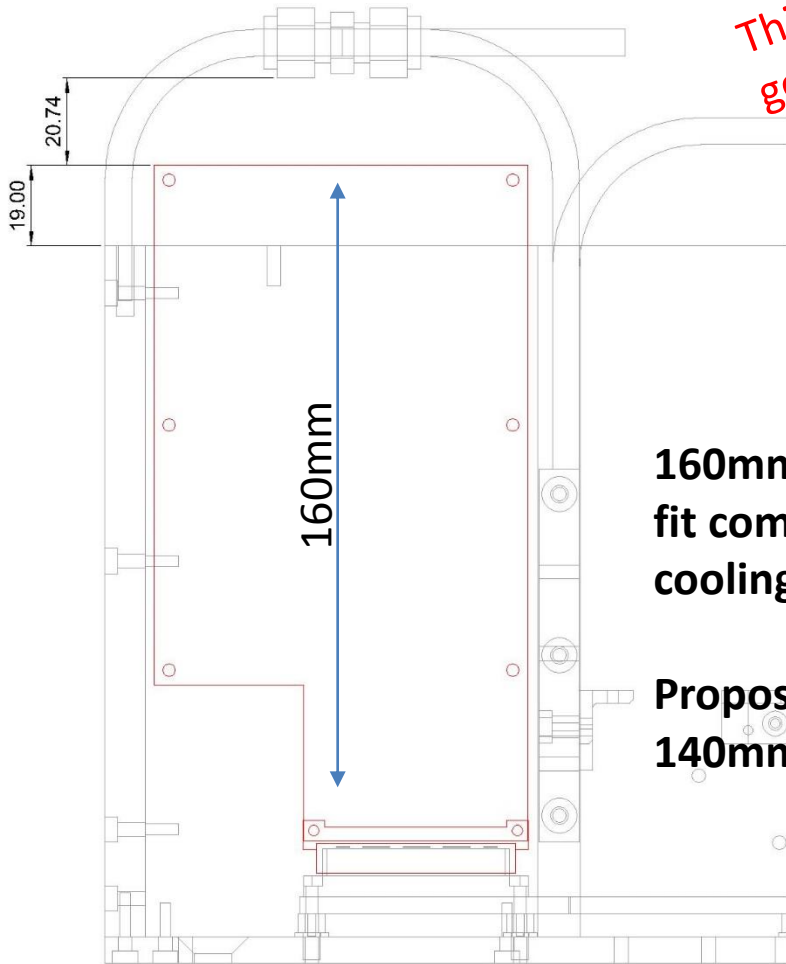


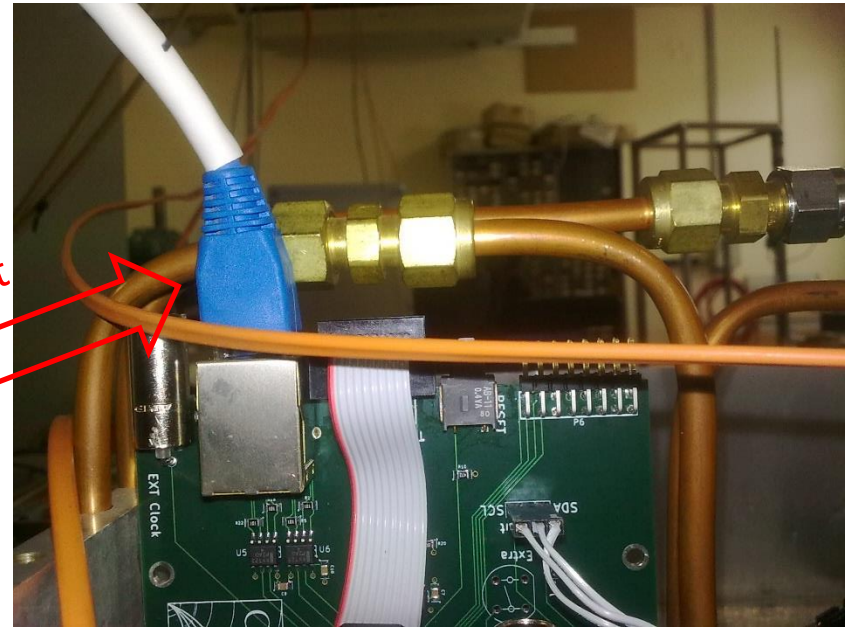
HE NgCCM integration issues

Ianos Schmidt, August 26, 2015

NgCCM card size



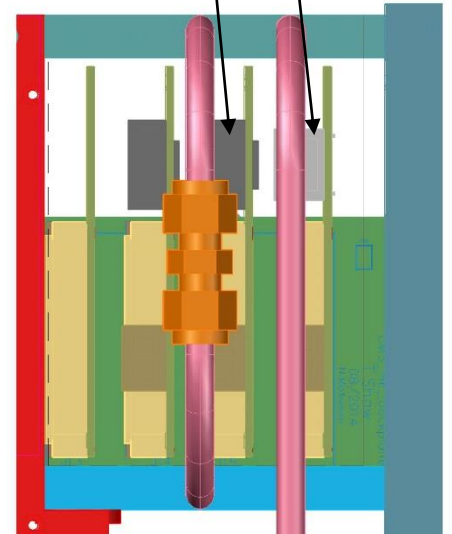
This is not good



160mm cards are too long to fit comfortably under the cooling pipes

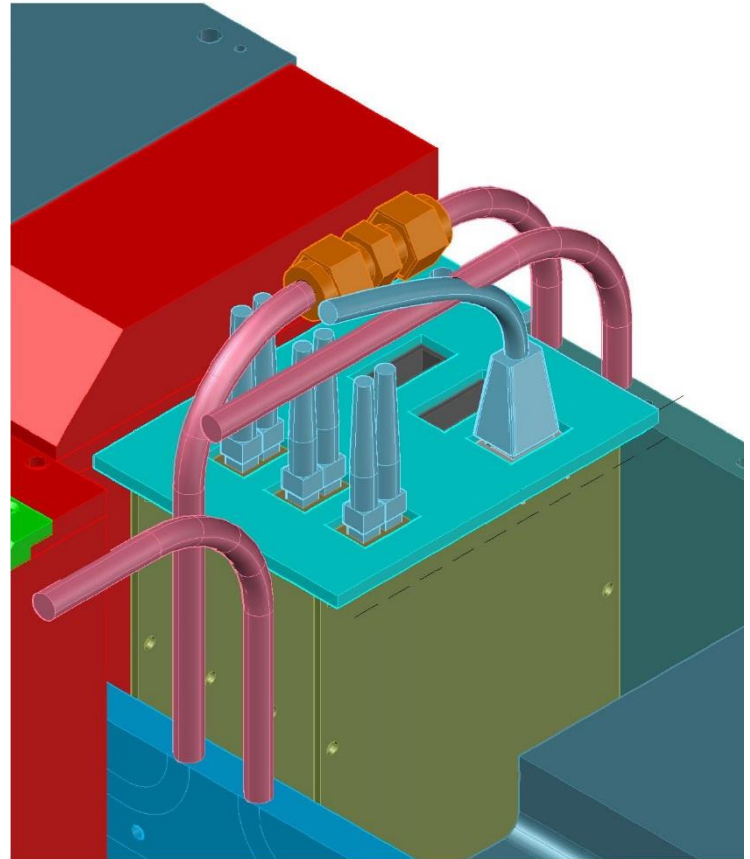
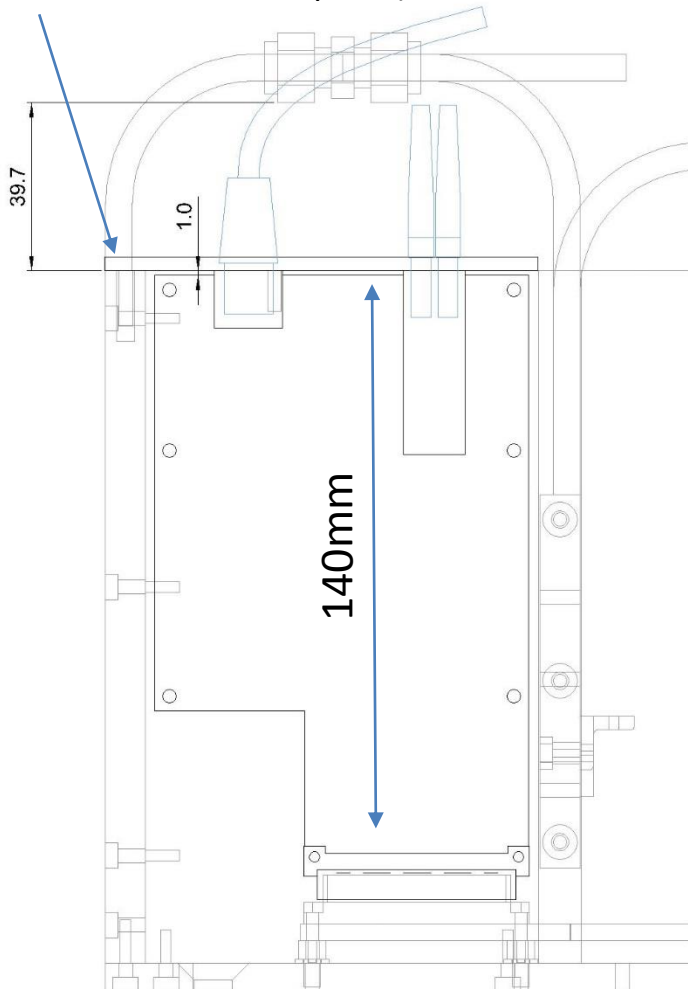
Propose reducing length to 140mm.

Cooling pipes pass over connectors



140mm cards

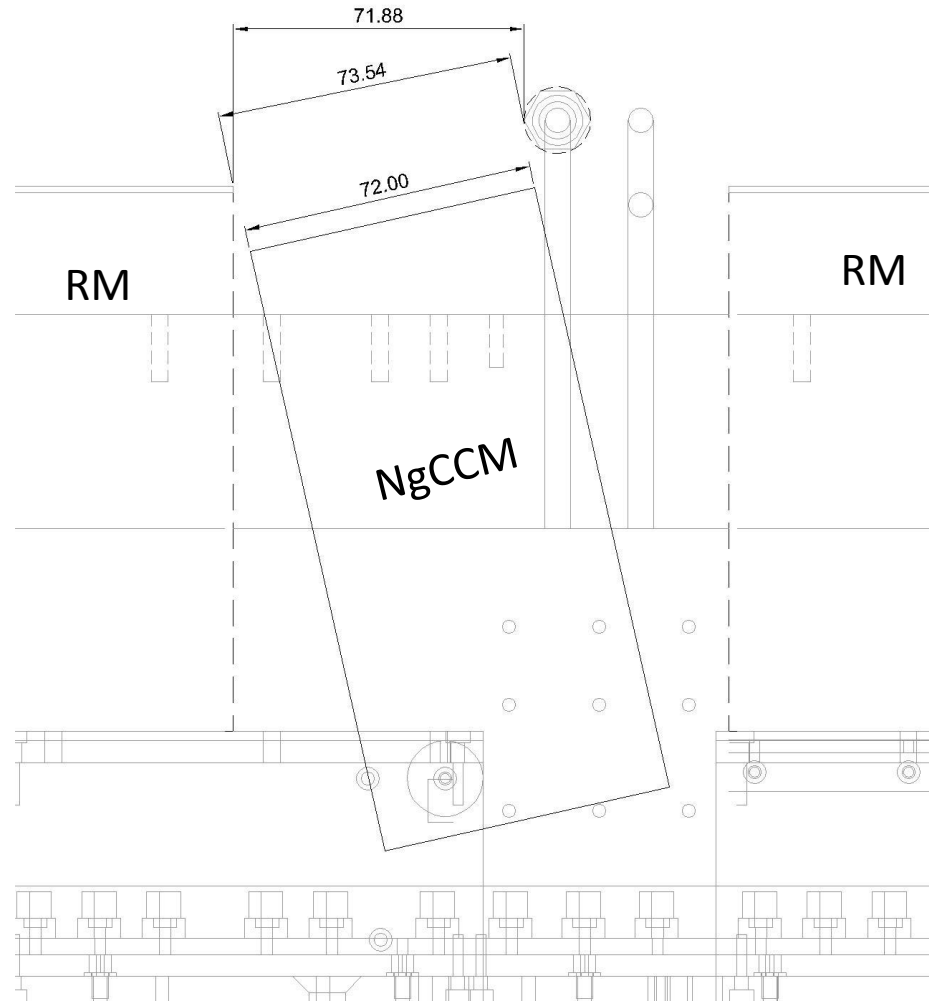
NgCCM Front panel Flush with RBX back wall
(1mm gap between board and panel)



NgCCM Width limit

CCM must pass between
RM and cooling pipes
(CU removed)

72mm is the maximum
NgCCM width



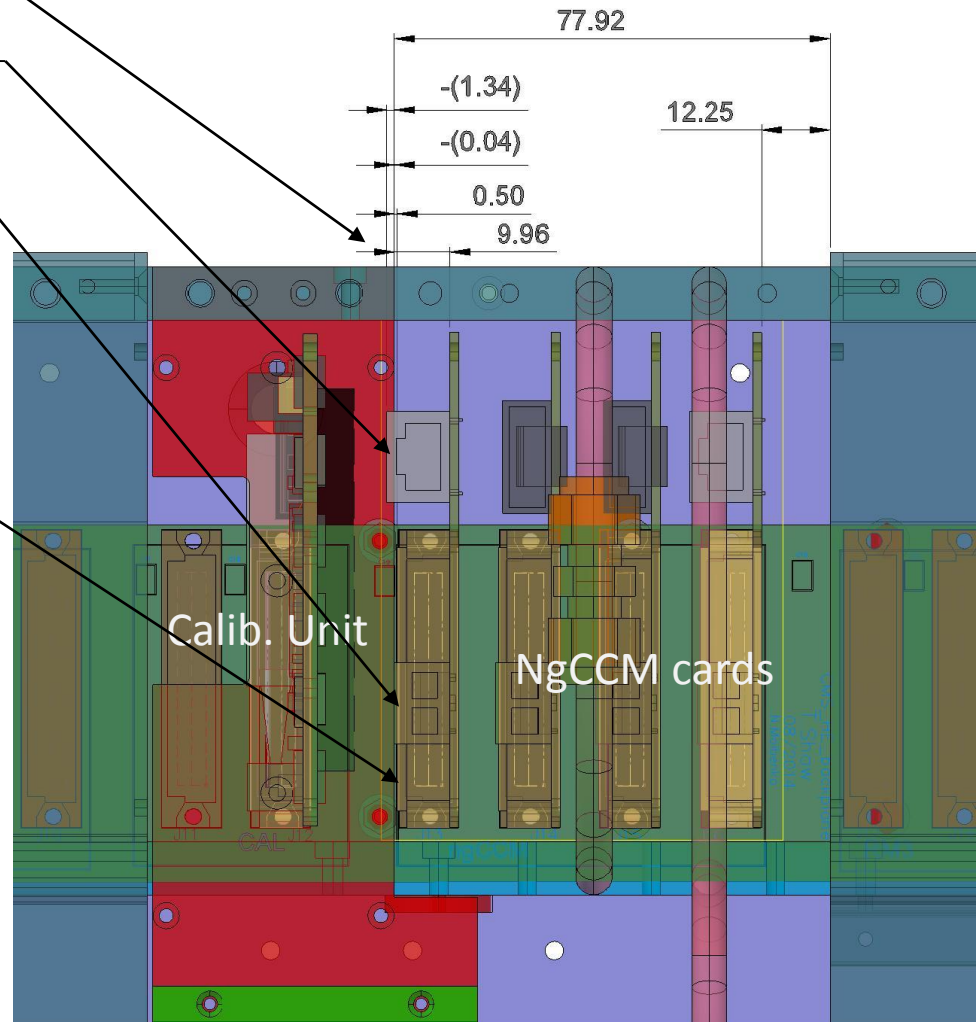
Horizontal spacing present situation

- <10mm between NgCCM card and calibration unit
- RJ-45 connector would interfere by ~1.4mm.
- VTRX would interfere by a hair, but does not include ~2.5mm needed for LC fiber latches
- Any other tall components?
- Above connectors not necessary for card adjacent to calibration module (?).
- NgCCM card backplane connector clears calibration unit by ~0.5mm
- ~12mm between NgCCM card and RM.
- NgCCM can not be wider than 72mm

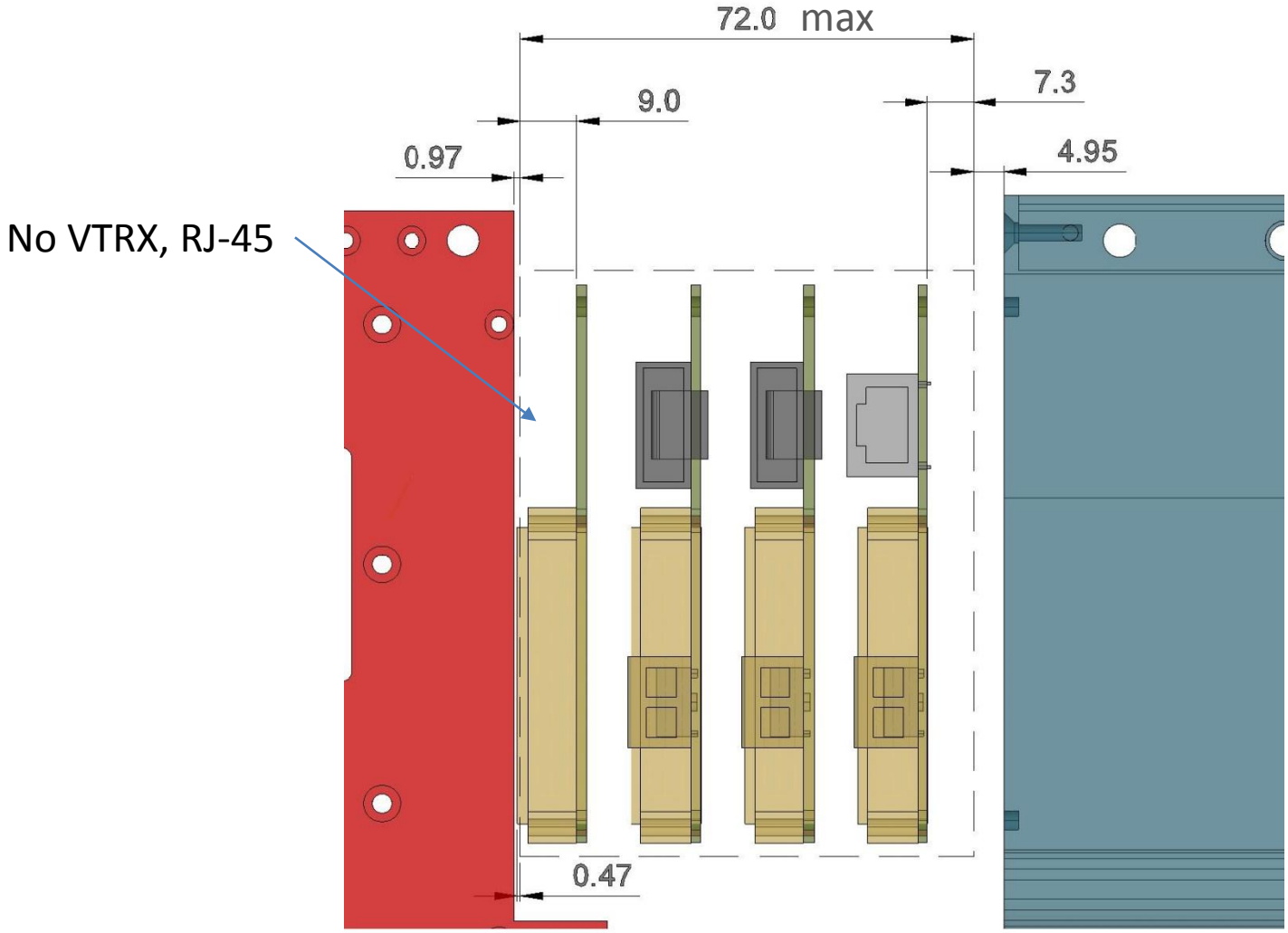
Possible solutions:

- A. NgCCM card adjacent to calibration module assembled without VTRX and RJ-45
- B. Calib unit made a bit narrower
- C. NgCCM backplane slots shifted away from calibration unit

Options shown on following pages

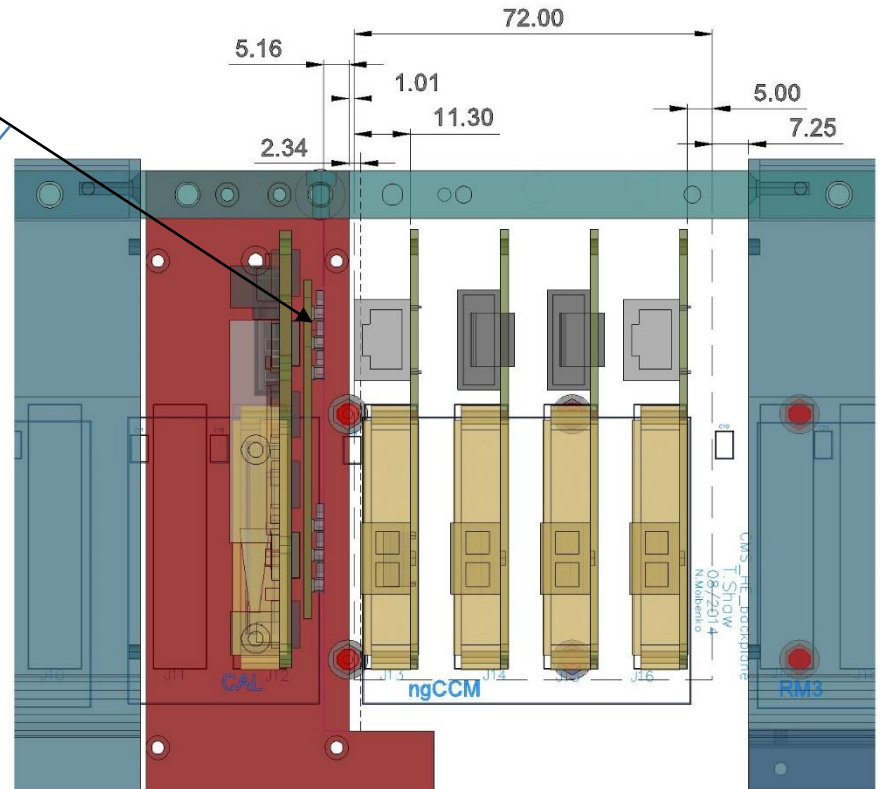
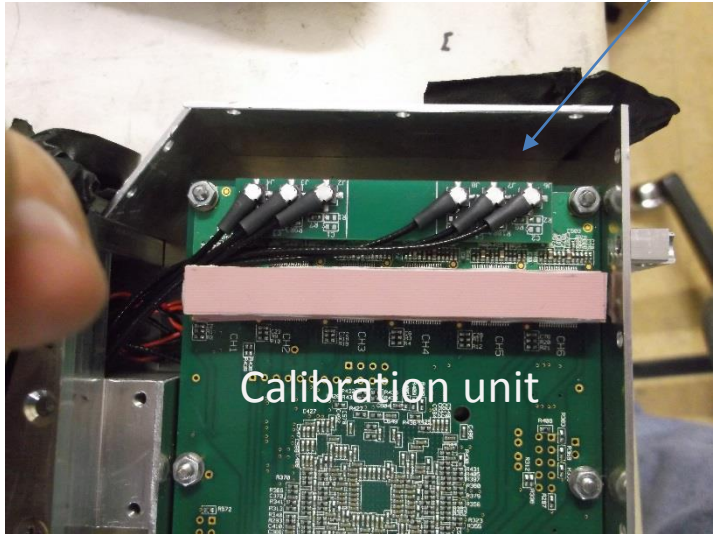


Solution A



Option B (reduce width of CU)

- 2.34mm minimum shift to be able to fit RJ-45
 - Leaves only ~5mm between connectors inside CU and CU edge (maximum effective CU wall thickness)
- Not a good solution unless RJ-45 and VTRX are necessary



Option C (shift backplane connectors)

Natural shift is ~9mm to allow room for backplane mounting screws between connectors

