fitting the PXI-XLink2:

- a) Insert the PXI-XJLink2's 20-way connector into its mating half on the XJTAG MAC Panel PXI Interface PCBA.
- b) Push the two T-bolts into the two holes of the PXI-XJLink2 front plate and through the DAK adapter. Rotate the ends of the T-bolts 90° to sit against the face of the plate.
- c) Secure in place by fitting the two Nyloc nuts to the T-bolts. Tighten using the ¼" spanner and T-bolt wrench.

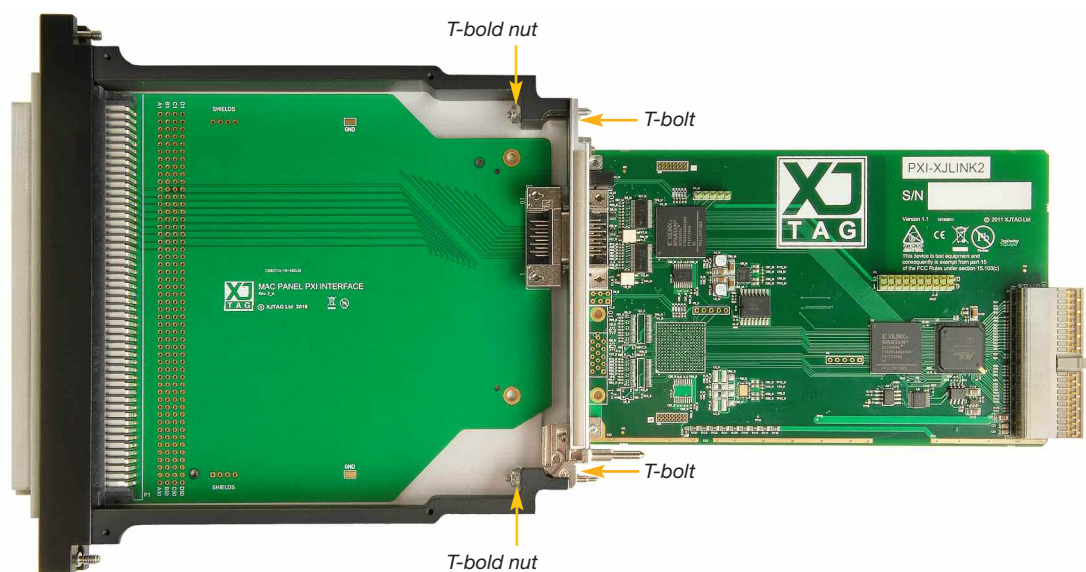


Figure 9 – Fitting the PXI-XJLink2 to the interface board

- d) Reattach the side plate of the DAK adapter using the original four countersunk screws that were removed earlier.

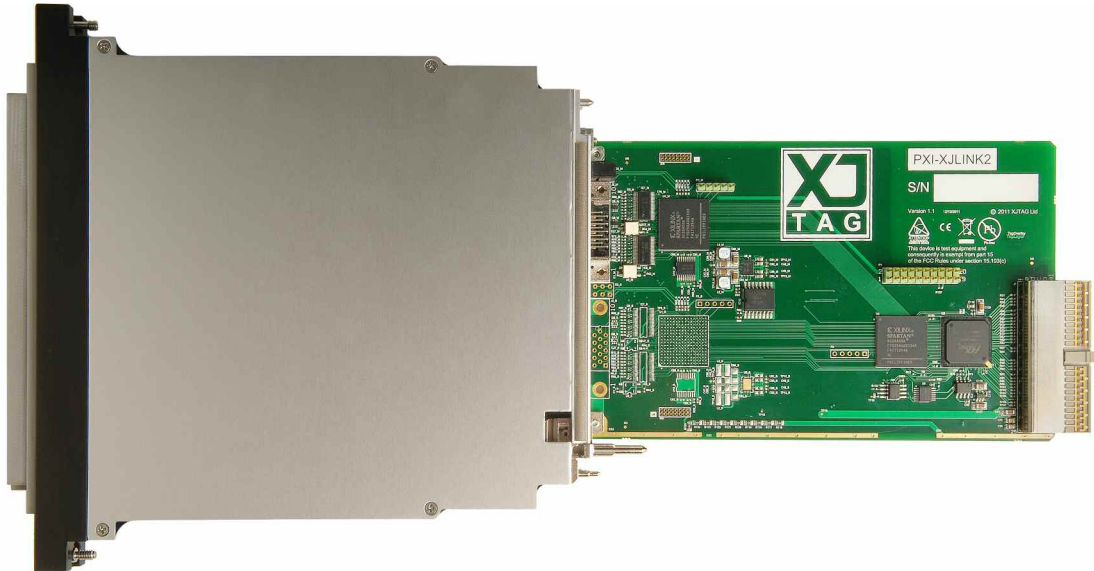


Figure 10 – The final assembled SCOUT system