

Test stand at SiDet (for normal sequencers not SASEQ)

Scope: Testing and debugging electronics and software for up to 4 cables from IB to sequencer.

Time scale: Could probably be setup now based on NU test stand except for VRBC and Interface Board crate and electronics. We can use a purple card before an interface crate shows up. This assumes that we can obtain the PowerPC, Bit3, and SBC. I spoke to Marvin Johnson about the Bit3 and SBC who was optimistic that we could borrow these. Spare sequencer controllers do exist, so I assume we can borrow this under the usual assumption that in an emergency anything returns to the running D0 experiment. The TFW card should be available from the computing division. 1553 controller spares do exist and more are under construction. We need a reasonable networked PC capable of running excel to support the Bit 3 interface to be used for debugging by the D0 engineers. The VRBC is on the critical path for this. Marvin Johnson is negotiating with the computing division for their support to accomplish this.

Most efficient method: Setup test stand at NU initially by modifying existing Run 2A stand to include TFW card, SBC, VRBC, 1553, and sequence controller. After debugged, move to SiDet. Time frame depends on availability of hardware plus 1 month to debug.

| Item | quantity | Availability |
|--------------------------------|----------|---|
| VIPA Crate | 1 | From NU 1 months after VRBC |
| Power Supply and rack for VIPA | 1 | From NU 1 months after VRBC |
| CPU- PowerPC | 1 | Need 2304 or equivalent, spare ? |
| Bit 3 interface | 1 | Need 617 or 620, spare? |
| SBC- Single Board Computer | 1 | Borrow spare ? |
| VRBC- controller | 1 | There are no spares now!!! |
| VRB | 1 | From NU 1 months after VRBC |
| 1553 controller | 1 | Use existing spare |
| | | |
| Sequencer crate and PS | 1 | From NU 1 months after VRBC but need PS |
| Sequencer controller | 1 | Use existing spare |
| Sequencer | 1 | From NU 1 months after VRBC |
| | | |
| Interface crate and PS | 1 | Start with purple adapter cards if IB not available |
| Interface board | 1 | ? |
| Cabling between all | | |
| | | |
| PC- windows based | 1 | Prefer NT based computer, ?? |
| TFW card for VRBC | 1 | FPGA card from computing division |
| Linux host | 1 | Should be able to connect to D0 host, is security an issue? |
| HV for silicon | 1 | Use stand alone PS if needed |

One Crate test stand in Lab C

This is just a list of needed items

| Item | quantity | Available |
|----------------------------------|----------|--|
| VIPA Crate | 1 | |
| PS and rack for VIPA crate | 1 | Exists at Lab C ? |
| CPU- PowerPC | 1 | |
| Bit 3 interface | 1 | |
| SBC- Single Board Computer | 1 | |
| VRBC- controller | 1 | |
| VRB | N | |
| 1553 controller | 1 | Use existing spare |
| RMI interface | 1 | |
| | | |
| Sequencer crate and PS | 1 | |
| Sequencer controller | 1 | |
| Sequencer | N | |
| | | |
| Interface crate and PS | 1 | |
| Interface board | N | |
| Cabling between all | | |
| | | |
| PC- windows based | 1 | |
| TFW card for VRBC | 1 | FPGA card |
| Linux host | 1 | Should be able to connect to D0 host, is security a problem? |
| | | |
| HV crate and modules for silicon | N | |
| PowerPC for HV crate | | |
| Cooling for SMT 2B | | |