

Update on the readbacker

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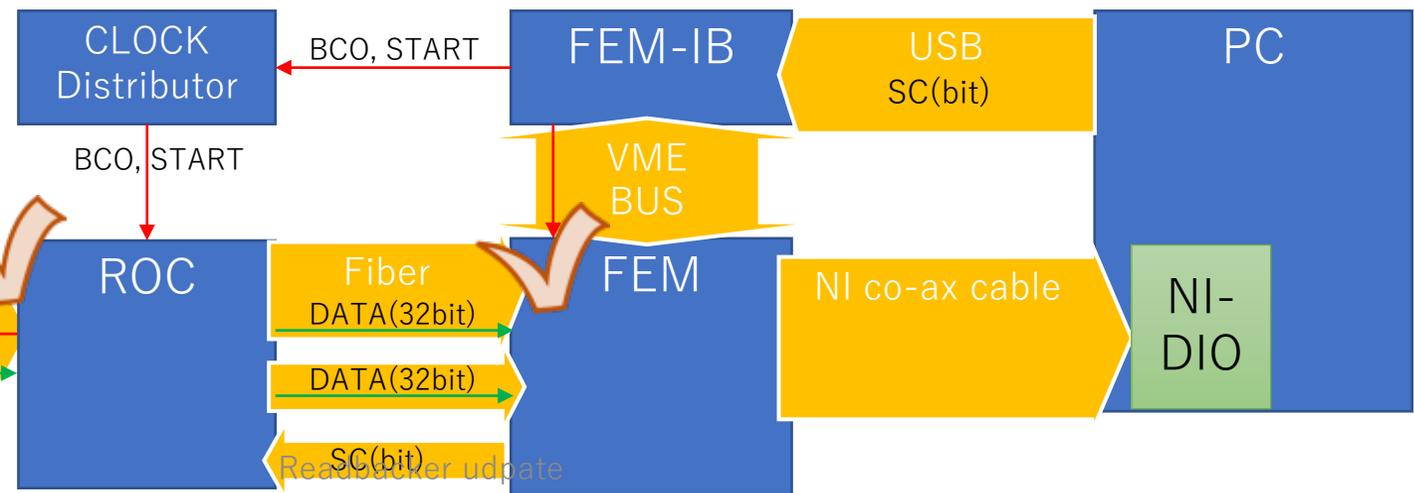
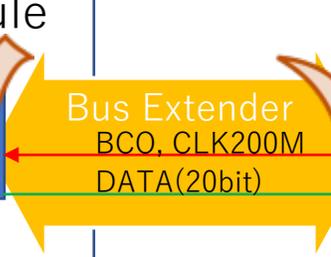
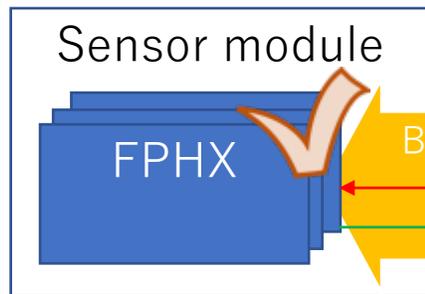
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Status

- We successfully sent a command to the specific chip on the ladder
 - GUI was also modified
- The interception board is useful for the readback development



32bit command (0b_1100 1110 0111 0111 1001 0100 0000 0000)



GUI setting to send the command to the chip

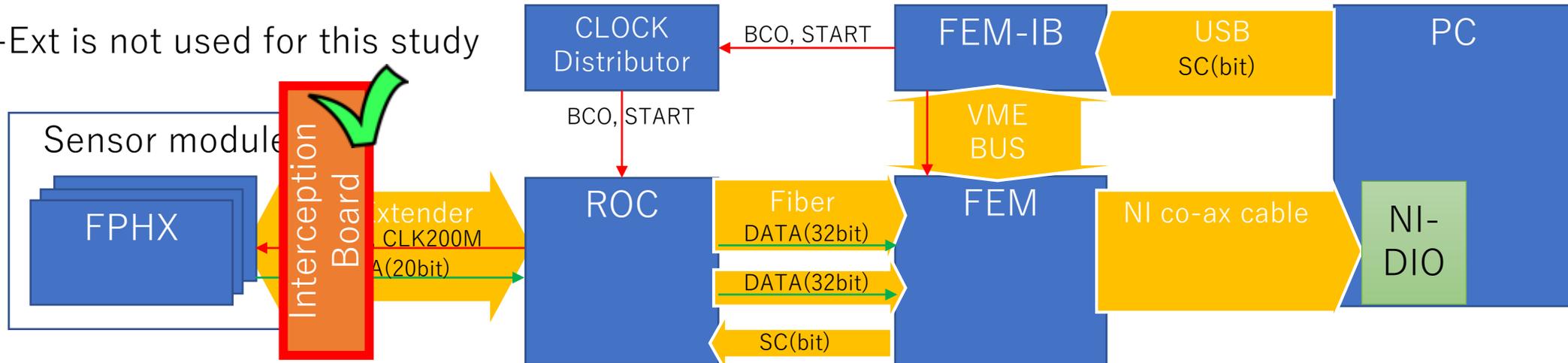
1. Select module ID
 - Tab corresponds to ID
2. Select chipID (1-13) and side (0,1,15)
3. Send the command by “WRITE” button

The screenshot shows the FPHX TestStand DAQ software interface. Key elements include:

- Module Selection:** Tabs for Module 0 through Module 4, with Module 15 selected.
- Register Table:** A table with columns for Register (Reg), Description (Desc), Chip, and Chip Command. The 'Write' column is highlighted with a red box.
- Chip Control Panel:** Fields for 'Chip ID' (21) and 'Side' (15), and a 'Channel Mask' section. These fields are highlighted with a red box.
- Global Chip/DAQ Operations:** A grid of colored buttons for operations like 'Enable RO', 'Latch FPGA', 'Core Reset', 'Start DAQ', 'Check GLINK', etc.
- DAQ Configuration:** Fields for 'NI DAQ Sample Rate (MHz)', 'Num of events', 'Duration', and 'Print Output'.
- Module Enable:** Radio buttons for 'On', 'Off', 'Both', 'Side 0', and 'Side 1'. The 'On' button for Module 15 is highlighted with a red box.
- ver6 Panel:** 'ROOT' and 'Module ID' (6) buttons.

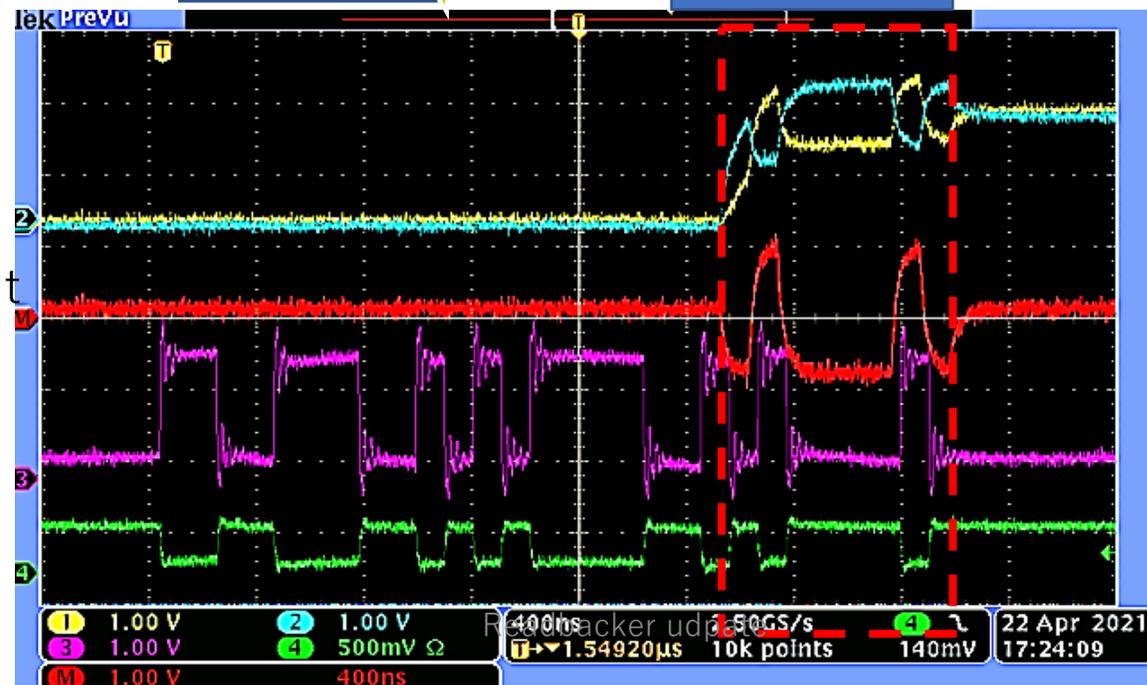
Readback value at Interception board

Bus-Ext is not used for this study



CH1: SC_OUT_0P
 CH2: SC_OUT_0N
 M: CH1-CH2
 CH3: SC_IN_0P
 CH4: SC_IN_0N

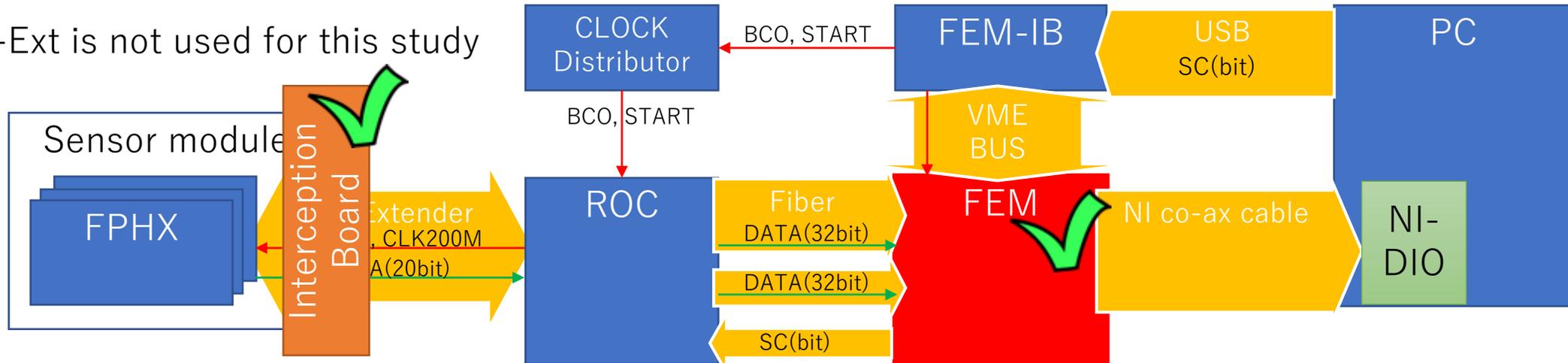
Output
 Input



- Signal is monitored by I/B
- To see the readback value, need to send SC command twice.
- Readback value is successfully seen

Readback value at FEM

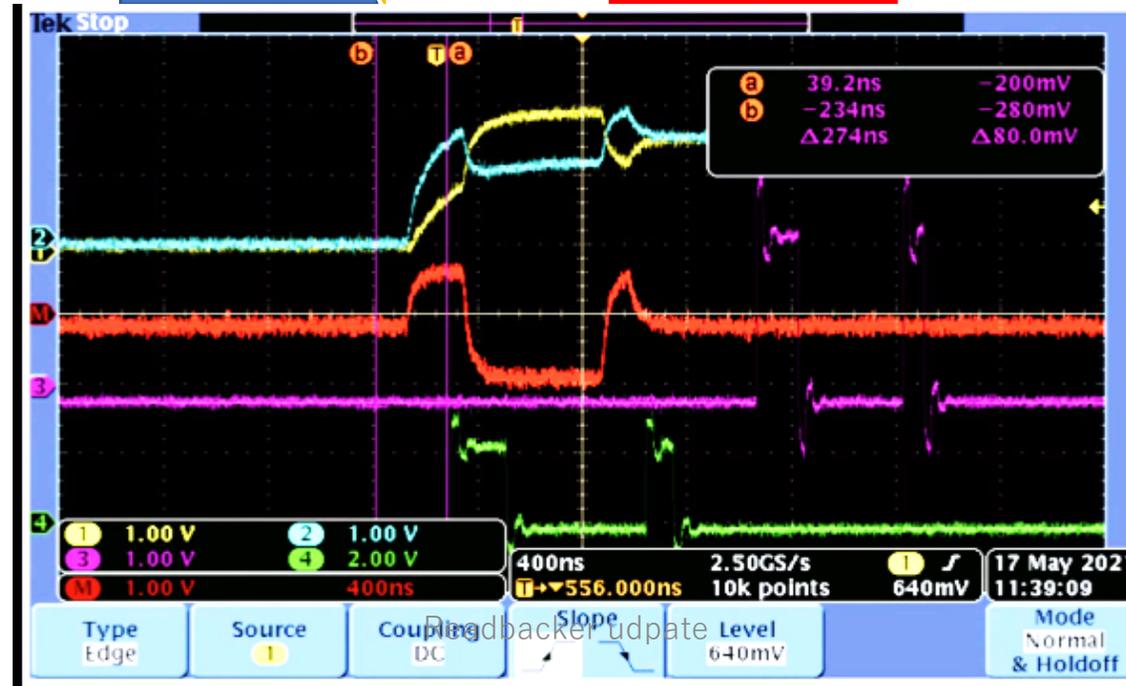
Bus-Ext is not used for this study



CH1: SC_OUT_0N
 CH2: SC_OUT_0P Int. Board
 M: CH 1 -CH 2

At FEM

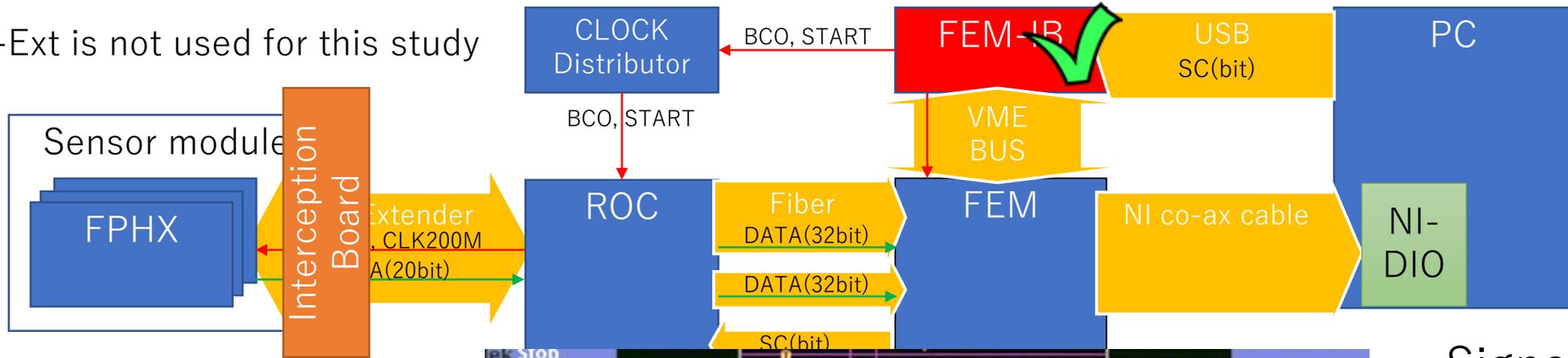
CH3: DATA_TO_SERIAL_OUTPUT
 CH4: SC_DATA_IN



- Signal is monitored by testpins at FEM
- Readback value is successfully seen at FEM

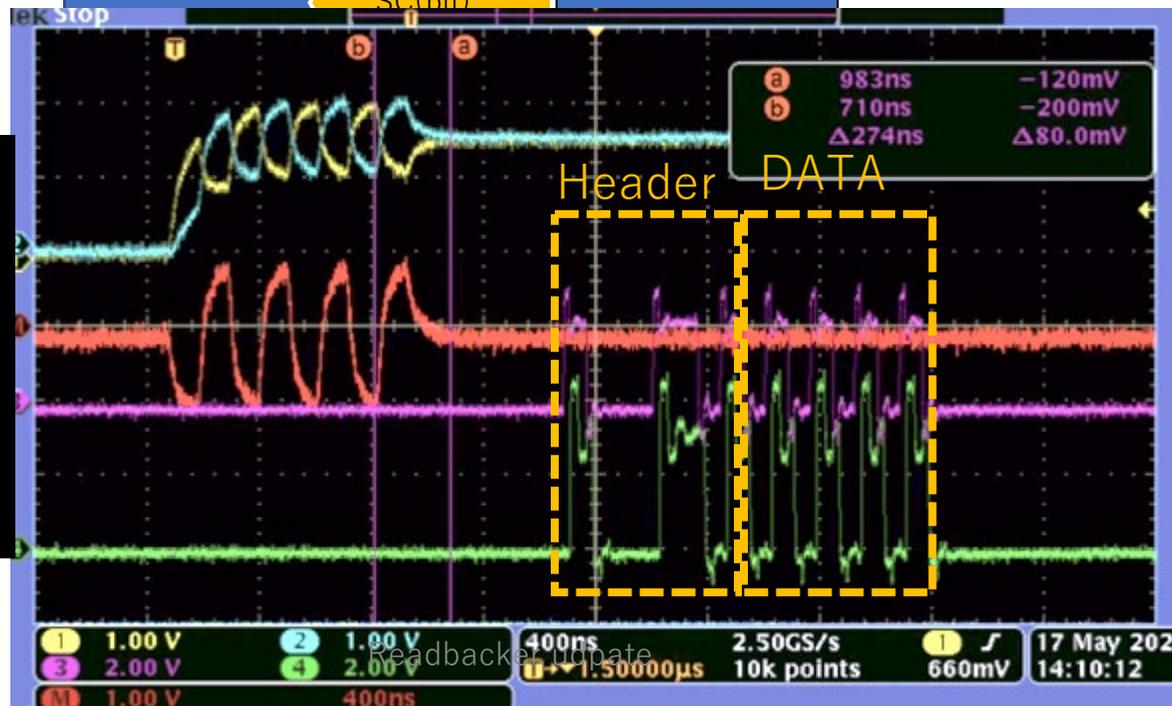
Readback value at FEM-IB

Bus-Ext is not used for this study



CH1: SC_OUT_0N
 CH2: SC_OUT_0P
 M: CH 1 -CH 2

CH3: DATA_OUT_SC_int (FEM)
 CH4: DI_SC_VME (FEM-IB)



- Signal is monitored by testpins at FEM-IB
- Readback value is successfully seen at FEM-IB

Summary

- Confirmed that the readback value come successfully to FEM-IB.
- Will develop USB-I/F to get the value from FEM-IB to PC

