Adding cold electronics to HWDB

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Situations

- At BNL, LArASIC chips QC testing (>1800 chips) and FEMB boards QC testing (~100 boards) have been going on for months; data is saved at local server
- These chips and boards are/will be used in the protoDUNE-II
- We want to start using HWDB to track the items
- A draft of PID lists for FD1 TPC and FD2 BD1 electronics has been created by Marco Verzocchi (?) and is on [EDMS#2505353](#)
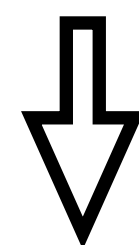
Questions

1. What components should be added to HWDB?

- [EDMS#2505353](#) is very detailed, and color marked

IMPORTANT - It is strongly advised not to use commas or any quotation marks to avoid parsing errors							
THE USE OF EMPTY (BLUE) ROWS IS ENTIRELY AT YOUR DISCRETION							
Color			Ready for implementation in the parts identifier DB				
			Still under discussion - not to be implemented in the parts identifier DB				
			Already implemented in the parts identifier DB - still in use				
			Already implemented in the parts identifier DB - obsolete, do not use				
Project	**System Name**	**System ID**	**Subsystem Name**	**Subsystem ID**	**Item Type Name**	**Item Type ID**	**Notes**
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	LArASIC	001	P5 version preprodution 1	0001	Front end amplifier ASIC P5 version (chips from first pre-production)
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	LArASIC	001	P5B version preproduction 1	0002	Front end amplifier ASIC P5B version (chips from first pre-production chips with additional ESD protection)
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	LArASIC	001	to be decided	0003	Front end amplifier ASIC (chips from second pre-production)
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	LArASIC	001	to be decided	0004	Front end amplifier ASIC (production version - chips from wafers 001 to 050) - split in two parts because expected serial range may exceed FFFF.
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	LArASIC	001	to be decided	0005	Front end amplifier ASIC (production version - chips from wafers 051 to 100) - split in two parts because expected serial range may exceed FFFF
D	FD1-HD TPC Electronics and FD2-VD Bottom Drift Electronics	081	ColdADC	002	P2 version preproduction	0001	Cold digitizer ASIC (chips from pre-production run)

- Does it mean we can request the green part to be implemented to HWDB? => Nobody says yes or no
- The items included are from all aspects: electronics, mechanics parts, cables
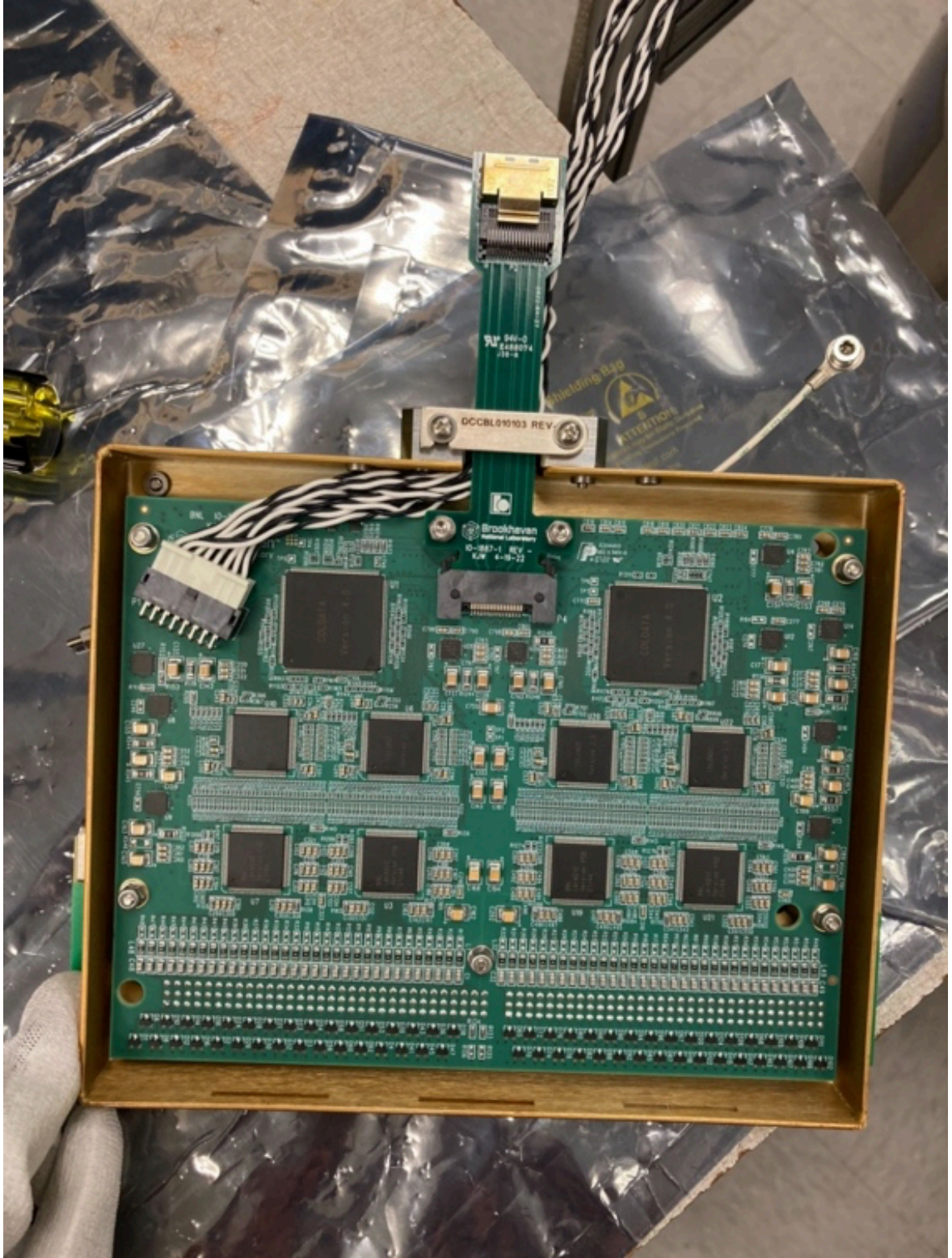- At BNL test stands, only small part of these items are used

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Can we start with a short PID list that only includes items in the QC tests?

Questions

2. What the partID should be?

- There will be many parts associated to the FEMB

- Chips, CR boards, CE boxes have unique ID,

=> should be part of PID

- Mechanical parts for the CE boxes, CE boxes support parts on APA (brackets)

=> only care about the version than a unique ID

CE boxes supports	018	CE tee end
CE boxes supports	018	CE middle tee
CE boxes supports	018	CE bracket clamp bar end
CE boxes supports	018	CE bracket clamp bar middle
CE boxes supports	018	CE bracket clamp bar end with PEM nut
CE boxes supports	018	CE bracket clamp bar middle with PEM nut

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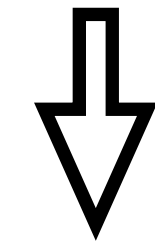
1). How should these mechanical parts be recorded in the HWDB? per item or per version

2). What should we do if there is a mechanical modification on the parts during the testing?

Connector insertion depth is increased by 1mm.

PSL must use a shorter screw here.