

## DSG-RICH R&D Meeting

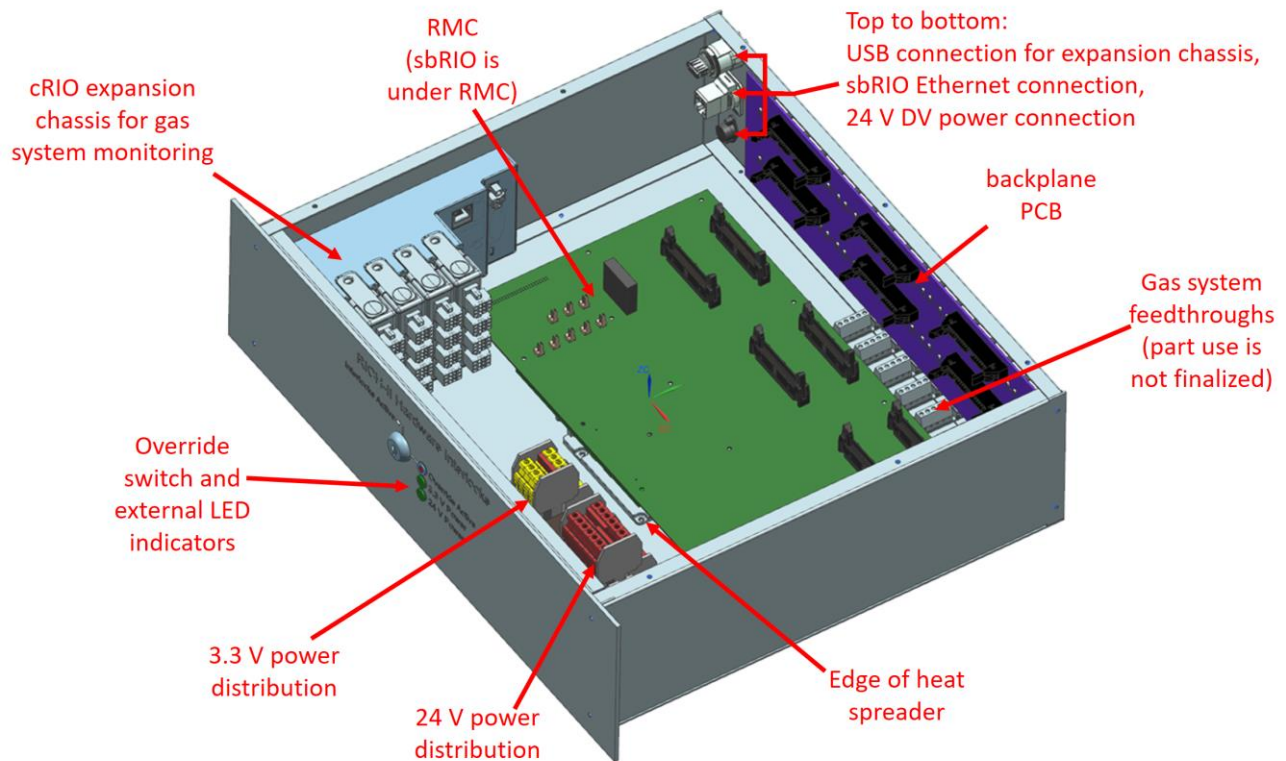
**Date: August 16, 2021**

**Time: 11:00 AM – 12:00 PM**

*Attendees: Mary Ann Antonioli, Aaron Brown, Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran*

### 1. NX12 design of hardware interlock chassis in progress

1. Rearranged chassis to make more room between backplane PCB and RMC



### 2. Discussed exterior I<sup>2</sup>C cabling

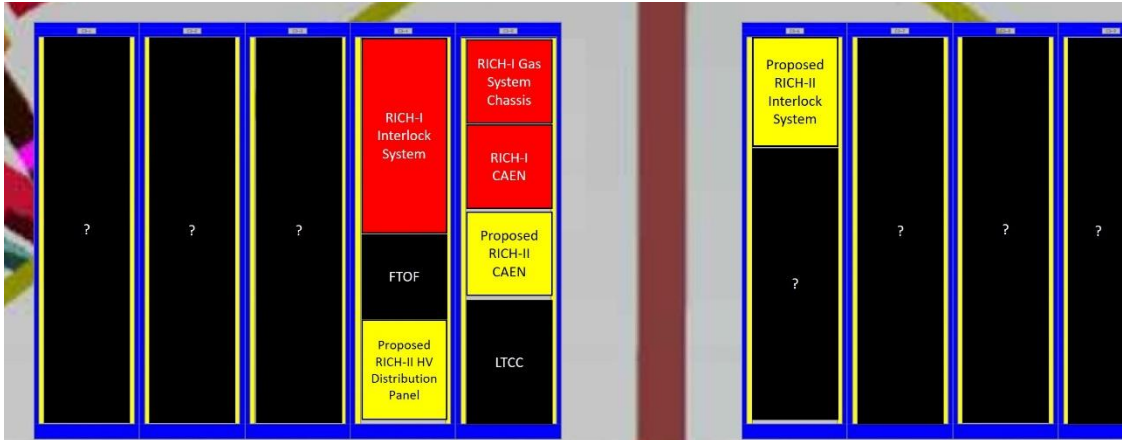
1. Exterior I<sup>2</sup>C cabling is defined as cables from interlock chassis in rack to patch panel at detector
  - Need ~60-ft cables for each SHT35 sensor PCB, a total of ~1500' for 24 PCBs
2. Possible candidate is <https://www.showmecables.com/85-700-120-gy-1000>
  - Cable is CAT7 with individually shielded, twisted pairs and an overall, braided shield



Sales photo from ShowMeCables website

### 3. RICH-II hardware interlock system rack location in Hall B

1. Proposed location is on Forward Carriage Level 3, top of rack C3-6
  - RICH-I uses more space than RICH-II because RICH-I has two cRIO chassis and a gas system power supply chassis that will be included in RICH-II's smaller chassis under development



Black rectangles are areas occupied by other detector equipment. Red rectangles are RICH-I equipment. Yellow rectangles are proposed locations for RICH-II equipment.

### 4. PR #405534 submitted for 50 SHT35 sensor PCBs

*Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen*

1. Tyler Lemon will ship 105 SHT35 sensors to Advanced Circuits for board population
  - 50 PCBs x 2 sensors per PCB + 5 overage required by company = 105 sensors

### 5. RMC review underway

*Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen*

### 6. Backplane PCB development

*Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen*

1. Schematic complete
2. Placement of components and layout of PCB in progress