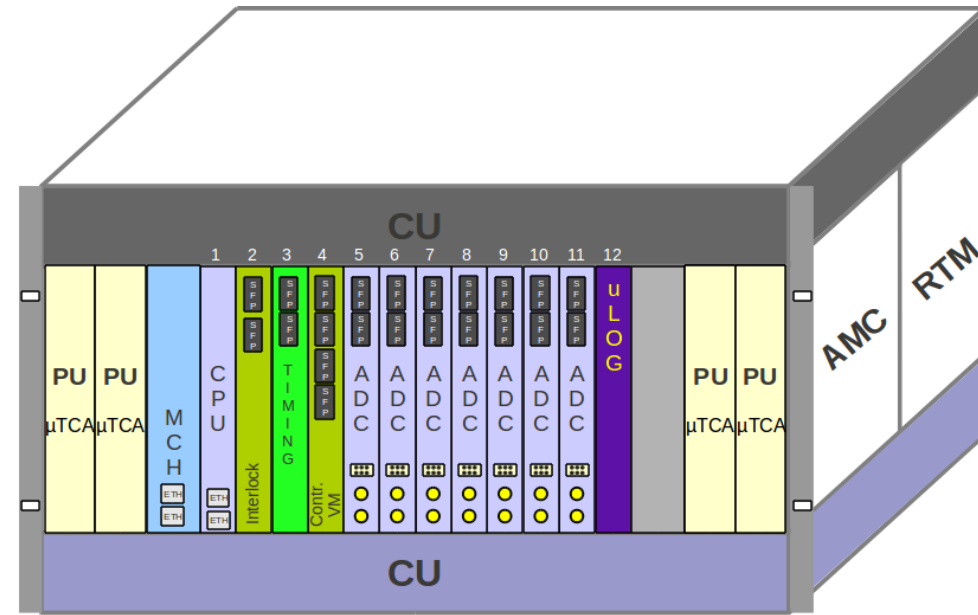
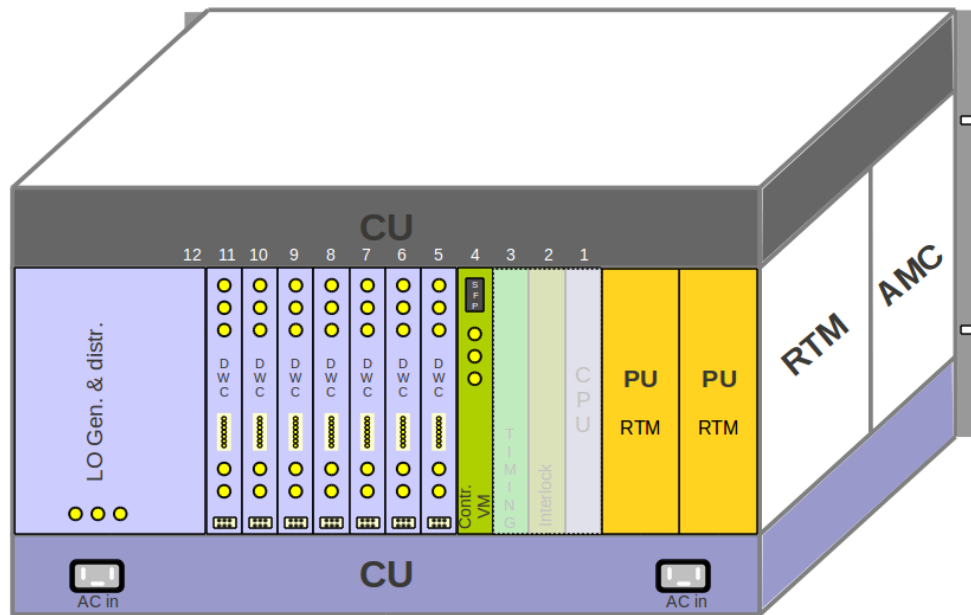


uPS Design Status

Latest information received on
August 3rd, 2012 (Friday)
from
PowerBridge (Thomas Holzapfel)
and
N.A.T. (Vollrath Dirksen)

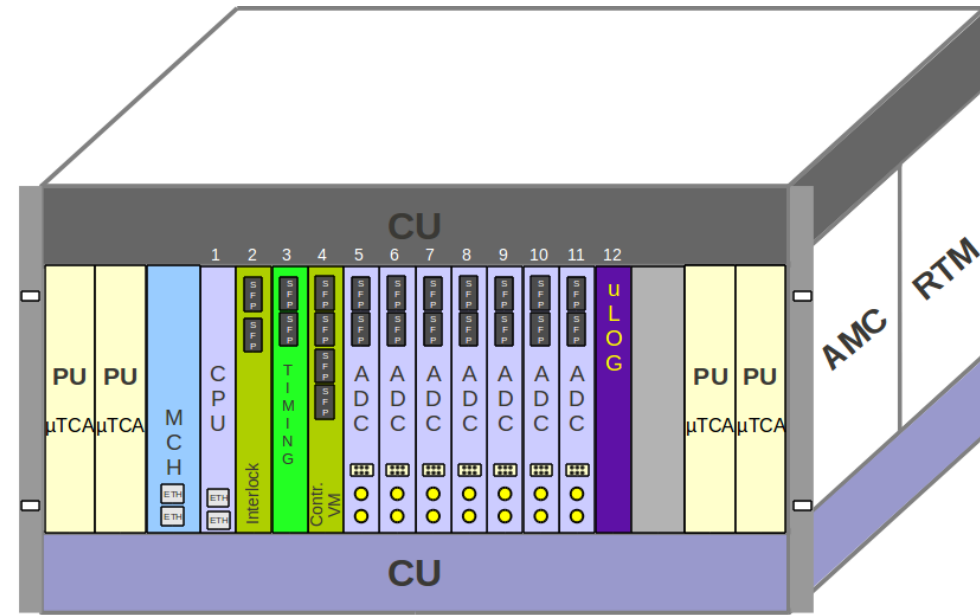
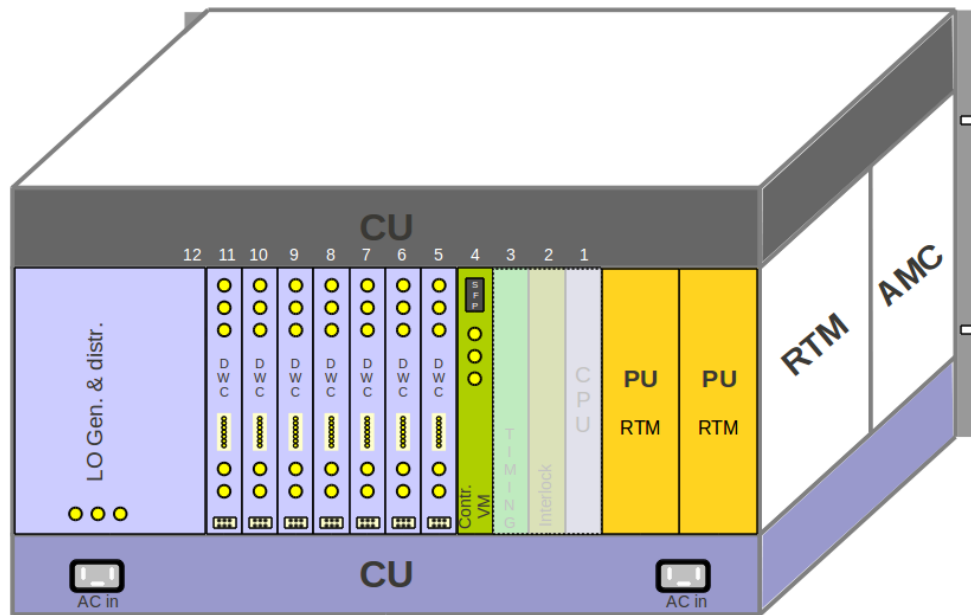
uPS Design Status

Power supplies in the crate



uPS Design Status

Power supplies in the crate



Internal AC power distribution – is it required?

Problems

- **Management** (general)
- **DC/DC converters** (general)
- **Rear PM** (new spec, ...)

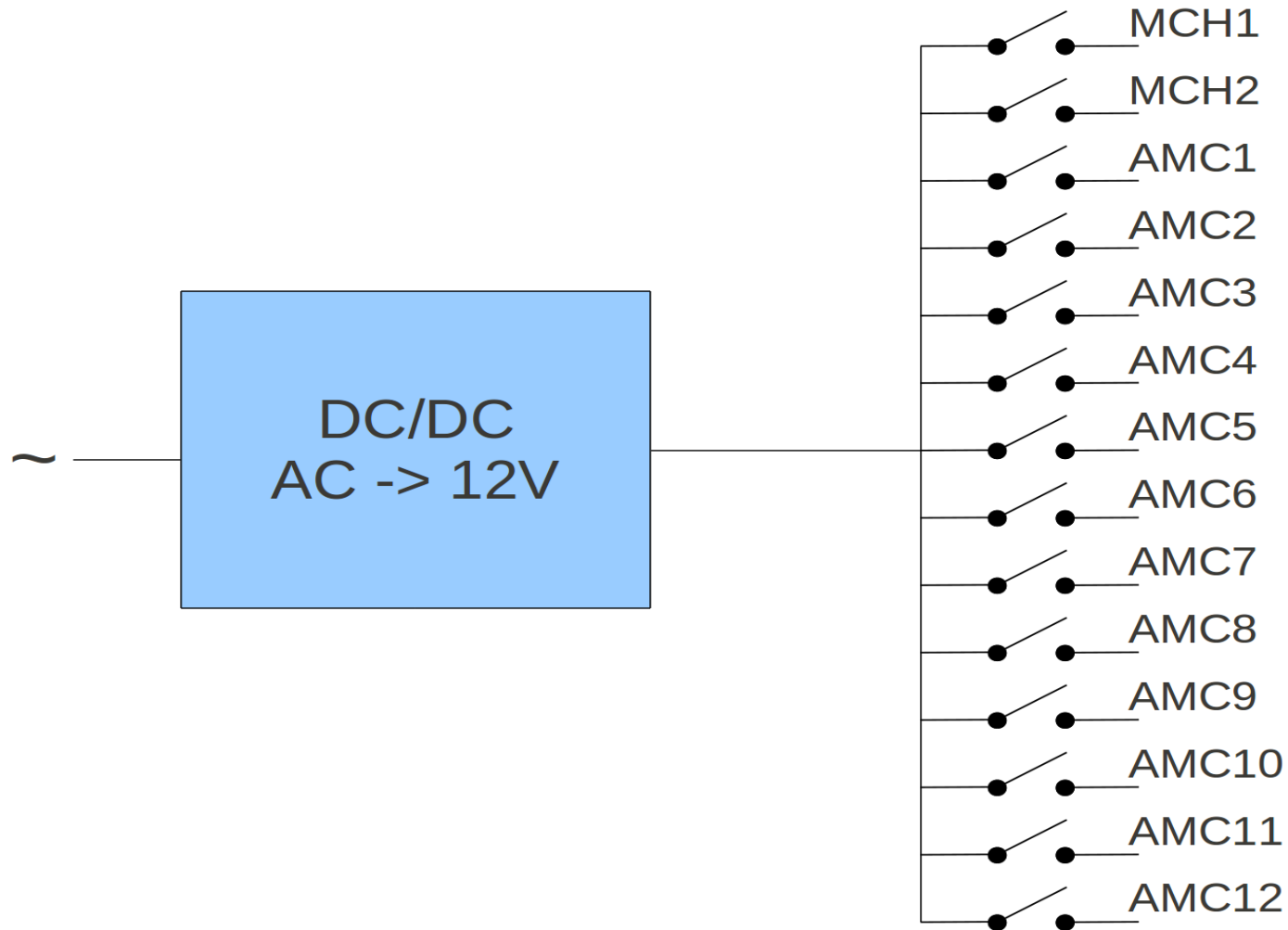
uPS Design Status

PS management

- In progress, not solved, spec not implemented in the proper way, different understanding by different vendors, no compatibility
(chassis manufacturer, power supply, MCH manufacturers have to work together)
- MTCA.4 – first application where 4 power supplies are used

uPS Design Status

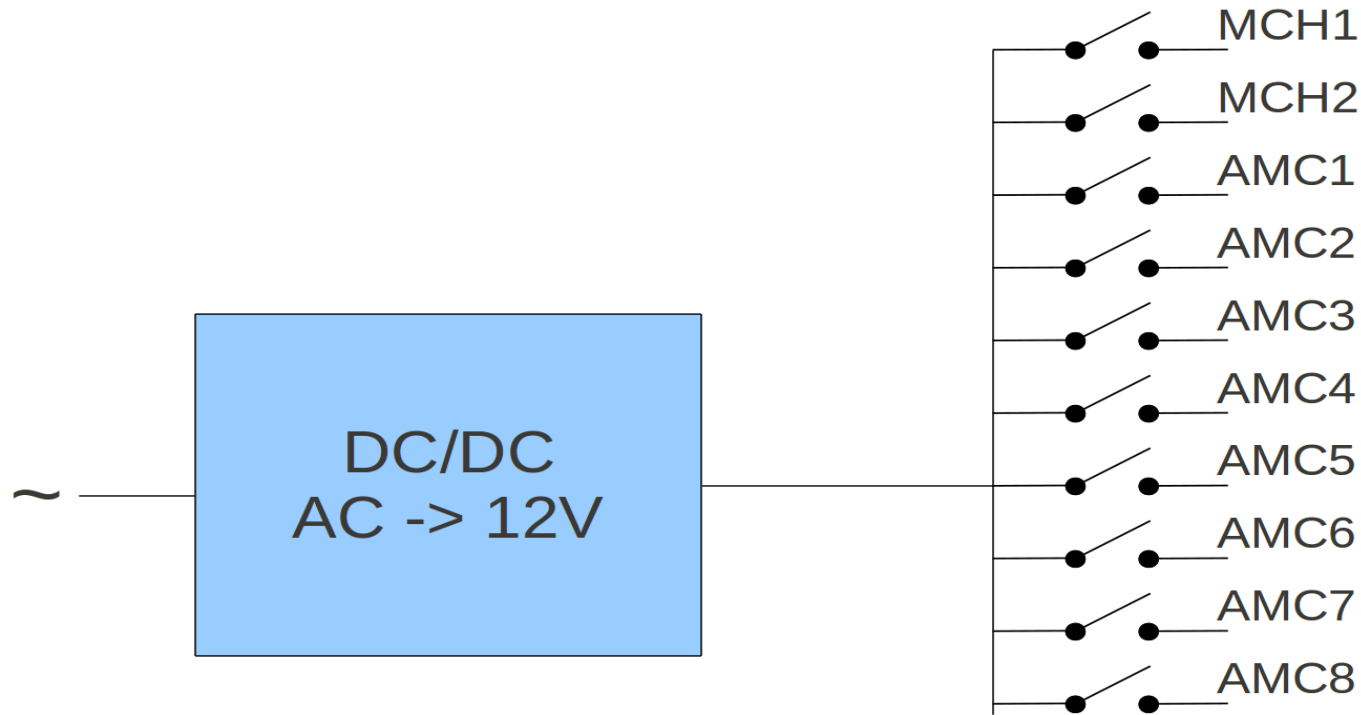
Front PS 600/1000 W (now)



Huge capacity change, depending on number of inserted boards.
Min. and max. cap. exceeded

uPS Design Status

Front PS 600/1000 W (now)



In existing systems redundant systems were used:

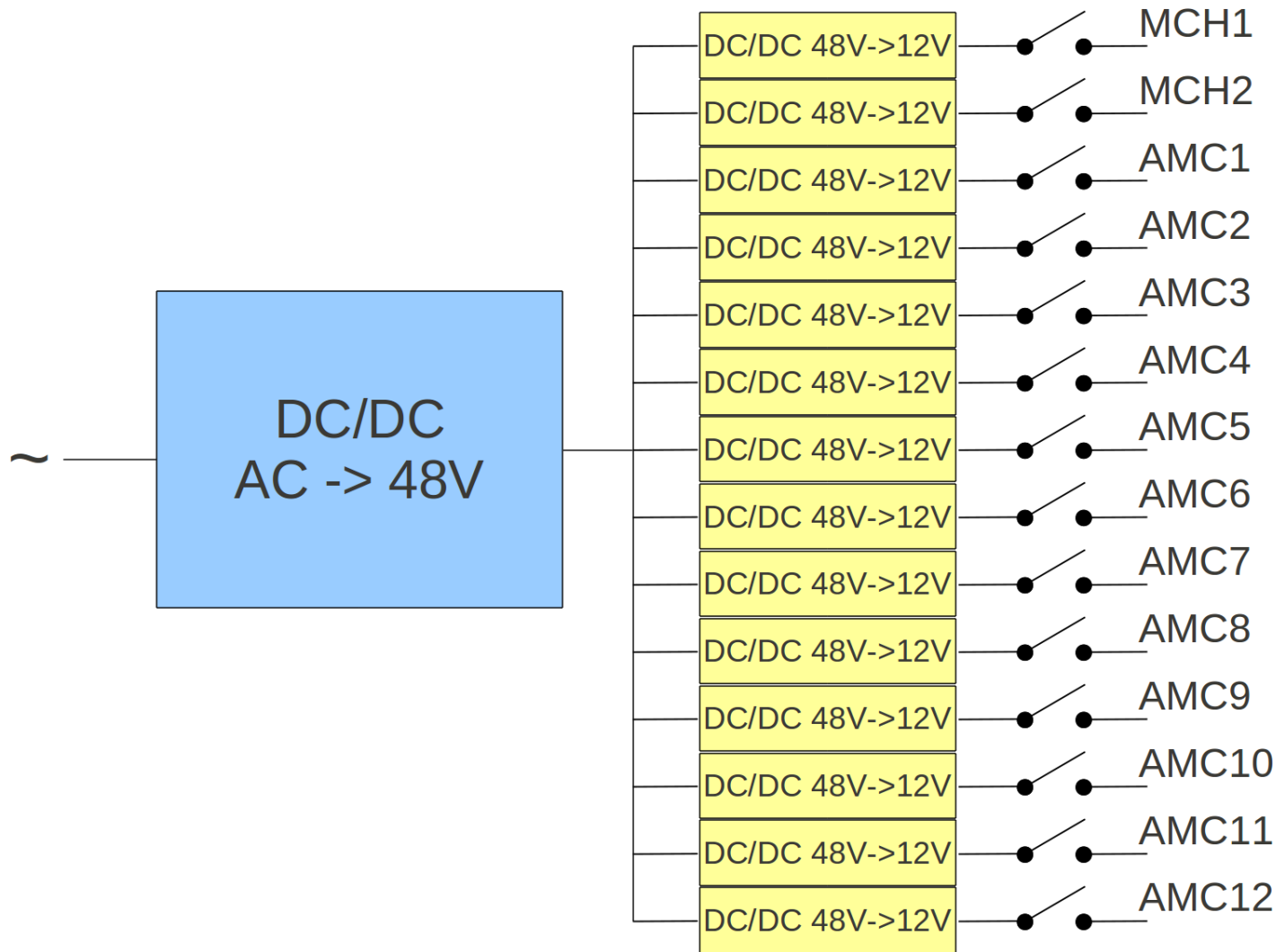
PM1 – 6 slots

PM2 – 6 slots

no PM3 and PM4

uPS Design Status

Front PS 600/1000 W (in 2-3 weeks)

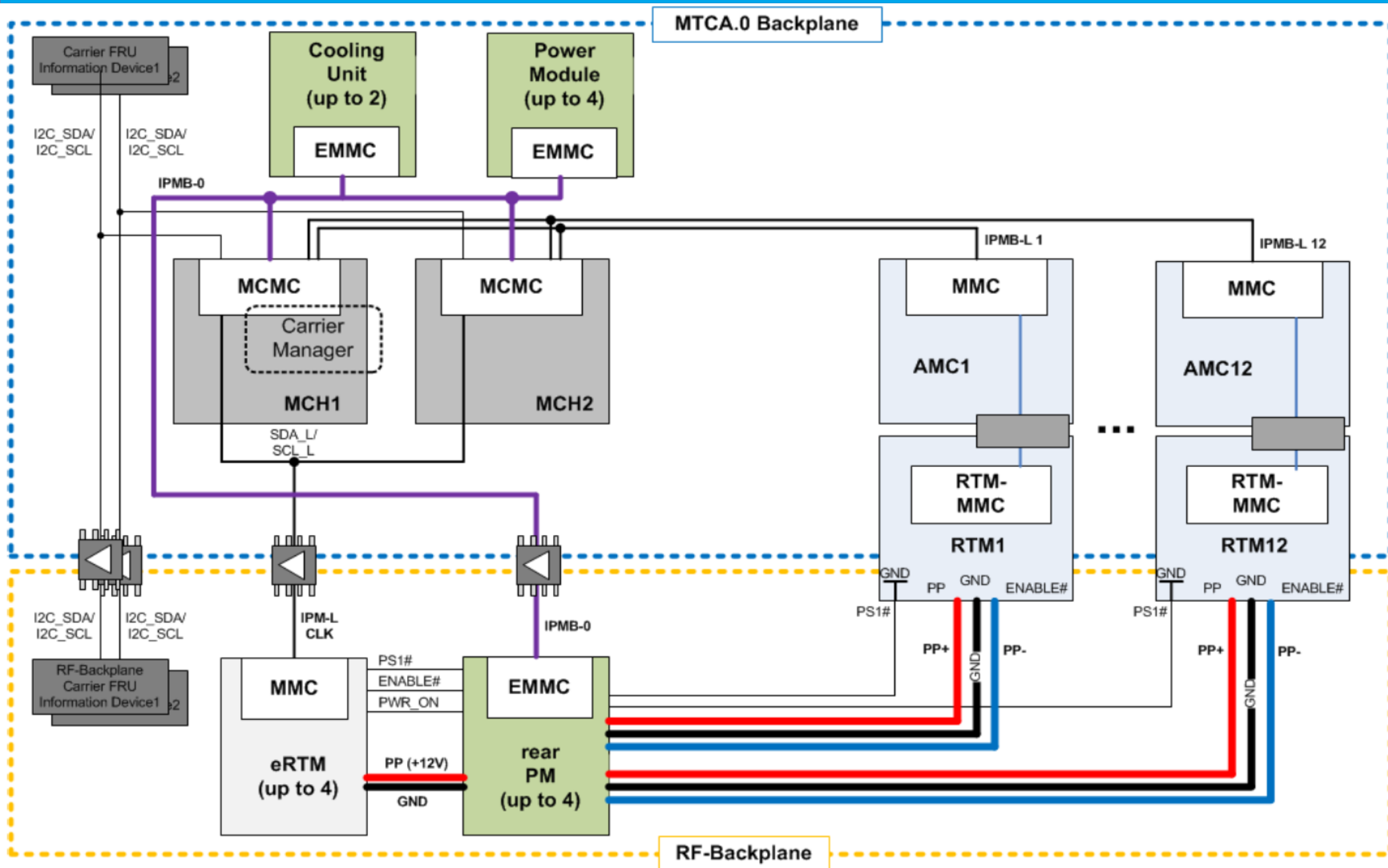


Individual DC/DC converter for each load node

A new EMMC for PM from N.A.T.
(Enhanced Module Management Controller)

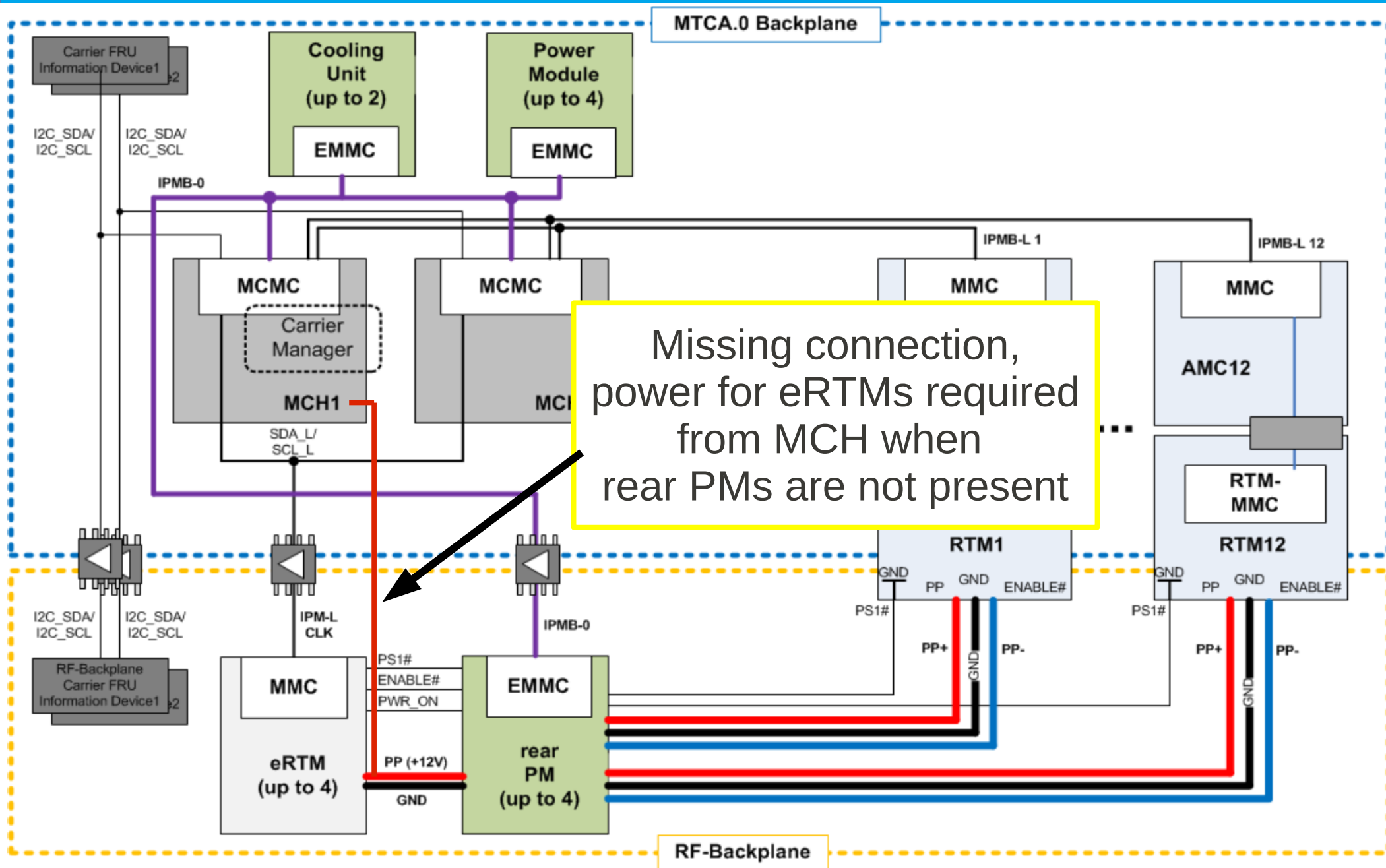
uPS Design Status

REAR – eRTMS, RTMs and rear Power Modules



uPS Design Status

REAR – eRTMS, RTMs and rear Power Modules



uPS Design Status

REAR Power Modules – custom and standard

Power Channel	Front FRU	Rear FRU	MP	PP	GND	EN_n#	Autonomous Power
1	MCH1	eRTM #1	+3.3V	12 V	GND	/Enable	yes
2	MCH2	eRTM #2	+3.3V	12 V	GND	/Enable	yes
3	CU1	eRTM #3	+3.3V	12 V	GND	/Enable	yes
4	CU2	eRTM #4	+3.3V	12 V	GND	/Enable	yes
5	AMC1	RTM1	+3.3V	Positive variable Voltage* (+VV)	GND	Negative variable Voltage* (-VV)	no
6	AMC2	RTM2	+3.3V	+VV	GND	-VV	no
7	AMC3	RTM3	+3.3V	+VV	GND	-VV	no
8	AMC4	RTM4	+3.3V	+VV	GND	-VV	no
9	AMC5	RTM5	+3.3V	+VV	GND	-VV	no
10	AMC6	RTM6	+3.3V	+VV	GND	-VV	no
11	AMC7	RTM7	+3.3V	+VV	GND	-VV	no
12	AMC8	RTM8	+3.3V	+VV	GND	-VV	no
13	AMC9	RTM9	+3.3V	+VV	GND	-VV	no
14	AMC10	RTM10	+3.3V	+VV	GND	-VV	no
15	AMC11	RTM11	+3.3V	+VV	GND	-VV	no
16	AMC12	RTM12	+3.3V	+VV	GND	-VV	no

Variable voltage +/- available to each RTM

Standard PM module can be used when (-)voltage is not required

uPS Design Status

REAR Power Modules – mechanics

Crate mechanics for PMs must be modified, under discussion
(deepness of rear modules is shorter by 12mm comparing to front modules)