No PWM when running in debugger Open Discussion

-  Helpdesk robot
- **Forum name:** #Debugging

We are developing an ECU using TTControl TTC590 hardware which uses a TI TMS570 CPU.
When we try to use a PWM output we observe that whenever we upload the application and run it using the Trace32 debugger the PWM will not work. If we then just reset the target (no reupload), the PWM starts just fine. If we attach the debugger to the running target the PWM will continue to work fine until we hit a breakpoint, but after continuing after the breakpoint, the PWM is no longer running.
Is this an known issue? I cannot find any reports on this...

Comment (1)

Ahmed Ghribi
1 year ago

Hello Mr Pedersen,

My name is Ahmed Ghribi, from Lauterbach's support team, and I will be pleased to try to help.

We would like to clarify a few points to better understand the situation:

- Could you confirm how the PWM is being generated on your setup? Is it directly through the TMS570's NHET module, or do you have any additional circuitry involved?

- Is the issue that the PWM signal itself is not present on the output pin, or is there another component connected to the PWM that is not behaving as expected?

- Could you share the output of the command `VERSION.SOFTWARE` ?

On the TMS570, PWM is most commonly generated using the NHET (High-End Timer) module. This peripheral has a built-in Emulation Mode that defines how it behaves when the debugger is active: Suspend mode or Ignore suspend mode. If this is the case, could you check the global configuration register of the “NHET” to confirm which emulation mode is set and try to switch “IS” bit in the “GCR” register (you can check it in the peripheral window `PER , "N2HET (High-End Timer Module)"`)

Best regards,
Ahmed Ghribi