[AWR1843AOP] SPI MCAL Problem Report



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**Topic: Spi\_SyncTransmit(SpiDriver\_0.seqCfg[0].seqId)** **API Function fail.**

When I try to use function Spi\_SyncTransmit API, JobResult and Sequence Result return fail.

I’m trying to use functional API that provided by SPI module, which I can use to control peripherals.

The chip I want to control is TCAN-14689-Q1. To do so, I configured MCAL SPI module, finished SPI\_Init(), and completed Spi\_SetupEB.

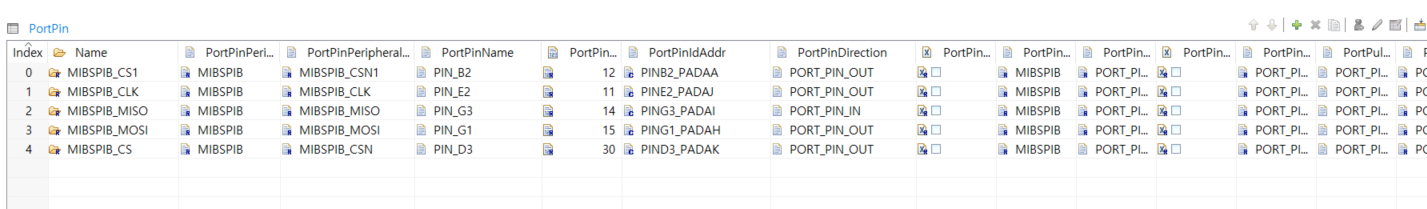
When I write image to Customer board and start it, even result return E\_OK, jobResult and seqResult return SPI\_JOB\_FAILED and SPI\_SEQ\_FAILED.

For more description, please read below.

# **Configuration**

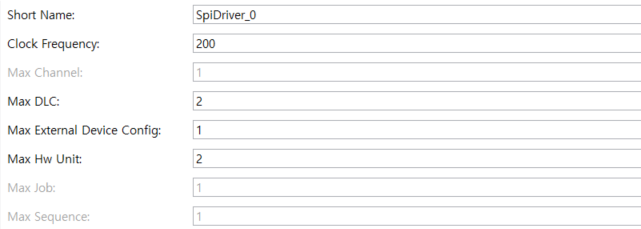
The chip that I want to control by using SPI module is TCAN-1469-q1, which is released by TI.

Port module was set like picture below, and before SPI\_Init(), Port\_Init() was executed.

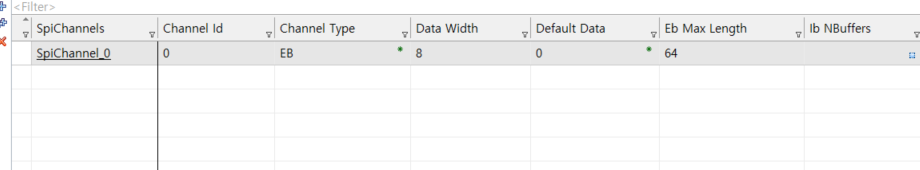


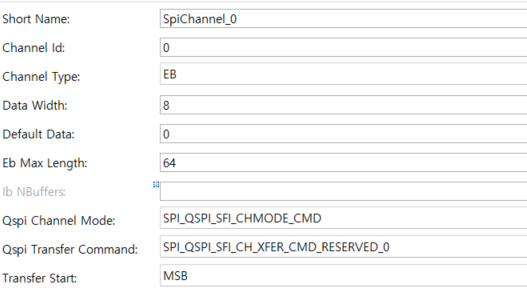
Here are some **configurations for SPI** that I configured to control TCAN-1469-q1.

* 1. **SpiDriver0**

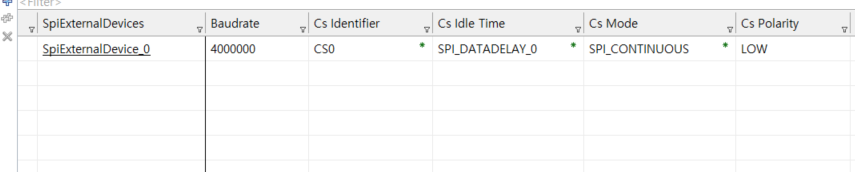


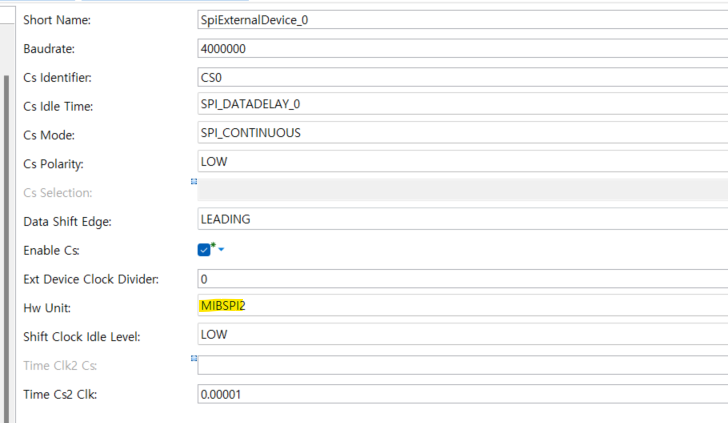
* 1. **Channels**

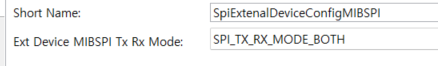




* 1. **ExternalDevices**
* Because usage of SPI in customer board is MIBSPIB, Hwunit was configured as MIBSPI2.



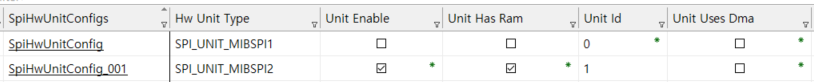




* In addition, because I can’t remove configuration for QSPI in here, I configured it as picture below.

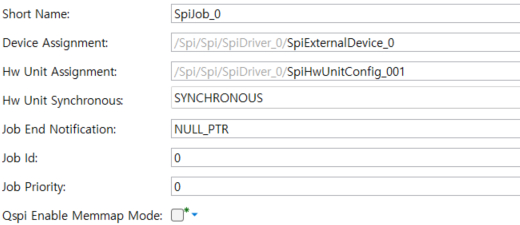


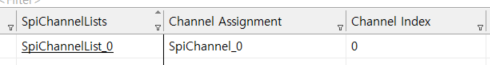
* 1. **HwUnitConfigs**



* 1. **Jobs**



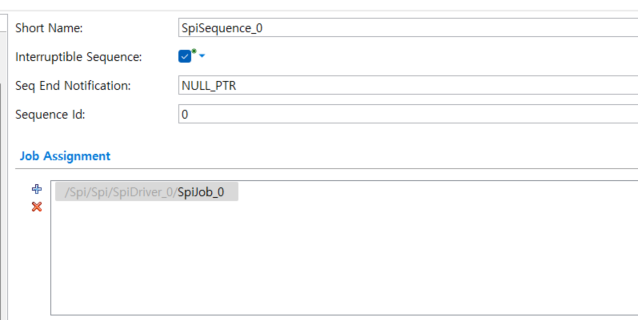




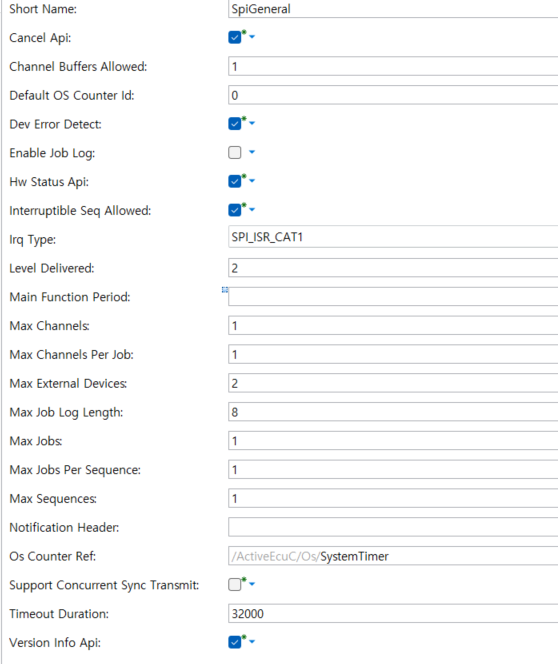


* 1. **Sequences**

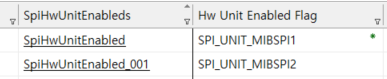




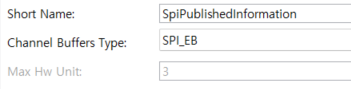
* 1. **General**



* 1. **HwUnitEnableds**



* 1. **PublishedInformation**

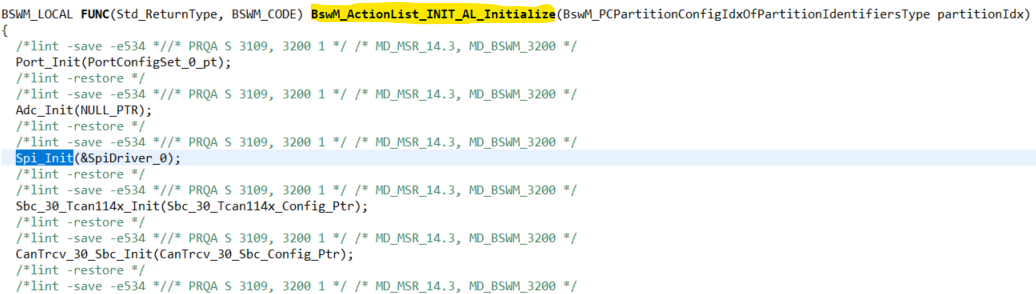


# **Code compilation**

AS I use DAVINCI, the tool for configuration and integration of BSW module, which Vector provided,

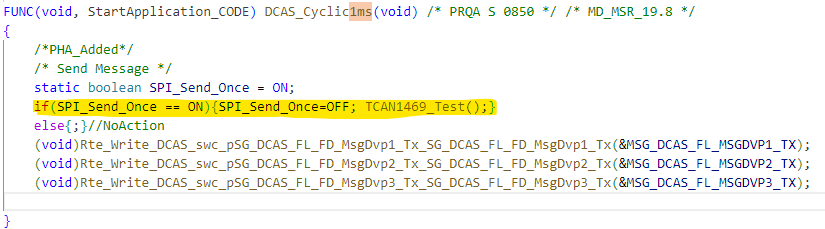
I generated it in DAVINCI, compiled through make file and initialized SPI module through BSWM module.

- **Initialization**



Spi module is initialized after Port Init.

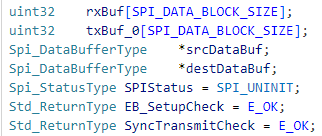
As platform initialized and AUTOSAR OS operates, SWC(Software component) that I designed runs for every 1ms and I designed it like the picture below.



Runnable DCAS\_Cyclic1ms(void) is triggered every 1ms and my test function is triggered only one time.

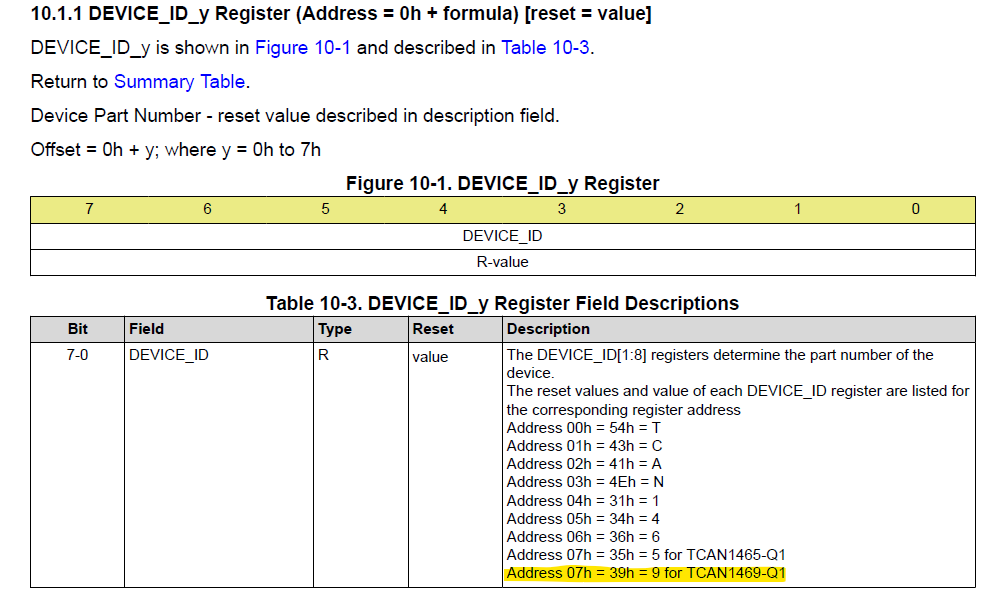
The contents for TCAN1469\_Test() is designed picture like below.

**- TCAN1469\_Test()**





Tx Buffer was set to read Register’s value which is related with the information, described in picture below.



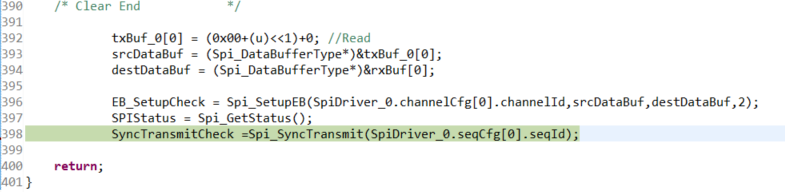
(TCAN-1469-Q1 Datasheet content related to register.)

I expected the result of this function is to return **0x39 in destDataBuf.**

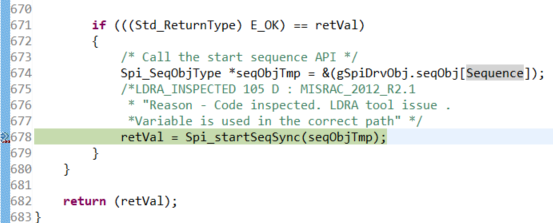
As I referenced in topic, Spi\_SyncTransmit(SpiDriver\_0.seqCfg[0].seqId) doesn’t work properly.

# **Code Flow and CCS Capture**

In here, I’d like to talk about main topic for this report. I inserted breakpoint like the picture below.

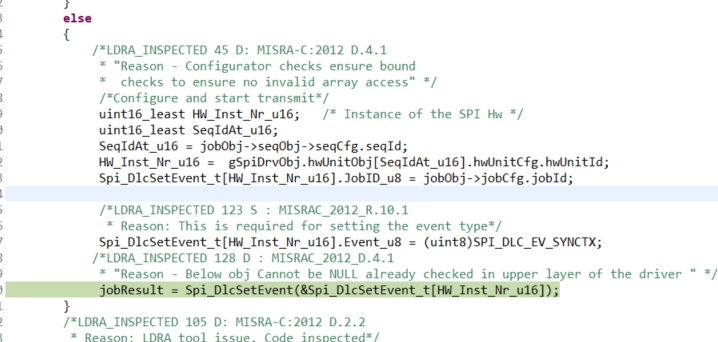


In this API, there’s no problem to proceed the code to next break point, which is shown below.



After this break point, the function **Spi\_ScheduleAllJobsSyncTransmit()** is executed.

Finally, the problem point reached in this function. The point is in picture below.



In here, **jobResult is returned** fail and because of this, seqResult is returned fail too.

# **Conclusion.**

**To debug this error**, I need TI’s help. Indeed, I need TI’s FAE to make this module work, to operate TCAN1469-q1, as there’s little time to work with in developing period.

Please confirm it and reply me back. Thank you.