







# Technical Tips Forum

## 2013


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**ST40 / STb71xx JTAG interfacing** (2 viewing) sam\_, (1) Guest

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## TOPIC: ST40 / STb71xx JTAG interfacing

**Re: ST40 / STb71xx JTAG interfacing** 8 months, 1 week ago

#1312

cattivo12



OFFLINE

Fresh Boarder



Posts: 8

Karma: 0

I measured the connector with a multimeter, 4-6-8 = gnd; 5 = no pull-up resistor could be tdo, so I took the connector pin "type j"

**Table 2. Target STMC Type J JTAG debug connector pinout**

Pin	Description	Signal direction	Pin	Description	Signal direction
1	TCK2_SCL	To target board	2	notASEBRK2_USR4	Bi-directional
3	TMS2_USR1	To target board	4	GND	Not applicable
5	TDO2_SDAO	From target board	6		
7	TDI2_SDAI	To target board	8		
9	notTRST2_USR2	To target board	10	notSYSRESET2_USR3	To target board

little update

I did not realize that after the command "sh4xrun -c sh4tp -t STMCLT1000A:sat7111:st40 -e flasher.out -a -r romdump.bin" sometimes appears "copy" to display of the decoder

Last Edit: 8 months, 1 week ago by cattivo12.

[Report to moderator](#)

THANK YOU

[QUICK REPLY](#)[REPLY](#)[QUOTE](#)**Re: ST40 / STb71xx JTAG interfacing** 8 months, 1 week ago

#1313

norbi20



OFFLINE

Fresh Boarder



Posts: 4

Karma: 0

HELP ME jtag STI 7111CUC  
box key rsa KEY

box TYPE  
Sagem DS86 HD  
PROCESOR : STI 7111 CUC  
RAM : elpida twm E1116aebg /EDE2116AEBG 8EF/  
nand : s29gl256p90ff 32mb

PLEASE JKEYS STI 7111 ON PROCESOR  
[members.tripod.com/dirt\\_muncher/how\\_to\\_jkeys\\_100.pdf](http://members.tripod.com/dirt_muncher/how_to_jkeys_100.pdf)

[Report to moderator](#)

THANK YOU

[QUICK REPLY](#)[REPLY](#)[QUOTE](#)**Re: ST40 / STb71xx JTAG interfacing** 8 months ago

#1314

Luck



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

**Bootloader Crash on your Receiver ???**  
**Here is a full secure Jtag Recovery for Octagon SF1008/1008SE/1018 and identical**

**Operating system**  
**Windows XP / Service Pack 3**

**Null-Modem Cable**

**Jtag Interface:**  
TIAO USB Multi Protocol Adapter:  
[www.tiaowiki.com/w/TIAO\\_USB\\_Multi\\_Protoc...pter\\_User%27s\\_Manual](http://www.tiaowiki.com/w/TIAO_USB_Multi_Protoc...pter_User%27s_Manual)

With **MProg 3.5** this interface was reprogrammed to ST Micro Connect Lite A / B  
It is in the Windows Device Manager as ST Micro Connect Lite A / B and works perfectly  
as:  
STMCLT1000A USB \ VID\_0483 & PID\_3746

**Jtag Connection on SF1008SE**

Pin 5 Trigout  
Pin 7 nASEBRK (\*)  
Pin 9 TMS  
Pin11 TCK  
Pin13 TDI  
Pin15 TDO  
Pin17 nSYSReset (x)  
Pin19 nTRST (x)

(\*) by Sentinel not found (0xfffffff! = 0xbeef with ST40\_Command "gdb", disconnect "nASEBRK" from the Tiao Interface and put the Octagon "nASEBRK Pin" on 3.3 volt (possibly a little higher).  
Up to 5 volt are possible without Problem, then the Tiao "nASEBRK" don't needed anymore.  
(x) can be reversed on the receiver

**Jtag Connection on Tiao Interface**

Pin 11 Trigout  
Pin 17 nASEBRK  
Pin 7 TMS  
Pin 9 TCK  
Pin 5 TDI  
Pin 13 TDO

Pin 15 nSYSReset (x).. look up  
 Pin 3 nTRST (x).. look up  
 Pin 2,4,6,8,10,12,14,16,18,20 Ground

### programming Software

ST40 Mirotolset Vers. R5.10 + Targetpack STMCR1.60

### ST40\_Commands >gdb

**sh4tp STMCLT1000A:mb442:st40**  
 ... for CPU STi7101 and STi7100 on mb442 Board)

(on mb411 Board)

**sh4tp STMCLT1000A:mb411:st40**

### Start Windows Hyperterminal - Com2-115200-8-no-1-no

later by input "loadb" - "u-boot.bin" File send it with Kermit

### ST40\_gdb - Input and Log-output

GNU gdb (GDB) 7.1-ST-1.0 [build Sep 25 2010]  
 Copyright © 2010 Free Software Foundation, Inc.  
 License GPLv3+: GNU GPL version 3 or later <gnu.org/licenses/gpl.html>  
 This is free software: you are free to change and redistribute it.  
 There is NO WARRANTY, to the extent permitted by law. Type "show copying"  
 and "show warranty" for details.  
 This GDB was configured as "--host=i686-pc-mingw32 --target=sh-superh-elf".  
 For bug reporting instructions, please see:  
 <<file://doc/docbug.htm> on the installation CD>.

### (gdb) sh4tp STMCLT1000A:mb442:st40

The target is assumed to be little endian  
 The target architecture is assumed to be sh4  
 mb442\_stx7109\_cut30 (mb442) connect start - parameters {}  
 Initialization TCK frequency set to 3000000 Hz  
**Device id 0x2d42c041**  
 tapmux connect(): boot mode single core setup  
 tapmux setup to bypass to core st40, channel 1  
 mb442 initialization start with SoC stx7109\_cut30 ...  
 stx7109\_cut30: booted audio companion  
 stx7109\_cut30: booted video companion  
 TCK frequency set to 10000000 Hz  
 tapmux complete\_connect(): single core setup  
 mb442 initialization complete  
**0xa000000 in ?? ()**

### (gdb) load c:/mb442/u-boot ...(u-boot (ELF)-Datei)

Loading section .text, size 0x1fad4 lma 0x85f00000  
 Loading section .rodata, size 0x1530 lma 0x85f1fad4  
 Loading section .rodata.str1.4, size 0x646c lma 0x85f21004  
 Loading section .data, size 0x10c4 lma 0x85f27470  
 Loading section .u\_boot\_cmd, size 0x700 lma 0x85f28534  
 Start address 0x85f00000, load size 166964  
 Transfer rate: 231 KB/sec, 33392 bytes/write.

### (gdb) continue

Continuing.

with nASEBRK against Ground can be break  
 and with "continue" resum.

look:

Program received signal SIGINT, Interrupt.  
 0x85f1418c in ?? ()

(gdb)

**on Windows Hyperterminal:****protect off bank 1**

... alternative "protect off all"

**era bank 1**

... alternative "era all"

**loadb**

## Ready for binary (kermit) download to 0x84000000 at 460800 bps...

**Now send "u-boot.bin" File with Kermit**

## Total Size = 0x00028a58 = 166488 Bytes

## Start Addr = 0x84000000

**cp.b (1) (2) (3)** ...example here "cp.b 0x84000000 0xa0000000 0x00028a58"

(1) Hex-Start-Address (from u-boot.bin)

.....look in Hyperterminal where is the beginning of u-boot.bin

(2) is the Address (beginning of NVRam / Flash)

.....look in "gdb" it is the last Address before load "u-boot" (ELF) (look up)

(3) File-Size of "u-boot.bin" File-Size in Hex **or in Byte****protect on bank 1**

... alternative "protect on all"

**reset**

The Receiver is now ready to work.

If not, (or by STi7101/7109) flash a Recovery Image with AAF-Recovery-Tool V.4.6.

Boot the Receiver.

With USB-Stick install the newest "HDF-Flasher-Plugin"

HDF-Flasher execute ...**Attention: set the right "Reseller ID"**.Put in Code "**0815**".

Boot the Receiver again with the original Bootloader.

Now you can flash every original Software over USB/RS232.

**in Appendix you will find "u-boot" (ELF) File****and "u-boot.bin" for SF1008 (u-boot\_2.23)****and SF1018 (u-boot.1.23) with STi7100 CPU.****It works great on STi7100 and STi7101 (STi7109)****But for STi7101 / STi7109 you must use AAF-Recovery-Tools****by Ending with Hyperterminal Command "reset" (look up)****And you find the newest HDF-FlasherV2.54 for SF1008/SF1008SE**

On this place many thanks to the moderator "Eisha" from the

octagon-forum for the provided "u-boot" Files

**best regards ...Luck**

Attachments:

 u-boot\_1.23.zip (574KB) u-boot\_2.23.zip (573KB)

 Bootloader...2.54.zip (201KB)

Last Edit: 8 months ago by Luck. [Report to moderator](#)

THANK YOU

QUICK REPLY

REPLY

QUOTE

The following user(s) said Thank You: [YLG80](#)

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1315

stefki



OFFLINE

Fresh Boarder



Posts: 16

Karma: 0

Hi all,

I tried to JTAG sti5202 receiver but seems the cpu is locked.  
The receiver has ethernet lan port which is disabled in firmware. My question is if I install STlinux on my linux machine is there any way to access to the receiver over lan ?

[Report to moderator](#)

THANK YOU

QUICK REPLY

REPLY

QUOTE

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1316

mcrae



OFFLINE

Fresh Boarder



Posts: 6

Karma: 0

Good, I wanted to know which is for each to the ejtag.

- 1 +0.00v-----2 GND
- 3 +0.33v-----4 GND
- 5 +0.02v-----6 GND
- 7 +3.27v-----8 GND
- 9 +0.33v-----10 GND
- 11 +0.33v-----11 GND
- 13 +2.82v-----12 GND
- 15 N/C-----14 GND
- 17 N/C-----16 GND
- 19 N/C-----20 GND

- 19->nTRST
- 17->nRST
- 15->TDO
- 17->TDI
- 13->TCK
- 11->TMS
- 09->nASEBRK
- 07->TRIGOUT

20,18,16...etc GND

And if I podais facilitate ejtag ST40 program.  
And I advise ejtag.

Attachments:



trozoplaca...tag1.jpg (168KB)



posiblesco...ones.gif (16KB)

[Report to moderator](#)

THANK YOU

QUICK REPLY

REPLY

QUOTE

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1317

mcrae

Good, I wanted to know which is for each to the ejtag.



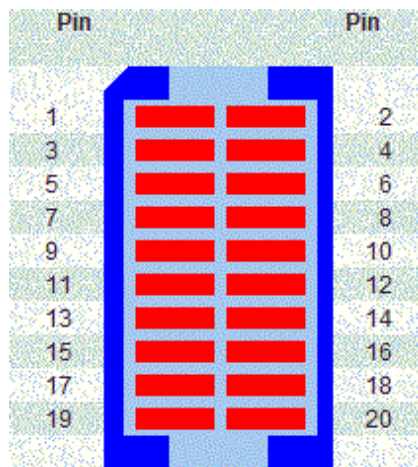
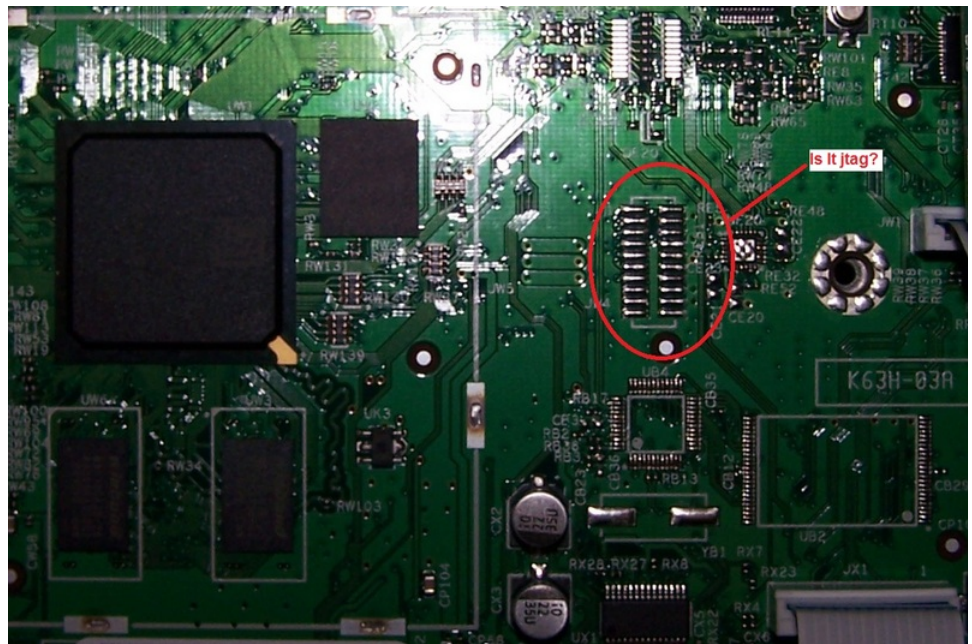
OFFLINE

Fresh Boarder



Posts: 6

Karma: 0



They go in that order as in the image is recorded, one at top left.

1 +0.00v-----2 GND  
 3 +0.33v-----4 GND  
 5 +0.02v-----6 GND  
 7 +3.27v-----8 GND  
 9 +0.33v-----10 GND  
 11 +0.33v-----11 GND  
 13 +2.82v-----12 GND  
 15 N/C-----14 GND  
 17 N/C-----16 GND  
 19 N/C-----20 GND

19->nTRST  
 17->nRST  
 15->TDO  
 17->TDI  
 13->TCK  
 11->TMS  
 09->nASEBRK  
 07->TRIGOUT

20,18,16...etc GND

And if I podais facilitate ejtag ST40 program.  
 And I advise ejtag.



Last Edit: 7 months, 3 weeks ago by mcrae. [Report to moderator](#)

[THANK YOU](#)

[QUICK REPLY](#)

[REPLY](#)

[QUOTE](#)

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1318

mcrae



OFFLINE

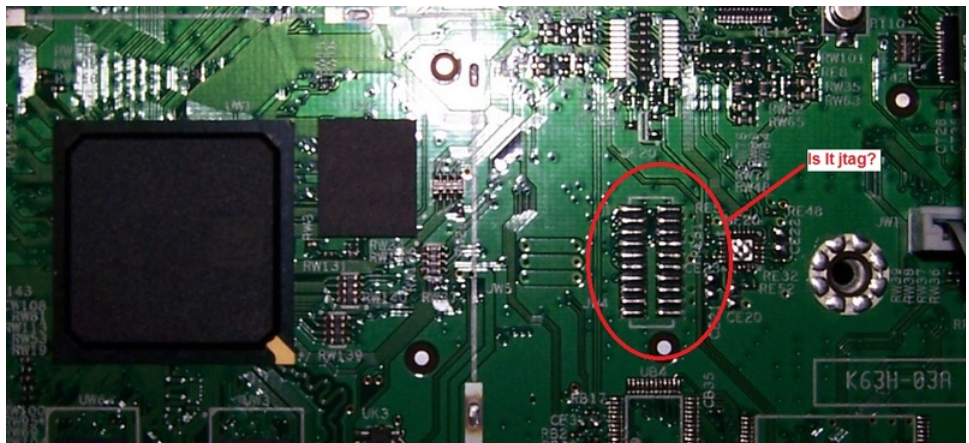
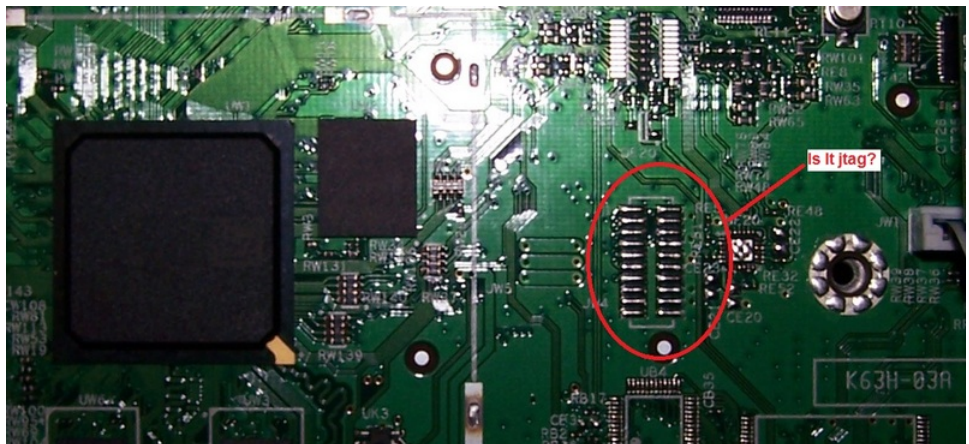
Fresh Boarder



Posts: 6

Karma: 0

Good, I wanted to know which is for each to the ejtag. STI7105-SUD



1 +0.00v-----2 GND  
 3 +0.33v-----4 GND  
 5 +0.02v-----6 GND  
 7 +3.27v-----8 GND  
 9 +0.33v-----10 GND  
 11 +0.33v-----11 GND  
 13 +2.82v-----12 GND  
 15 N/C-----14 GND  
 17 N/C-----16 GND  
 19 N/C-----20 GND

19->nTRST  
 17->nRST  
 15->TDO  
 17->TDI  
 13->TCK  
 11->TMS  
 09->nASEBRK  
 07->TRIGOUT

20,18,16...etc GND

And if I podais facilitate ejtag ST40 program.  
And I advise ejtag.

Attachments:



posiblesco...14-2.gif (16KB)

[Report to moderator](#)

THANK YOU

[QUICK REPLY](#)

[REPLY](#)

[QUOTE](#)

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1320

**mcræe**



OFFLINE

Fresh Boarder



Posts: 6

Karma: 0

Sorry for the repeats do not know how to delete them.

[Report to moderator](#)

THANK YOU

[QUICK REPLY](#)

[REPLY](#)

[QUOTE](#)

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago

#1321

**admin**

It looks like your connector is indeed for JTAG.  
But we do not speak about eJTAG in that topic. Don't know if the eJTAG interface can be





OFFLINE  
Moderator  
●●●●●●  
Posts: 31  
Karma: 0

used with the STi7105.  
If you have a USB interface you should test it with the pinout described your post using the Toolset.  
The other choice would be to use the USB JTAG-NT interface.

Last Edit: 7 months, 3 weeks ago by admin. [Report to moderator](#)

THANK YOU QUICK REPLY REPLY QUOTE

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 3 weeks ago #1322

mcræe



OFFLINE  
Fresh Boarder  
●●●●●●  
Posts: 6  
Karma: 0

Good, thanks for replying but what is not where I have to connect wires to the usb jtag deco.

[Report to moderator](#)

THANK YOU QUICK REPLY REPLY QUOTE

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 2 weeks ago #1323

stefki



OFFLINE  
Fresh Boarder  
●●●●●●  
Posts: 16  
Karma: 0

Hi all,  
Can somebody make a list of receivers and CPUs which this ft4232 module can JTAG them.  
I mean on tested devices.

Last Edit: 7 months, 2 weeks ago by stefki. [Report to moderator](#)

THANK YOU QUICK REPLY REPLY QUOTE

**Re: ST40 / STb71xx JTAG interfacing** 7 months, 2 weeks ago #1324

chuci

Hi,  
  
I am trying to run STMCMicroLite on a Windows 7 64bits machine.  
No way to find the drivers on the net.  
Maybe I could run it on a Linux virtualbox in that machine??



OFFLINE

Fresh Boarder



Posts: 4

Karma: 0

Any suggestion?

Thanks

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 2 weeks ago

#1325

YLG80



NOW ONLINE

Moderator



Posts: 501

Karma: 18

There is no problem to run the ST Tools on a WIN7 x64 machine. I've sent you a pm with the instructions to download the Microconnect package with the drivers.

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1326

Daggi\_Duck



OFFLINE

Fresh Boarder



Posts: 14

Karma: 0

sza2 wrote:

*Do anyone has the detailed datasheet of the STi7105?*

Look at:

[www.docin.com/p-266133876.html](http://www.docin.com/p-266133876.html)

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1327

cobramostar

hi  
Daggi\_Duck

wir können uns aus

Irde.to 4Free Board » Alles für die Manipulation » Hardware » PACE DS830NP



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

Forschung

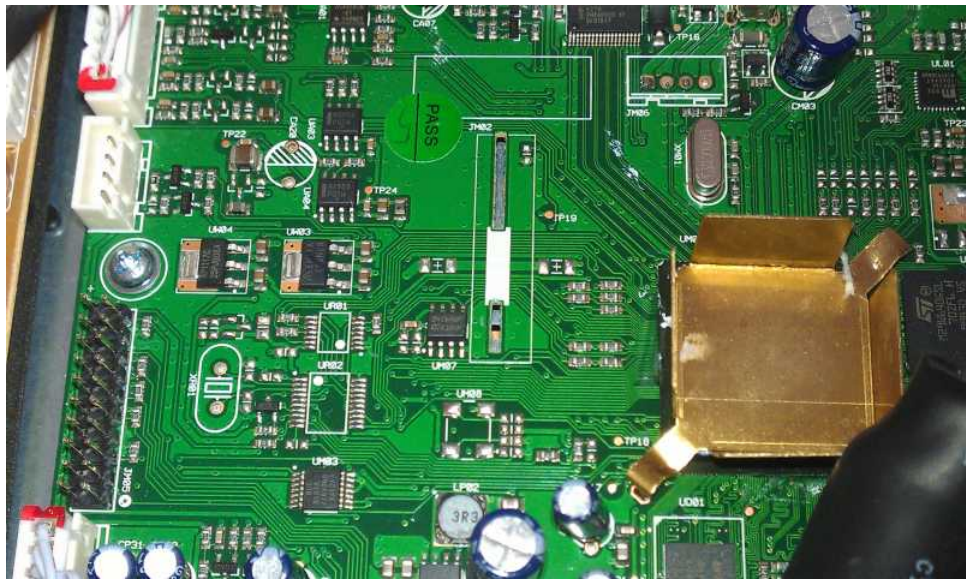


i have two recivers  
1.) Inverto Scena 6N

Prozessor ist Sti 7105 SUC mit 450Mhz.

RAM:  
2x Winbond W971GG6JB-2 (1GB DDR2-800 SDRAM)

Flash:  
1x STMicroelectronics IC Flash M29W6400GSL 70ZF6E (64 MB)  
1x STMicroelectronics NAND01GW3B2CZA6



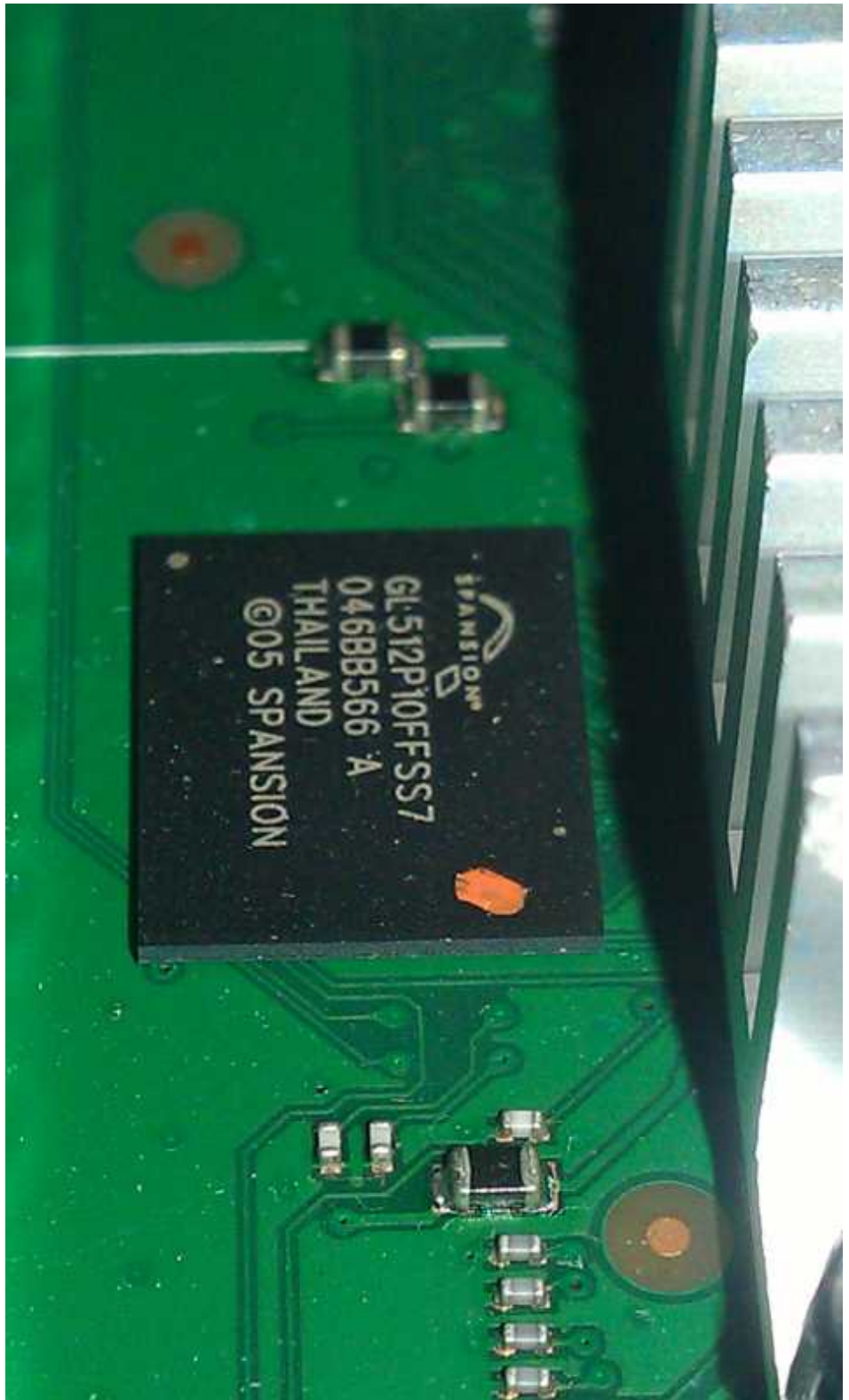
i serch pinout of jtag

and i have

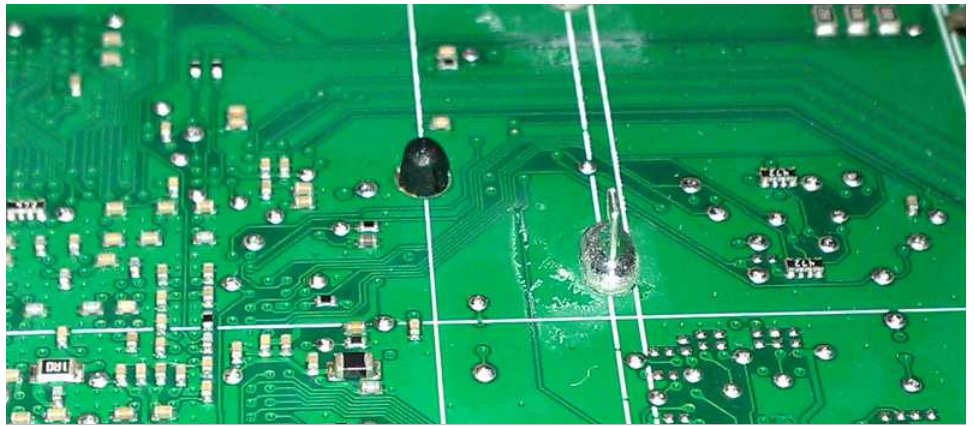
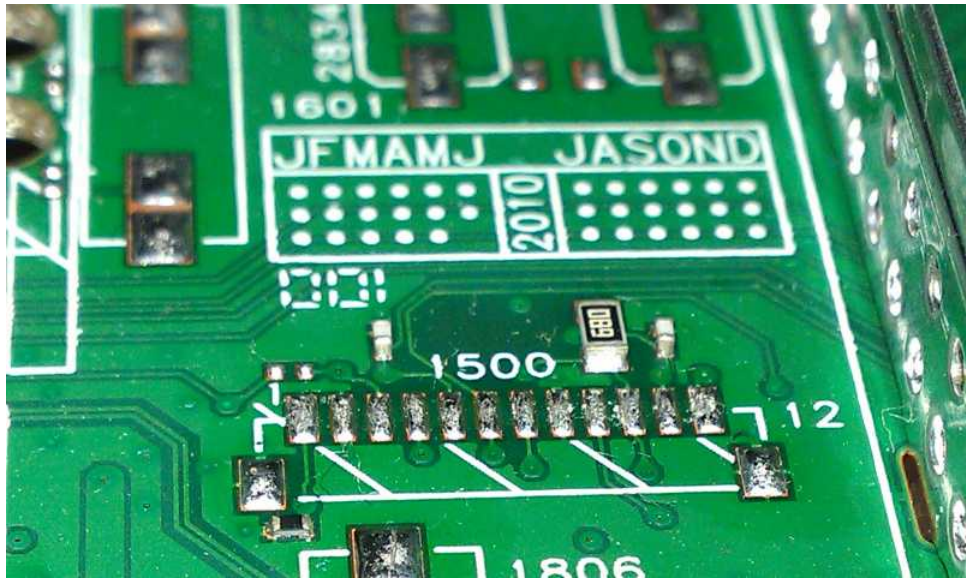
Pace DSR 7151/53











can any help

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1328

YLG80



NOW ONLINE

Moderator



Posts: 501

Karma: 18

@cobramostar

On the second picture, near the left edge, you have a black 20 pin connector. It could be your jtag connector. You should check if all pins in one row are connected to the ground.

Last Edit: 7 months, 1 week ago by YLG80.

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1329

cobramostar



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

something similar STi7103HUD board

Only in this case, pin 1 and pin 7 are short-circuited as a picture on your board STi7103HUD

pin 1 = 3,25 V

pin 3 = 0 V

pin 5 = 0 V

pin 7 = 3,26 V

pin 9 = 0,62 V

pin 11 = 0 V

pin 13 = 0,63 V

pin 15 = 0,02 V

pin 17 = 3,28 V

pin 19 = 0,63 V

pin 1 to GND 13,73 k OHM

pin 3 ##### 1500 kohm

pin 5 ##### 10 kohm

pin 7 ##### 13,7 kohm

pin 9 ##### 10 k ohm

pin 11 ##### 10 k ohm

pin 13 ##### 10 kohm

pin 15##### 1500 kohm

pin 17 ##### 97 kohm

pin 19 ##### 10 kohm

pin 2,4,6,8,10,12,14,16,18,20 GND

I worked at

HOWTO\_JTAG\_Interface\_STMCLT\_Clone\_rev1

and there is a marked "Use Fixed Serial Number" while tovm explanation is different

**YLG80 wrote:**

*From the Howto*

whether it can cause errors? ? ?

that there is a jtag pin 5 for STI marked as trigout while those with 20 pin JTAG connector on a board STi7103HUD offer an inversely as pin 3 trigout ? ? ?

percent, and that I am using FT4232H Mini Module is where it tirgin ST ???

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1331

Luck



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

@cobramostar

Sentinel not found !!!

Look at my Posting.

It work's. 😊

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1332

cobramostar



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

but the voltage on the JTAG but he has pin 7 = 3,26 V  
???

Last Edit: 7 months, 1 week ago by cobramostar.

Report to moderator

THANK YOU

QUICK REPLY

REPLY

QUOTE

Re: ST40 / STb71xx JTAG interfacing 7 months, 1 week ago

#1333

Luck



OFFLINE

Fresh Boarder



Posts: 7

Karma: 0

**cobramostar wrote:**

*but the voltage on the JTAG but he has pin 7 = 3,26 V  
???*

Hi,

disconnect NASEBRK from your Interface.  
Connect Receiver NASEBRK (if it is Pin 7) with an external, controllable current source, who has 3.5 volts up to 5 volts clean DC power.  
Beginning at 3.5 volts and then in increments of 0.1 volts to the sentinel error disappears.

I do the same on my Receiver more then 100 Times with 3,7 Volt and later with 5 Volt more

then 50 Times and had no Problems with my Receiver. 😊

IF it does not work with 3.8 volts, your "uboot" (ELF-File) is not fit for Receiver / CPU-Board,  
or you must interchange (? Pin17) nSYSReset and (? Pin19) nTRST

Luck

Last Edit: 7 months, 1 week ago by Luck.

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