February 4, 2011 (PEG)

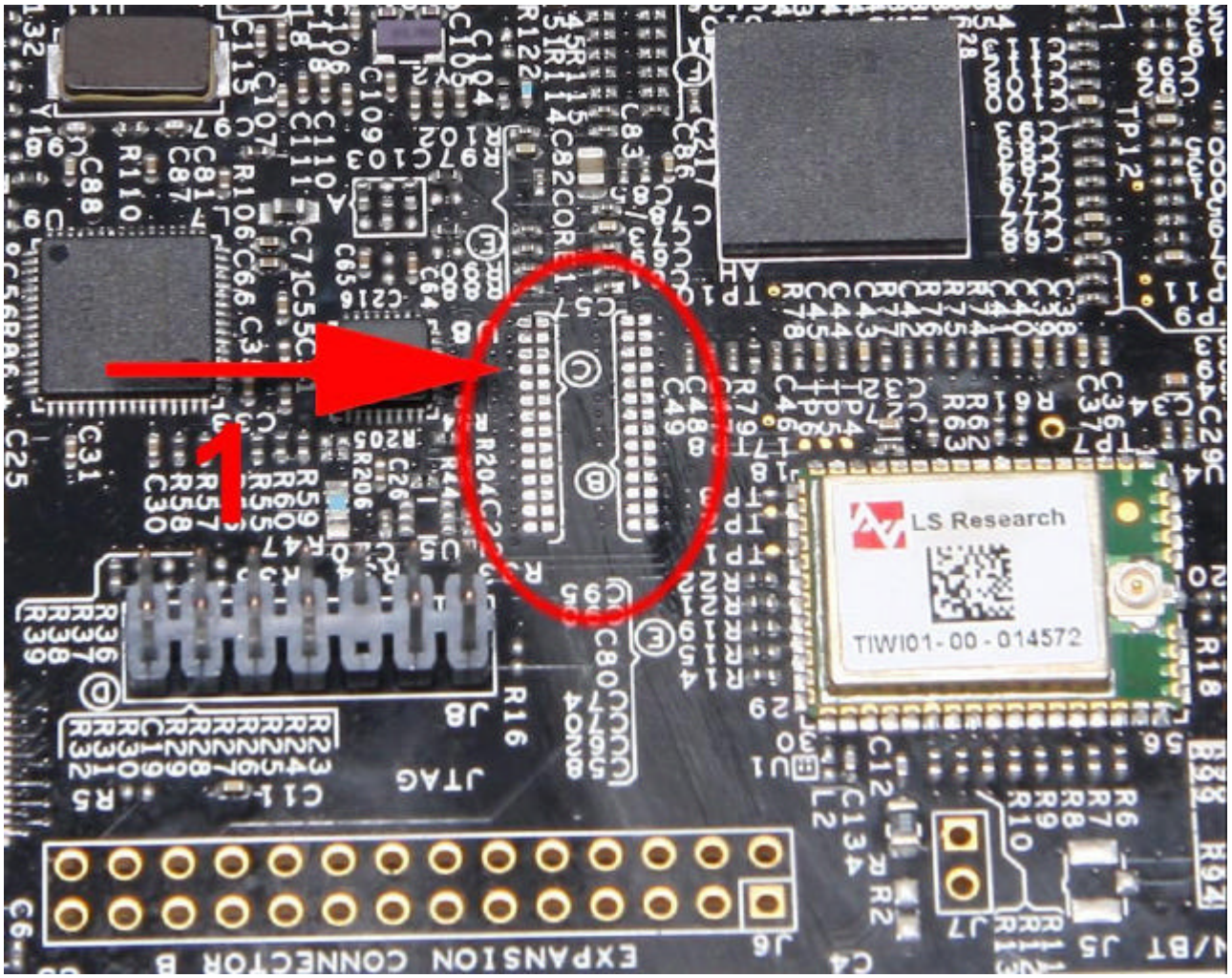
Required PandaBoard modifications in order to use off-chip program or system trace

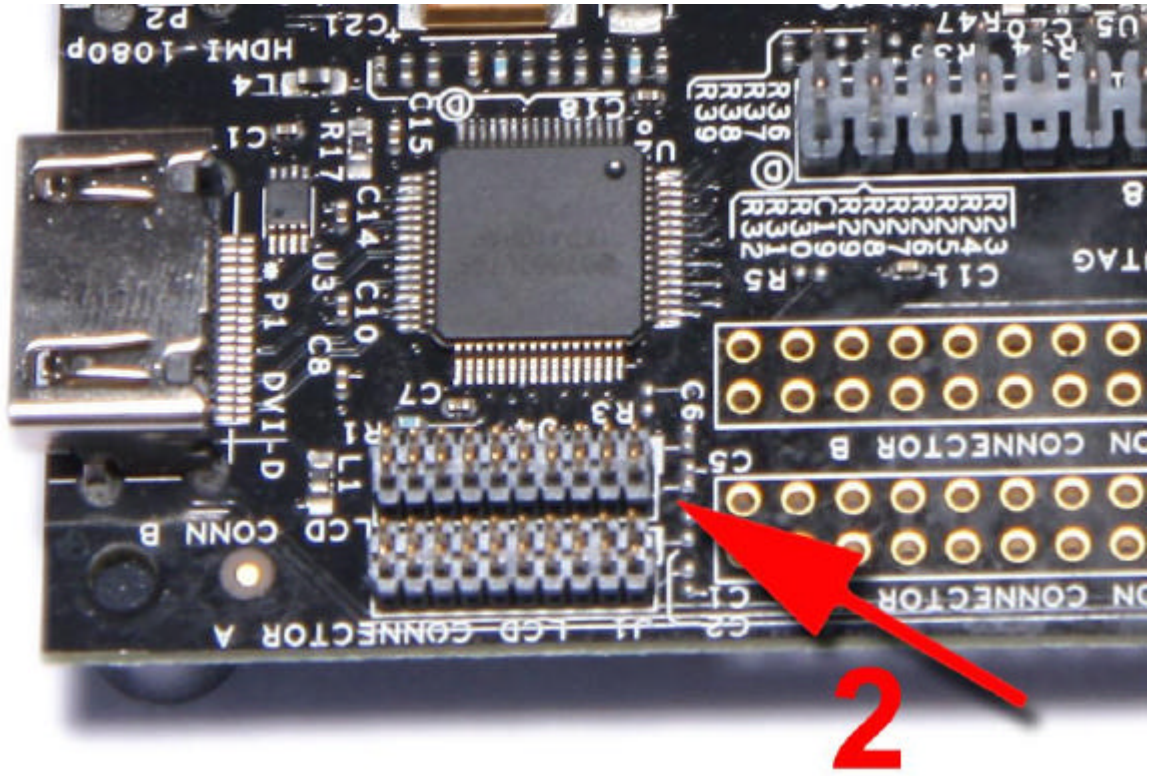
For off-chip trace software dated January 24, 2011 or newer is required (>= build 27597).

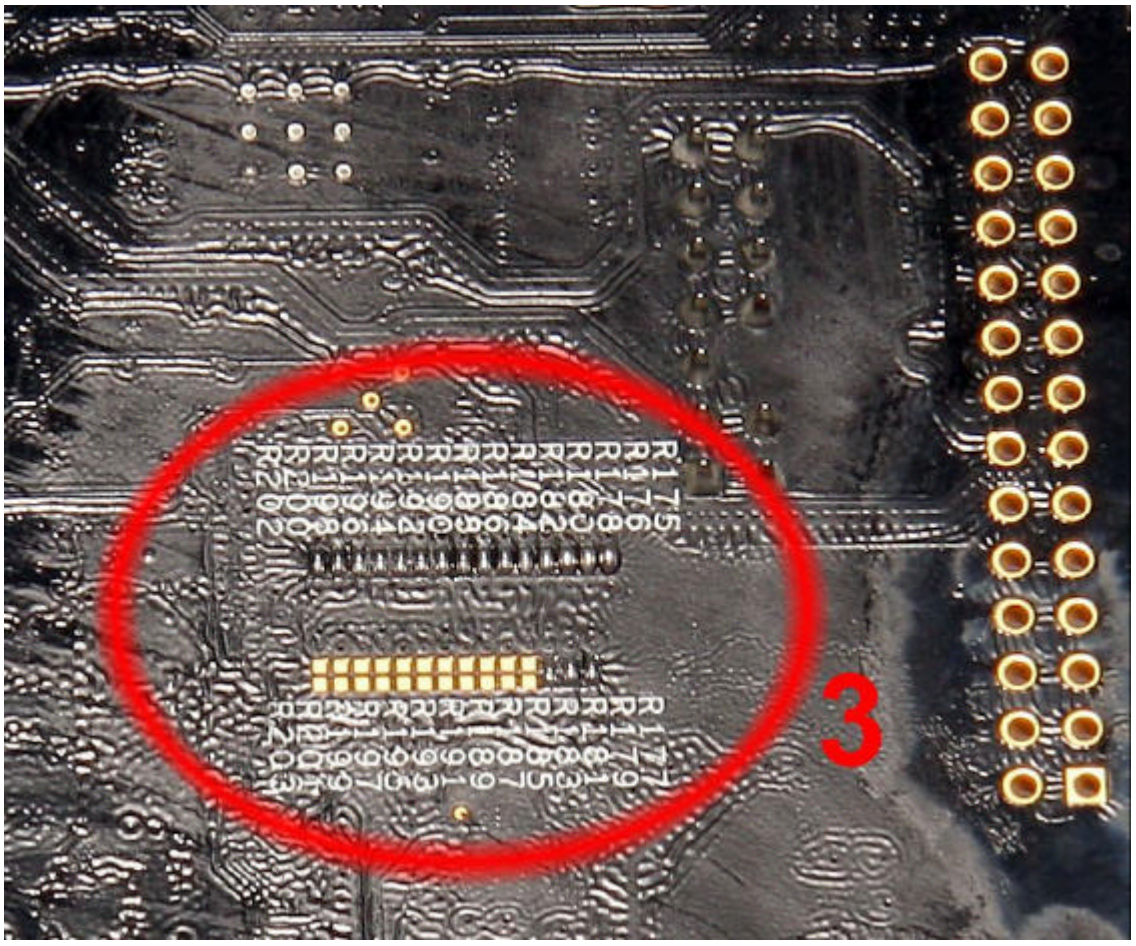
You need a converter board LA-3840 "Trace Converter for OMAP4430 PandaBoard" to connect the "Preprocessor" (trace probe) or “CombiProbe” to the PandaBoard. The converter will be plugged onto J1, J4, J8 on the PandaBoard.

Before you can plug on the converter the following modifications on the PandaBoard are needed:

1. Remove resistor block marked "B" (R40..R84) and "C" (R41..R85).
2. Solder in J1 and J4 pin header delivered with the converter board.
3. Solder 0 Ohm resistors (or just connect the pads) on bottom side to left register block (R175..R202) and at the first three of the right resistor block (R177, R179, R181).




HDMI-1080P
P1 DVI-D
LCD CONN B
LCD CONNECTOR A
CONNECTOR B
2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In case you want to build your own converter the following hints will be helpful:

Important is to provide the DPM_EMU signals to our Preprocessor in case of program trace and to our CombiProbe in case of system trace. Search in the PandaBoard schematic for DPM_EMU signals (see http://www.pandaboard.org). These are the signals you need to connect to our tools. Do not forget to connect reference voltage and ground.

Our minidemo program (demo.cmm) configures DPM_EMU2 to DPM_EMU19 for off-chip program trace. DPM_EMU2=TRACECLK, DPM_EMU3=TRACECTL, others are 16 data pins starting with EMU4=TRACEDATA0. Find the Preprocessor pinout here:

http://www.lauterbach.com/frames.html?adetmmictor.html (see ETMv3, Connector 1)
http://www.lauterbach.com/frames.html?adetmmipi60.html (see ETMv3)

For system trace (STM) it configures DPM_EMU15 to DPM_EMU19 for system trace.
DPM_EMU19=TRC_CLK, DPM_EMU18=TRC_DATA0, …, DPM_EMU15=TRC_DATA3.
See the CombiProbe pinout here:

http://www.lauterbach.com/frames.html?adarmcombi.html (see 34-pin MIPI connector)