Spare ROC Status

スペアROCの状態

	場所	状態	症状
1	BNL	OK	
2	奈良女	OK	
3	理研	Slow Controlに問題あり	配線が切れていた。修理済み。
4	理研	FPGA C,Dが動かない FPGA A,B Fiber lock しない	FPGA C,Dを交換したがダメ

ROC 4 Repair History

- On 2018/07/26 9:58, eric mannel wrote:

- I took a first look at the repaired ROC today and results are mixed. Based on the information that I was given, I had them replace the C&D FPGAs. I was able to establish an optical lock on all of the fibers associated with FPGA C, and 6 out of 8 channels for FPGA channel D. I was not able to establish optical lock for FPGAs A & B however. At this point in time I have no idea why I am not able to establish lock on FPGAs A & B, and unfortunately I did not verify the operation of the ROC prior to sending it out for repair.

  With respect to the second ROC that has Slow Control problems. Looking at my notes and FVTX log entried, the problem is that the transmit from ROC to FEM is not working. This can be one of several problems, an issue with the Slow Control FPGA, the associated TLK, or an internal break in the associated serial lines. Unfortunately most of the connections are unaccessible, although I may be able to probe it at the transceiver, but I need to look more closely at the board to determine if that is possible. Even if I can probe it, it would not tell me where the problem is, since this is the end of the transmission chain. The rest of the connections are all buried traces and micro-vias under the BGA components with no test points.

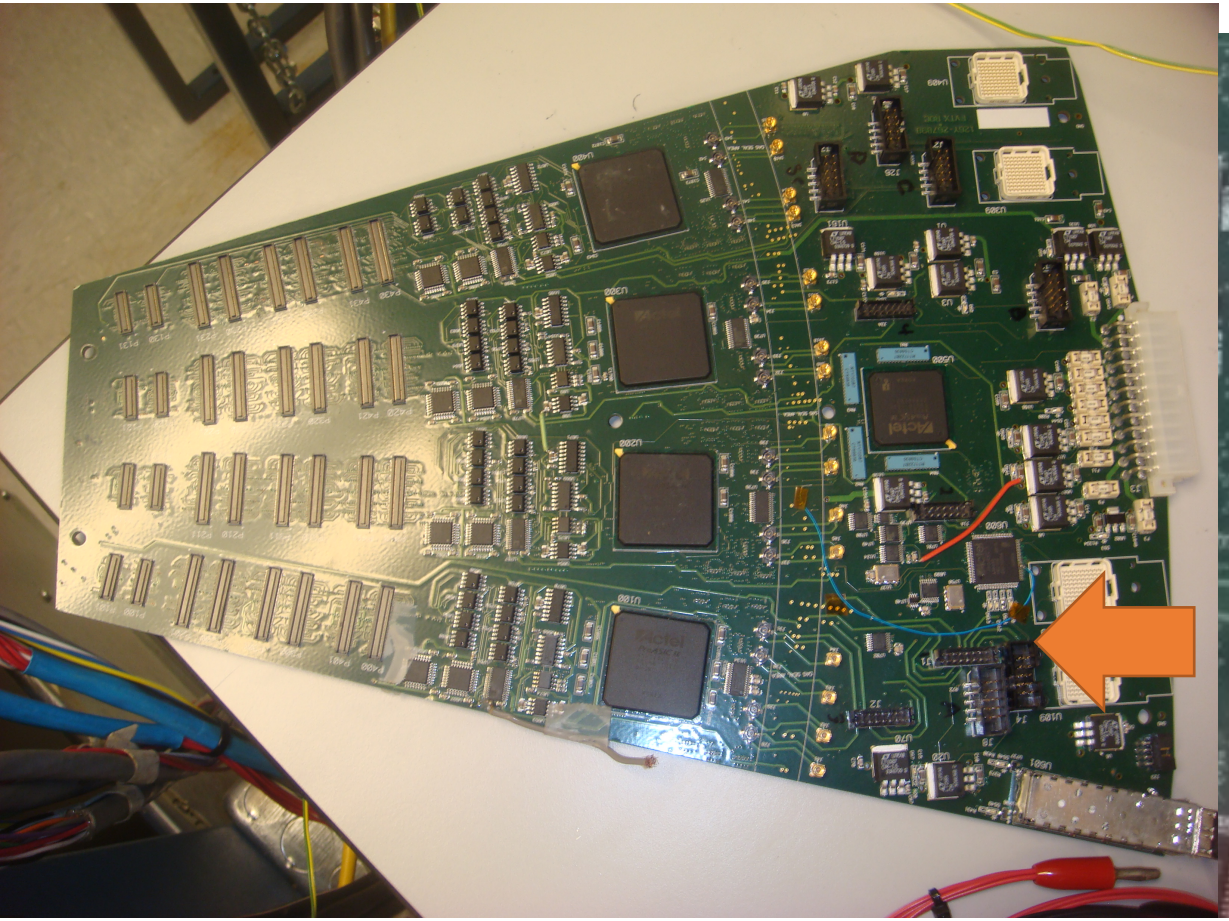
- On 2018/10/01 1:11, eric mannel wrote:

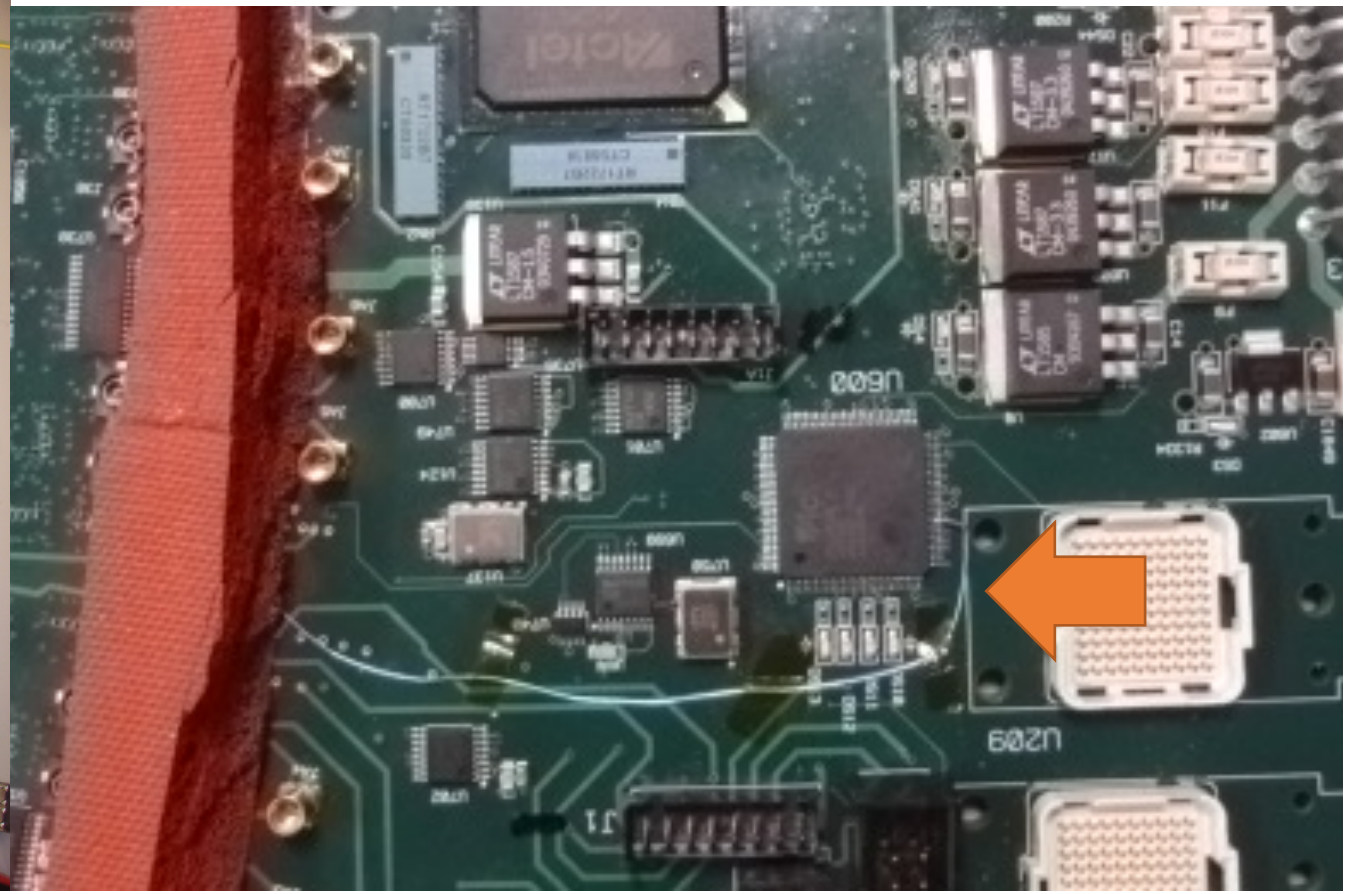
- Sorry about not getting back to you sooner. For the board that was repaired, I had Sal replace the inductors and the A and B transmitter work, although there is one dead fiber channel. (does not lock). Channel C seems to be OK, and Channel D is intermittent. At the time of repair, Best had informed me that when they observed some damage and indications of a previous repair under the FPGA U400 (Channel D data fpga). This may or may not be the issue with the communications, but further repair is not possible.

  As I indicated before, the problem with the slow control fiber is in the transmit side, most likely a broken micro-via. Modifications to the upper level software will allow you to use the board, but you will have no readback of the slow control channel (e.g. you won't be abel to query the FPHX chip status).

  I can send one or both boards to you later this week.

ROC-3 配線の修理





青いケーブルがU600チップサイドで半田付けが取れていた。過去にこれが外れてSlow Controlに問題が出たことがある。