



## [MPC5xxx] No debugger access due to a censored device

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The MPC5XXX processors implement a censorship feature. When enabled, the JTAG debugger is locked out and debugging or tracing is impossible.

The debug implementation on the MPC5XXX does not allow detecting if a processor is censored or not. The indication of active censorship is that reading the JTAGID works, but any further accesses, fail. The debugger will report a **Debug Port Fail** error and the additional error description in the message AREA will look like follows:

```
JTAGID=0x____1D
Error: received invalid OSR (0x000)
is the device censored?
```

If the processor was censored on intention, it is possible to regain access using this command sequence:

```
SYStem.DETECT CPU
SYStem.Option.KEYCODE 0xFEEDFACECAFEBEEF
SYStem.Up
```

### **Note:**

- If the password (keycode) is unknown or illegal (e.g. after accidentally erasing the shadow row), the processor is locked forever and can not be recovered, unless the application in flash provides a feature to unlock the processor (e.g. via CAN).
- Some processors require the upper and lower 32-bit parts to be exchanged for **SYStem.Option.KEYCODE** (e.g. 0xCAFEBEEFFEEDFACE instead of 0xFEEDFACECAFEBEEF)
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## Comments (4)

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**AM Arun Mukundan**

1 year ago

Hi, consider my password is 12345678123456781234567812345678. How can I provide this data through lauterbach

1, using space as a seperator. eg: 0x12345678 0x12345678 0x12345678 0x12345678

2, using comma seperator. eg: 0x12345678,0x12345678,0x12345678,0x12345678

please help me to resolve this.

**Wafi Jmal**

1 year ago

Hello,

If I understand you request correctly this script should help:

```
&password_1="0x11111111,0x22222222,0x33333333,0x44444444"  
&password_2="0x55555555 0x66666666 0x77777777 0x88888888"  
&output_1=STRing.Replace("&password_1","",0x,"",0.)  
&output_2=STRing.Replace("&password_2","",0x,"",0.)  
print "&output_1"  
print "&output_2"  
ENDDO  
Output:  
0x1111111222222233333344444444  
0x5555555666666677777788888888  
Please let me know your feedback on this  
Best Regards  
Wafi
```

**AM Arun Mukundan**

1 year ago

Hi Wafi,

Thanks for the help, PFB is the exact script I'm executing. I think now I'm sending the keycode as expected.

SYStem.RESet

SYStem.BdmClock 16.0MHz

SYStem.DETECT CPU

SYStem.Option.ResBreak OFF

SYStem.Option.WaitReset 3s

SYStem.Option KEYCODE 0x12345678 0x12345678 0x12345678 0x12345678 0x12345678  
0x12345678 0x12345678

System.Option ResetMode FUNCtional

SYStem.Option.WATCHDOG OFF

SYStem.Up

After this either I end up with target reset or debug port fail

**Wafi Jmal**

1 year ago

Hello,

Please refer to this document: [https://repo.lauterbach.com/pdf/debugger\\_mpc5500.pdf](https://repo.lauterbach.com/pdf/debugger_mpc5500.pdf)

If the issue persists:

- . kindly open a new ticket using this link: <https://support.lauterbach.com/new-ticket>.
- . Generate a system information report about your TRACE32 configuration by selecting the TRACE32 menu: Help > Support > System Information..., click Save to File, and attach the resulting text file to your email.

This will help us investigate the issue further.

Best Regards

Wafi