

PXleCOMe test procedure summary

2022/12/15

Rev. 1.1

Always wear an anti-static wrist band when doing this procedure

1	Visually inspect the PXleCOMe board in the fully assembled state including the COMe-bTL6 (CERN preferred) or COMe-bCL6 board.
2	Check for short circuits in the power supplies of the PXleCOMe.
3	Remove jumper SW1 if present
4	Insert the lithium battery
5	Insert the mSATA disk containing the CentOS Stream 8 image with the PTS
6	Install the PXleCOMe in slot 1 of the NI PXle-1075 PXle chassis (the two PXCT modules should be placed in slot 2 and slot 10)
7	Connect the following cables. <ul style="list-style-type: none">• LAN• Mouse• Keyboard• USB serial cable to the PXCT in slot 10• Xilinx download cable• USB3.0 memory sticks• Trigger cable to the PXCT in slot 2• Serial cable to the PXCT in slot 2• DisplayPort
8	Start the system and select System setup to enter the BIOS.
9	<i>COMe-bTL6 (CERN preferred)</i> Under ChipSet PCH-I/O Configuration Security Configuration change the BIOS Lock to Disabled. Under Advanced PCH-FW Configuration Firmware Update Configuration change the ME FW Image Re-flash to Enabled. <i>COMe-bCL6</i> Under ChipSet PCH-I/O Configuration Security Configuration change the BIOS Lock to disabled.
10	Under Boot change the Boot Option #1 to UEFI: Built-in EFI Shell.
11	Under Save & Exit select Save Changes and Exit so the system will boot to the EFI shell.
12	Check to see if the USB stick can be accessed as fs0. So use > fs0: > ls
13	<i>COMe-bTL6 (with ATM) (CERN preferred)</i> > cd BTL6R901_2x4 <i>COMe-bTL6 (without ATM)</i> > cd BTL6R110_2x4 <i>COMe-bCL6</i> > cd BCL6R113_2x4
14	> flash.nsh
15	> reset -s
16	Turn the power supply of the PXle chassis off, so that also the standby power is turned off. This is needed to use the new BIOS when powered on.
17	Turn the power supply of the PXle chassis on, so the system can start. Since the BIOS has changed, the COMe module needs to scan the system in which it is active.
18	Select System setup to enter the BIOS.

PXleCOMe test procedure summary

2022/12/15

Rev. 1.1

19	<i>COMe-bTL6 (CERN preferred)</i> Under ChipSet System Agent (SA) Configuration PEG Width Configuration change the PEG Width Configuration to 1x8+2x4 / norm. <i>COMe-bCL6</i> Under ChipSet System Agent (SA) Configuration PEG Width Configuration change the PEG Width Configuration to 1x8+2x4.
20	Under Boot change the Boot Option #1 to the CentOS Stream 8 option.
21	Under Save & Exit select Save Changes and Exit so the system will reboot.
22	Select the keyboard up- or down-key so the timer to automatically start booting is stopped.
23	Push the RESET button on the PXleCOMe PCB. This should reset and restart the system.
24	Login using username ' user ' and password ' baraka '.
25	Open a terminal
26	\$ cd pts
27	\$./pxiecome.sh To start the test program.
28	Type the password: baraka
29	The program asks for the serial number of the board. Enter the serial number using the keyboard and press [ENTER]. The second serial number is not needed, so just press [ENTER].
30	The software will automatically start executing tests 00 to 11.
31	Test 00 require the user's intervention to verify the setup.
32	Test 01 require the user's intervention to visually check the PWR and DRIVE LEDs.
33	Test 03 require the user's intervention to visually check the 10/100/1000 and ACT/LINK LEDs.
34	Test 04 require the user's intervention to verify and change the setup.
35	Test 05 require the user's intervention to visually check the DONE and INIT LEDs.
36	Test 07 require the user's intervention to check GPI2 and GPI3.
37	Wait for the tests to finish.
38	At the end of the tests the user will be asked if the tests should be repeated. In case of no errors: Type [n] and then [ENTER] to quit the test program. In case of errors: Type [y] and then [ENTER] to repeat the tests once.
39	To switch the computer OFF, type [y] and then [ENTER]. To exit the test program and keep the computer ON, type [n] and then [ENTER].

Once the testing has finished all the errors that may have appeared will be listed on the screen. The log files containing more detailed information on each test will be saved in:

/home/user/pts/log_pxiecome

Log files with detailed descriptions of the tests will have been automatically generated and archived in a .zip file called:

zip_run_<run id>_<timestamp>_PXleCOMe_<serial number>.zip

If you need to repeat the tests more than two times for the same board, please report to the responsible of tests at CERN.