

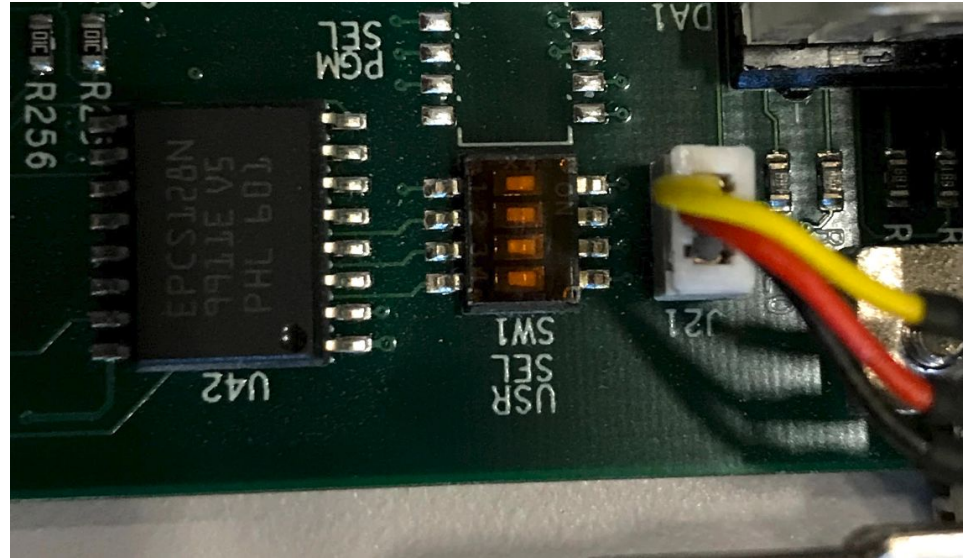
# Test lab GEM update

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# Reproduced SLAC three GEMs problem

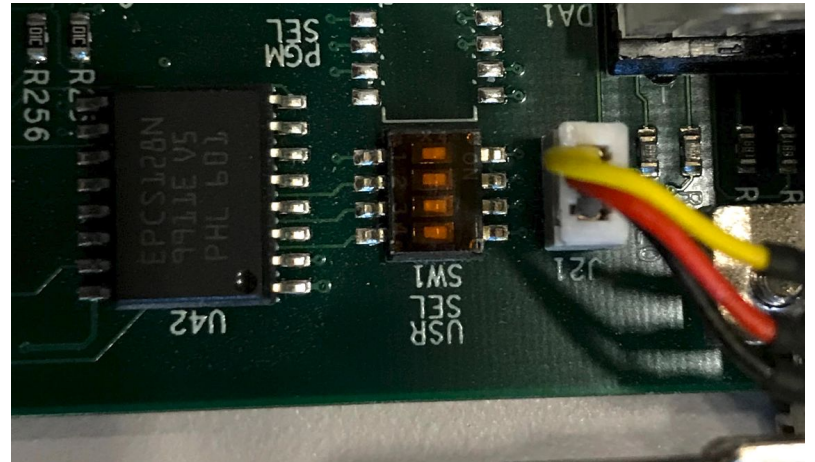
- We could take two GEMs data, but the set-up didn't allow us to take three GEMs data.
- During data taking the two MPDs were using their own internal clocks
- In the test lab I have tried many configurations with Bryan - all of them didn't work.



# MPD Clock synchronization

- First MPD SW1.1 - OFF SW1.2 -OFF
- Second MPD SW1.1 - ON, SW1.2 - OFF
- Default setting OFF,OFF,OFF,OFF
- Default setting in second MPD we used at SLAC OFF,OFF,OFF,ON!!
- It does work sometimes - but DAQ stops working unpredictably.

These switch is protected by a kapton tape - There is no chance modified this by mistake



# Other issues

- Whole problem of DAQ crash is due to MPD getting more than one trigger for an event.
- It would be nice to have the MPD timing in the output root file (SBS-offline) for debugging
- When we ran the QDC-MPD system - we do see some trigger missing in the QDC!!
- The test lab area is very noisy (Environment as well as electrical ground).
- So far I can run THREE GEMs with two MPDS (without any QDC in crate). QDC creates DAQ problem - not sure why!! - The setup is working sometimes but not stable - (trigger loss,data word mismatch in the MPD data).