

LMU München - Excellence Cluster Universe

PS and Services

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Extended Lab-Meeting 24.01.19





- PS's
- Services Cables
- Services Dockbox
- Services PP



- Commissioning of units completed
 - 50 units dedicated for PXD
 - OVP build in, can be enabled on demand using jumper
- OVP takes care of Vref/Vsub window: $-0.4V < (V_{ref} - V_{sub}) < 2.2V$
- Some issues with high trigger rates of OVP on ClearHigh on some units

- Started production of a further set of 5 units
 - StepDown Regulators, MCU-cards, Ana.- Dig.- HV-, Bipolar- regulator cards available
 - 5+3 OVP cards on delivery
 - DC/DC cards and 2 out of 6 regulator card need cash infusion from CF

Breakdown of Units (except the 5 in production and the preprod units):

LMU: 4 DESY: KEK: MPP: HLL: Bonn: Göttingen:

HephyDB Down....

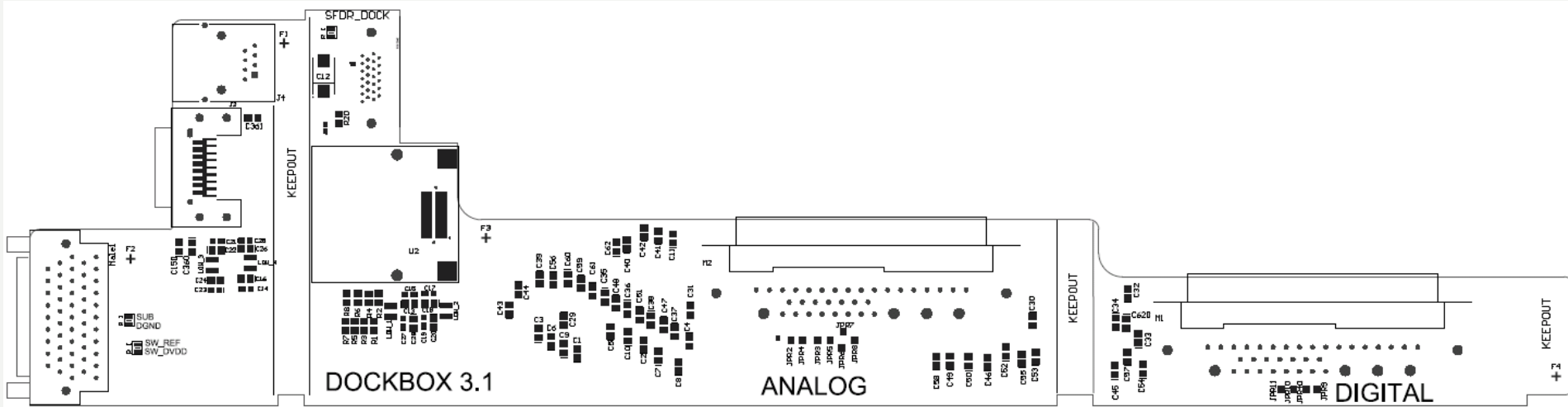
- L1 PXD operation should be convenient, for 2020 availability of all units essential



- Two full sets of cables for full PXD operation available
- The first set includes:
 - Power cables (90)
 - Optical Fibres (Dockbox to DHE) (9+9)
 - Cameralink cables (45+4)
- The second set includes:
 - Power cables (88)
 - Optical Fibres 13x8-fold, 9x12-fold
 - Cameralink cables 44

→ Cables aplenty

- Dockboxes have been produced and tested, 48 total
 - Additional transmitters were ordered, delivery was in August, initially to cover shortage for parallel Phase II operation
- In total 55 transmitter available
→ 48 Dockboxes in final layout
→ Additional 6 prototypes offer the same functionality



PatchPanel FREIGEBEN

Datei Bearbeiten Ansehen Einfügen Format Daten Tools Add-ons Hilfe Letzte Änderung vor 4 Tagen von Anonym

27.03. OK (TDO_N - TDO_P Vertauscht - Pad DP12)

Gesamt St.-Nr.	PCB Type	Typ St.-Nr	gefertigt bei			geliefert an										Bemerkungen			
			PCS	MPI	HighQ	gelabelt	Ka beilester	Funktionstest	eingegossen	fehlerhaft	OK	DESY	gepart in Tscharte	KEK	13.3.2018 / Tscharte		ohne Auswerfer	=	
1	L1-fwd	1	x		x	x	x								x			Kabellänge wie BEAST p2	laut Stefan Kabel OK (CMK) aber Stecker während Test beschädigt.
2	L1-fwd	2	x			x	x								x			Kabellänge wie BEAST p2	20.03.18: Pad 19 ist mit DHPIO_SENSE verbunden anstatt DVDD_I
3	L1-fwd	3		x		x	x								x			Kabellänge wie BEAST p2	Test: 20.03.18 OK
4	L1-fwd	4		x		x	x								x	x		Kabellänge wie BEAST p2	
5	L1-fwd	5		x		x	x	x							x	x		Kabellänge wie BEAST p2	
6	L1-fwd	6		x		x	x								x			Kabellänge wie BEAST p2; DGND - DHPIO_SENSE short	20.03.18: Nach Entfernung von Lötresten in Or
7	L1-fwd	7		x		x	x	x							x	x		Kabellänge wie BEAST p2	
8	L1-fwd	1	x			x	x								x			Kabellänge wie BEAST p2	Zusätzliche Isolation im Bereich der Biegung d
9	L1-fwd	2	x			x	x	x							x	x		Kabellänge wie BEAST p2	
10	L1-fwd	3		x		x	x								x			Kabellänge wie BEAST p2	27.03. OK (TDO_N - TDO_P Vertauscht - Pad DP12)
11	L1-fwd	4		x		x	x								x			Kabellänge wie BEAST p2	Rework done
12	L1-fwd	5		x		x	x	x							x	x		Kabellänge wie BEAST p2	
13	L1-fwd	6		x		x	x								x	x		Kabellänge wie BEAST p2	
14	L1-fwd	7		x		x	x	x							x	x		Kabellänge wie BEAST p2	
15	L1-fwd	8	x			x	x								x	x		Hauptproduktion (PCS)	Short zwischen DGND und Gehäuse wurde mit Tape behoen
16	L1-fwd	9	x			x	x								x	x		Hauptproduktion (PCS)	LMU Kabeltester OK
17	L1-fwd	10	x			x	x								x			Hauptproduktion (PCS)	Power Problem: CCG3 mit Drift vertrauscht, also P34 und P35
18	L1-fwd	11	x			x	x								x	x		Hauptproduktion (PCS)	LMU Kabeltester OK
19	L1-fwd	12	x			x	x								x	x		Hauptproduktion (PCS)	LMU Kabeltester OK

Bauteile-Übersicht 17 Fertigungsverlauf

- Production is synchronized between LMU, MPI using a g-spreadsheet
- Tracking of production, testing and components
- Issue reporting



- PP production:
 - Organization at MPP
 - Assembly and rework at HighQ + PCS
 - Visual inspection at MPP
 - Testing @ LMU
 - Functional testing at DESY
- L1 12 PP of each type, L2 18 PP each → 8/12 needed 50%

State of PP according to Spreadsheet:

- L1-bwd 12 grade A
- L1-fwd 10 grade A, 1 grade B, 1 Samtec connector damaged
- L2-bwd 11 grade A, 2 @ HighQ for rework (05/18), 2 failed DESY test, 3 hard failures require rework
- L2-fwd 13 grade A, 1 grade B, 4 need rework

→ Further production of L2 PPs probably wise

→ For Phase 2 - 8 PP were produced without final length cables – recycling of (expensive) housing possible



- PS commissioning done 50 + 5 available / in preparation
- 48 Dockboxes available + some previous prototypes
- Two full sets of cables for PXD operation available
- PP available for L1 PXD operation, additional spare production for 2020 recommended

Backup