

# HWDB APIs

- **Web form**
- **API on iPad**
- **What (other) interfaces do you need?**

# WEB Form

- WEB forms are provided by HWDBI.

Edit Component Type

SPECS LOG IMAGES

Component Type: MOB001

Comments: MOBO type 1

Category: generic

Managed by: x new-board x tester

Manufacturers: x Daugherty, Beahan and O'Hara x Huel Inc x Reichel Group x Stiedemann-Hill

Created: 2021-02-01 17:50:56

Created by: Vladimir Podstavkov

Specifications

Version: 2

Created: 2020-07-09 11:12:44-05:00

Created by: Stephen White

Datasheet

Gain:  
- v0  
- v1  
Size: null  
Type: null  
Array: []

s0: FEB001  
s1: FEB001  
s2: FEB001  
s3: FEB001  
s4: FEB001  
s5: FEB001  
s6: FEB001  
s7: FEB001  
s8: FEB001

SAVE DONE

YOU define the form

User(s) can then fill the form

Edit Component b78e4afa-a042-11ea-9345-0cc47a331e14

SPECS LOG STRUCTURE LOG CONTAINER LOG TEST LOG IMAGES

External ID: b78e4afa-a042-11ea-9345-0cc47a331e14

Serial Number: SN0cc47a331e14

Manufacturer: Daugherty, Beahan and O'Hara

Batch ID: 1237

Created: 2020-05-27 12:52:23

Created by: Vladimir Podstavkov

Contained in: N/A

Component Type: MOB001

Specifications

Gain: v0

Size: 3x4

Type:

Array: [5.9, 6.7, 3.8, 9.1]

Xtype: x-pcb

Version:

Voltage: 12V

Sub-components

S0:FEB001: dfcd52dc-4f6a-11ea-97b0-e35629e15589

S1:FEB001: dfcd4d82-4f6a-11ea-97b0-7fbc8aa5500

S2:FEB001:

S3:FEB001:

S4:FEB001:

S5:FEB001:

S6:FEB001:

S7:FEB001:

S8:FEB001:

SAVE DONE

# Mobile device - 1

- MN group is developing an iPad app to do just that.

Supports multiple users/iPad



Username:

Password:

Guest

Login

Version: 1.0.5.61

ProtoDUNE II

FR4 Frames Checklist

Country/Institution ID: USA / Fermi National Accelerator Laboratory  
CERN / CERN  
USA / Argonne National Laboratory  
USA / Kansas State University

Date: 2/2/22 午前 8:30

Name	Drawing #	Parts ID	# Ordered	# Received	Visual	Template	Cleaned
Main Bottom Support Bar	PD2-20-1312		0	0	0	0	0
Upper Side Bar P1 US	PD2-20-1116		0	0	0	0	0
Upper Side Bar P1 DS	PD2-20-1113		0	0	0	0	0
Intermediate Bar	PD2-20-1115		0	0	0	0	0
Middle Side Bar P1 US	PD2-20-1223		0	0	0	0	0
Middle Side Bar P1256 DS	PD2-20-1224		0	0	0	0	0
Lower Side Bar P1 US	PD2-20-1134		0	0	0	0	0
Lower Side Bar P1 DS	PD2-20-1333		0	0	0	0	0
Upper Side Bar P256 US	PD2-20-2116		0	0	0	0	0
Upper Side Bar P25 DS	PD2-20-2113		0	0	0	0	0

Makes uploading multiple entries easier

RELEASED OCT 21 2021

Argonne National Laboratory

MAIN SUPPORT BAR

PD2-20-1312

Corresponding mechanical drawing is easily reachable

# Mobile device - 2

Can provide step-by-step assembly procedure

the 6th CPA Unit DFD-20-G100 (DFD-20-H100) (top Unit Panel) using 1/2" holes in the Top Main Support Bar.



20-H100



14. Move to the tower CPA assembly frame and lower onto the 5th Unit, sliding the Horizontal FSS pieces over the 5th Unit Intermediate Bar.



15. Drive 0.25" diameter X 2.5" long dowel pins into frames and bolt together with 1/4 - 20 X 2.25" SS socket head cap screws on each side of the CPA Units at the intersection.

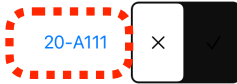
along with links to the corresponding pictures and drawings

16. Lock the Unit into the place on the tower frame by closing the safety latches using the safety pins.

17. Remove the lifting fixtures from the Unit.



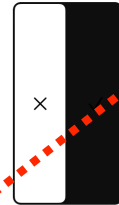
18. At the Unit intersection, attach 4 Brass T-Straps DFD-20-A111 (2 each side of CPA) using 3 - #8-32 X 1/2" screws with a single Belleville washer each.



20-A111

19. Route the 4 jumper wires DFD-20-A113 from the upper Unit through the horizontal frame holes to the lower Unit at the Unit intersection and attach using #10-24 X 1/2" screws with Belleville washer, 2 flat washers and a #10-32 nut. Order of connection should be: screw head - ring lug - flat washer - RP - flat washer - nut (flat washers in direct contact with RP).

20-A113



20. (Place holder) Hang the Panel by its hanger bar on its trolley and remove from the assembly frame.



21. Fill in the "CPA Completed Panel Checklist".

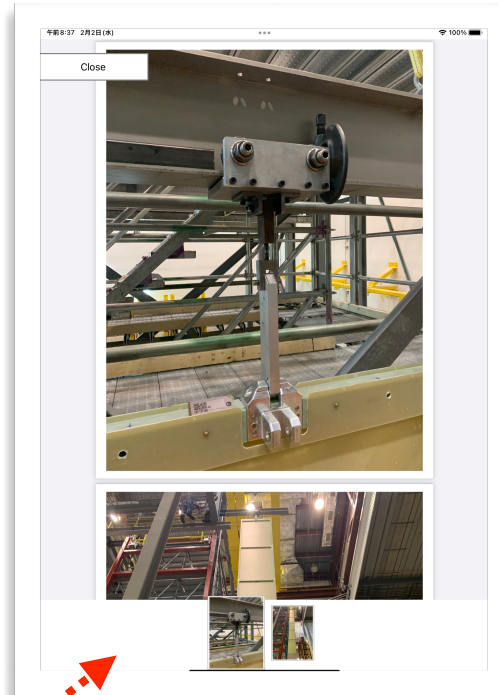
Checklist



22. Repeat steps 1-21 for the 2nd CPA Panel in the crate.



and link(s) to a checklist (form to be uploaded to HWDB)



午前8:40 2月2日(水) 100%

Cancel CPA Completed Panel Checklist Print

Barcode:

Date: 2/2/22 午前8:40

Name	NOT OK or OK
Hinge Block to FSS connection	<input type="checkbox"/> <input checked="" type="checkbox"/>
HV Bus	<input type="checkbox"/> <input checked="" type="checkbox"/>
HV Bus connections	<input type="checkbox"/> <input checked="" type="checkbox"/>
FSS connections	<input type="checkbox"/> <input checked="" type="checkbox"/>
Profile connections	<input type="checkbox"/> <input checked="" type="checkbox"/>
Straightness	<input type="checkbox"/> <input checked="" type="checkbox"/>
Flatness	<input type="checkbox"/> <input checked="" type="checkbox"/>
Dust	<input type="checkbox"/> <input checked="" type="checkbox"/>

Other Comments:

[Upload](#)





### ProtoDUNE II

### Bent AI Profile

Cancel

Print

In the QA/QC Storage the photos are independent and not connected like below. The stitching below is to be a guide for orientation.

A = After Bend, B = Before Bend

Profiles: 1-52

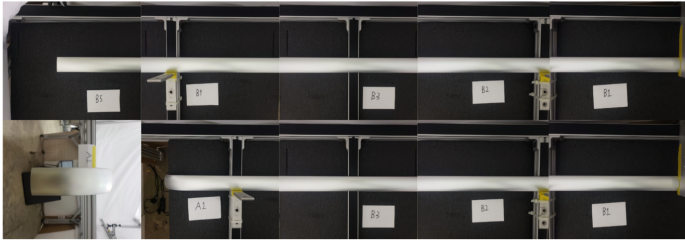
A1 = B2

A2 = B1

Profiles: 53 -> Going Forward

A1 = B4

A2 = B5



# Mobile device - 4

helps uploading multiple image files

One could use different sources for images to be uploaded

- Camera (iPad's camera)
- Photos (images stored in Photos app)
- Files (provides direct access to other apps on iPad, such as iClouds and MS OneDrive).

#### Image Sources

Photos

Take Photo B1

Comments:



Take Photo B2

Comments:



Take Photo B3

Comments:

Take Photo B4

Comments:



Take Photo B5

Comments:

Send via email

Upload to HWDB

# Mobile device - 5

10:53 AM Wed Aug 25 100%

[Cancel](#) **MRB** [Update](#)

Number of MRBs:

Maximum Acceptable Deviation (%):

Include MRBs with Failed Tests on Chart:  No  Yes

MRB Type	# Received	Visual	# Passed	Mean Resistance	Standard Deviation
Blue	80	69	69	4.807	0.812
Yellow	70	68	68	4.998	0.379
Black	50	39	39	4.941	0.582

MRB Type To Display:  Blue  All  Black

[Print](#)

Total Entries Listed on Chart: 184 [Generate Chart](#)

Legend: ■ Within deviation range ■ Outside deviation range

**can perform a quick analysis on the fly based on the info stored in HWDB**

# (non) Mobile device - 6

CPAProductionChecklists

Cancel

### FSS Checklist

Date: 2/ 2/2022, 8:58 AM

Name	Drawing #	Parts ID	# Ordered	# Received	Visual, Cleaned	Template Check	Surface Resistance
Top/Bottom Horizontal	DFD-20-A101	D06010002-0001	0	0	0	0	0
Horizontal	DFD-20-A102	D06010002-0002	0	0	0	0	0
Top/Bott Int. Vert. L	DFD-20-A103	D06010002-0003	0	0	0	0	0
Top/Bott Int. Vert. R	DFD-20-A104	D06010002-0004	0	0	0	0	0
Ext. Upper L	DFD-20-A105	D06010002-0005	0	0	0	0	0
Ext. Upper R	DFD-20-A106	D06010002-0006	0	0	0	0	0
Middle Ext. Vert. L	DFD-20-A107	D06010002-0007	0	0	0	0	0
Middle Ext. Vert. R	DFD-20-A108	D06010002-0008	0	0	0	0	0
Middle Int. L	DFD-20-A109	D06010002-0009	0	0	0	0	0
Middle Int. R	DFD-20-A110	D06010002-000A	0	0	0	0	0
Top/Bottom Horizontal L	DFD-20-A118	D06010002-000B	0	0	0	0	0
Lower Int. L	DFD-20-A301	D06010002-000C	0	0	0	0	0
Lower Int. R	DFD-20-A302	D06010002-000D	0	0	0	0	0
Ext. Lower L	DFD-20-A303	D06010002-000E	0	0	0	0	0
Ext. Lower R	DFD-20-A304	D06010002-000F	0	0	0	0	0
Top/Bottom Horizontal	DFD-20-B101	D06010002-0010	0	0	0	0	0

Comment:

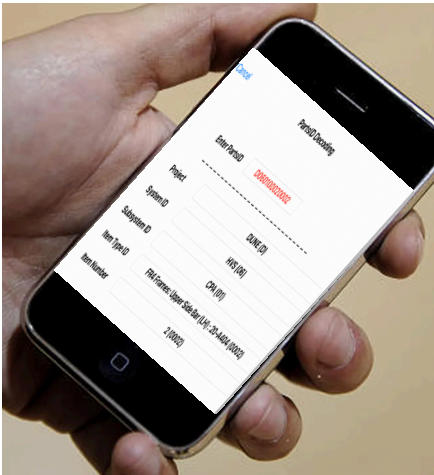
Upload

Upload to Database

(via Catalyst)

- It can also run on macOS (both M1 and Intel), besides iOS.
- Maybe useful for ones need larger screen/keyboard (like me)?

# NOT YET, but if requested...



Cancel **PartsID Decoding**

Enter PartsID **D060100020002**

**ID scheme here is old.  
Ignore it!**

---

Project

System ID

Subsystem ID

Item Type ID

Item Number

午後 1:21 1月24日(日) 100%

Cancel **PartsID**

Select 1st 3 columns: DUNE HVS CPA  
FC  
EW

Select Item Type: FR4 Frames: Side Middle Bar (RH) : 20-A501  
FR4 Frames: Upper Side Bar (RH) : 20-A405  
FR4 Frames: Intermediate Bar : 20-A405  
FR4 Frames: Side Middle Bar (LH) : 20-A502  
FR4 Frames: Lower Side Bar (LH) : 20-A602  
FR4 Frames: Lower Side Bar (RH) : 20-A604  
FR4 Frames: Bottom Support Bar : 20-A607

Item Number (DEC)  (≦ 65535)

Generated ID **D060100060002**

Generate Barcode 

Generate QRcode 

---

Project

System ID

Subsystem ID

Item Type ID

Item Number  (A)

- We could develop an iPhone app that allows to:
  - ▶ scan bar/QC codes
  - ▶ decode them and print its info in human-readable form
  - ▶ show the corresponding contents on its browser (or within its app)

## **Are there other Interfaces and functionalities that are needed and/or help the client side interface easier?**

- Parse spreadsheets (csv) and directly upload to HWDB?
- ...?
  
- Devices other than Apple?
  - ▶ A python-based application (runs on any PC)?
  - ▶ Android?