

Silicon TIM VME board status and service log

TIM Serial Number	Flavor	Current Location	Revision	FFTV*	Notes
26	SCT TIM	USA15:Y.24-14.A2.U08.13F	Rev. 3C, firm 1e	SCT	TIM 26 History
27	SCT TIM	USA15:Y.22-11.A2.U28.13F	Rev. 3C, firm 1e	SCT	TIM 27 History
28	SCT TIM	USA15:Y.22-11.A2.U08.13F	Rev. 3C, firm 1e	SCT	TIM 28 History
29	SCT TIM	USA15:Y.24-14.A2.U28.13F	Rev. 3C, firm 1e	SCT	TIM 29 History
30	SCT TIM	USA15:Y.23-11.A2.U28.13F	Rev. 3C, firm 1e	SCT	TIM 30 History
31	SCT TIM	Loaned to Bologna, March 2014	Rev. 3C	SCT	TIM 31 History
32	SCT TIM	borrowed to IBL for tests, SR1 pixrcc07	Rev. 3C, firm 55	IBL	TIM 32 History
33	SCT TIM	SR1, sbcsct-rcc-04	Rev. 3C, firm 52	SCT	TIM 33 History
34	SCT TIM	USA15:Y.25-14.A2.U08.13F	Rev. 3C, firm 1e	SCT	TIM 34 History
35	SCT TIM	USA15:Y.23-11.A2.U08.13F	Rev. 3C, firm 1e	SCT	TIM 35 History
36	SCT TIM	USA15:Y.25-14.A2.U28.13F	Rev. 3C, firm 1e	SCT	TIM 36 History
37	SCT TIM	UCL for testing	Rev. 3C	SCT	TIM 37 History
38	Pixel TIM	SR1, pixrcc06	Rev. 3C, firm 5a	IBL	TIM 38 History
39	Pixel TIM	USA15:Y.26-05.A2.U28.13F	Rev. 3C, firm 4a	PIX	TIM 39 History
40	Pixel TIM	USA15:Y.25-05.A2.U28.13F	Rev. 3C, firm 4a	PIX	TIM 40 History
41	Pixel TIM	USA15:Y.25-05.A2.U08.13F	Rev. 3C, firm 4a	PIX	TIM 41 History
42	Pixel TIM	At UCL - Status unknown (was "Disassembled")	Rev. 3C, firm 19	PIX	TIM 42 History
43	Pixel TIM	USA15:Y.26-05.A2.U08.13F	Rev. 3C, firm 4a	PIX	TIM 43 History
44	Pixel TIM	USA15:Y.27-05.A2.U28.13F	Rev. 3C, firm 4a	PIX	TIM 44 History
45	Pixel TIM	USA15:Y.27-05.A2.U08.13F	Rev. 3C, firm 4a	PIX	TIM 45 History
46	Pixel TIM	Disassembled	Rev. 3C, firm 19	PIX	TIM 46 History
47	Pixel TIM	USA15:Y.28-05.A2.U28.13F	Rev. 3C, firm 4a	PIX	TIM 47 History
48	Pixel TIM	USA15:Y.28-05.A2.U08.13F	Rev. 3C, firm 4a	PIX	TIM 48 History
49	Pixel TIM	USA15:Y.29-05.A2.U28.13F	Rev. 3C, firm 26	PIX	TIM 49 History

50	SCT TIM	SR1, sbcsct-rcc-05	Rev. 3F, firm 5a	SCT	TIM 50 History
51	SCT TIM	B104: spare	Rev. 3F, firm 1e	SCT	TIM 51 History
52	SCT TIM	B104: spare	Rev. 3F, firm 1e	SCT	TIM 52 History
53	SCT TIM	Loaned to Pixels, in IBL barack, pixrcc02	Rev. 3F, firm 5a	IBL	TIM 53 History
54*	Pixel TIM	ATLAS P1	Rev. 3F, firm 5a	IBL	TIM 54 History
55*	Pixel TIM	Loaned to UCL for tests	Rev. 3F, firm 50	IBL	TIM 55 History
56	Pixel TIM	SR1 crate1 pixrcc03	Rev. 3F, firm 55	IBL	TIM 56 History
58	SCT TIM	UCL for tests	Rev. 3F, firm 1e	SCT	TIM 58 History
59	SCT TIM	Cambridge for tests	Rev. 3F, firm 1e	SCT	TIM 59 History

TIM #54 and #55 require special TTC CLK selection by setting bit 8 of the TTC_Select (0x28) register. TIMs #50 and #56 aren't. Other TIM-3Fs to be checked. most of TIM-3F's need FW from v0x5a for proper operation in TTC mode.* FFTV setup is based on two jumpers: SCT: PL203 unset and PL202 unset; PIX: PL203 set and PL202 unset; IBL: PL203 unset and PL202 set.

Firmware description can be found here [?](#). The XILINX iMPACT flashing software (as a part of the Lab Tools package) can be downloaded from here [?](#) (it is free but registration is required). Beware of differences in L1A propagation delays w.r.t. backplane and TRO TIM ouptut for TIM3(C/F) flashed with firm v0x1e and 0x26 as has been measured by Matt.

Installation precautions in the populated ROD crate: as for the ROD, but pay especially attention to the capacitor on the left side of the TIM board. It sticks out of the board and if the TIM is pulled off the backplane by a few centimeters it may get in touch with the front panel of the ROD in slot 12 and get ripped off. So pull the TIM off the crate very slowly. The same precautions apply for plugging-in; in this case you can see the capactor isolated by a capton tape on the solder side of the board.

Here is the photo of the TIM, which lost its firmware (note all LA,CA,ER,BR,FR,SP LEDs are ON). If you see this you need to re-flash the TIM with the new firmware, with the revision you can find in the table above (valid for Pixel only, SCT to check!). To do so, pick-up the TIM flash kit (black laptop bag for PIX or white paper bag for SCT) from the IDCR room (on the open shelves on your left, contact Pixel or SCT on-call if in doubt), go down to USA 15. The TIM will be uncofigured, but it is better to have the ROD DAQ elements unconfigured in the data taking partition as a starting point. (For IBL ask Pixel on-call on the procedure, for old Pixel, you do not need to switch off optoboards since without TIM the BOCs will switch over to internal clock, however an optobord reset may be necessary after the TIM is back). Turn on the laptop, plug-in the cable one side to laptop USB port another side to the connector on the TIM front panel, start the script with the TIM frimware revision name in it (Pixel - from the desktop folder "TIM shortcut (visible for all)", SCT - directly from the desktop, follow the instructions on the screen. The healthy TIM after successful re-flashing should look like this. (For Pixel you can execute \$ROD_DAO/RodUtils/TimStatus script after logging in to the corresponding crate, which in case of healthy TIM will return its serial number, firmware and status information) If the re-flash wasn't successful you may try to re-flash the main TIM FPGA (FPGA1). An icon with the script (SCT) or a link from TIM shortcut folder (Pixel), flashing the FPGA1 with the firmware (v3) is provided. Then you could repeat the procedure above. If this won't work, replace the TIM.

In case the re-flash does not work or there is any other reason for TIM not to be configured, you need to replace the TIM. For Pixel, you need to pick up at the first place the TIM from the SR1 left (if you stay in

front of the crates in the SR1 rack area) crate, also known as "crate 0". This is the only spare TIM3C card, other spares are TIM3Fs and need firmware revision equal and greater than 0x26 and a configuration code modification. Be very cautious (re-read the first paragraph in red above) dealing with TIM hardware! **Do not forget to switch off the crate and the lasers on TTCex (using front panel switch on the module in the TTC crate with fibers coming out) before unplugging the fiber and use ESD protection.**

-- JohnHill - 22 Feb 2006

-- JohnHill - 15 May 2007

-- JohnHill - 03 Jul 2007

-- AndreasKorn - 12 Sep 2007

-- IskanderIbragimov - 19 Okt 2007

-- DaveRobinson - 19 Jun 2008

-- JohnHill - 26 Oct 2008

-- IskanderIbragimov - 28 Okt 2008

-- JohnHill - 26-Jan-2010

-- IskanderIbragimov - 03 Aug 2012

-- IskanderIbragimov - 09 Jun 2016

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