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Re: Broke my TDS3000B

Mar 11 🔗 (https://groups.io/g/TekScopes/message/180223)

maxim.vlasov@...

TDS3000B are built on the MPC860 PowerQUICC. This is the main CPU. So, it has no boot ROM or the full fledged custom secure bootloader (too old), which is a great advantage for repairman. So, this thing can be sourced and replaced, IMHO.

Are you referring to the big PQFP240 National Semi thingy, right? IMHO, this is not the CPU, it's the ASIC DPO emulator with the ADC/RAM/etc crossbar, ADC clock generator PLL and DMA functionality.

Could you, please, check at which sampling rates you have a garbled response? If you run in X/Y mode, do you have the same stuff? Is it the same when running from the external trigger? Are all the traces garbled or just a subset of channels? Try to remove all the plug-ins and extension cartridges.
Also it could be the SRAM too (just two chips next to the ASIC). How about the linear power regulators in the vicinity of the tantalum cap? Are they OKAY?
Try to go around the o-scope and check the logic levels around the SRAM and National Semi ASIC. Maybe you can find a burned buffer or something. If it breaks below 400us, it could be the PLL.
I would go around and note the voltages and levels and post it to the forum.
Also the thermal image would be a good indication of something awkward.
You said that built-in self test runs OKAY. But how about running the calibration and service routines, would these fail?

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❯ (https://groups.io/g/TekScopes/message/180224)