

A

A

B

B

C

C

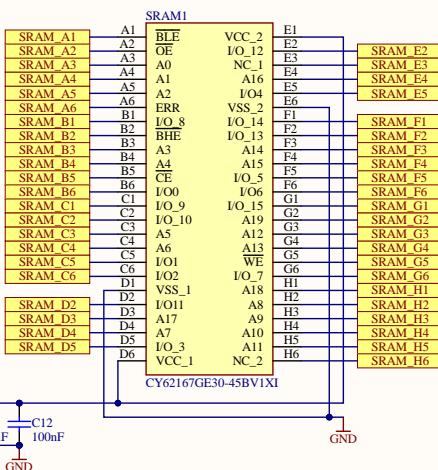
D

D

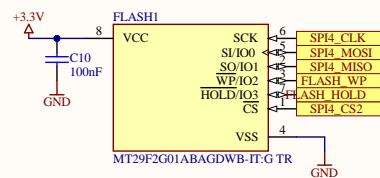
Title Housekeeping			Project CHESS - OBC	
Size A3	Revision 1.0	File Name Housekeeping.SchDoc	Last updated 05/04/2021	
EPFL SPACECRAFT TEAM	Page 1 of 8	Designers ML, PFA, EW	EPFL Spacecraft Team EPFL Space Center PPH335 station 13 CH-1015 Lausanne	

SRAM

Actual component: CY62157G/CY62157GE

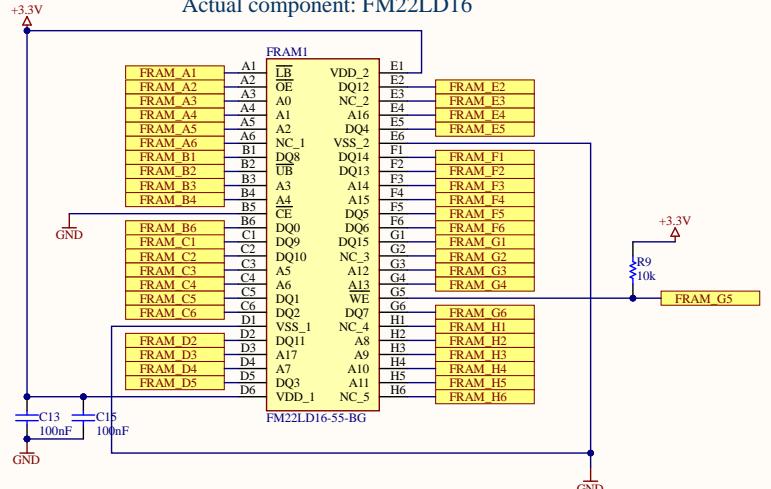


FLASH



FRAM

Actual component: FM22LD16



Title
Core

Size
A3

Revision
1.0

File Name
Memory.SchDoc

Last updated
05/04/2021

Designers
ML, PFA, EW

Project
CHESS - OBC

EPFL
SPACECRAFT



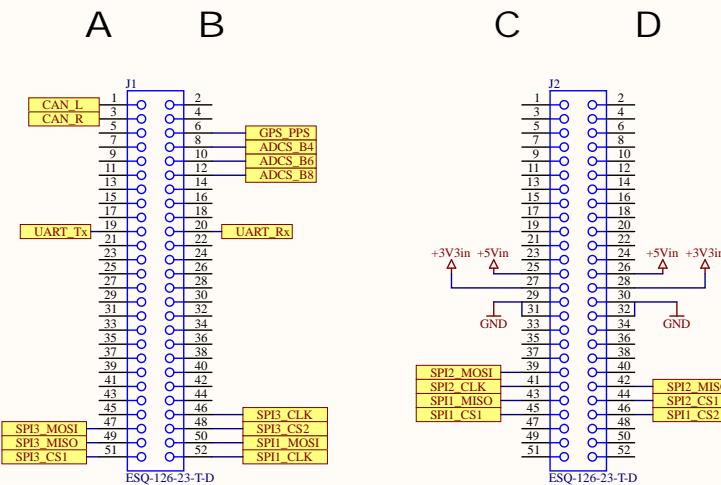
EPFL Spacecraft Team

EPFL Space Center

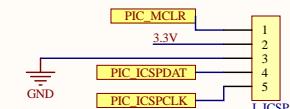
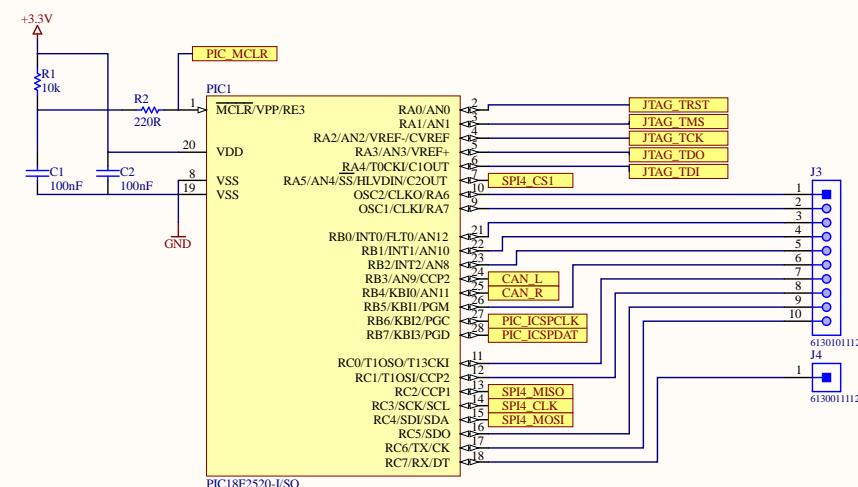
PPH335 station 13

CH-1015 Lausanne

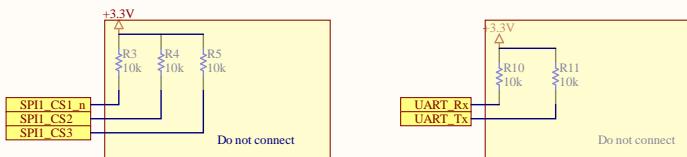
PC/104 Connector

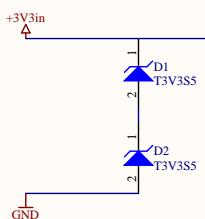
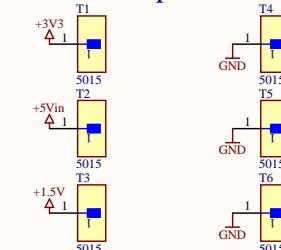
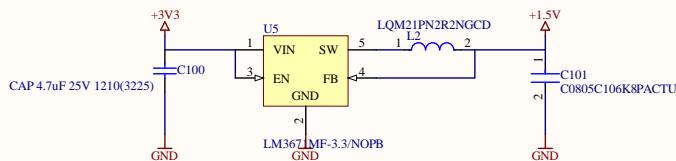
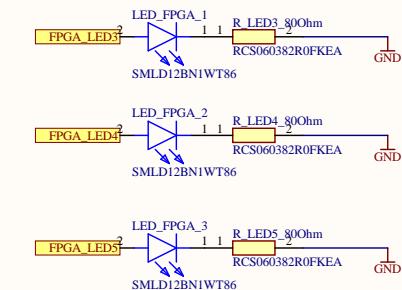
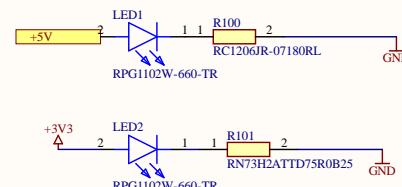
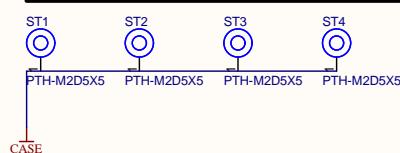


PIC (PIC18(L)F26K83)



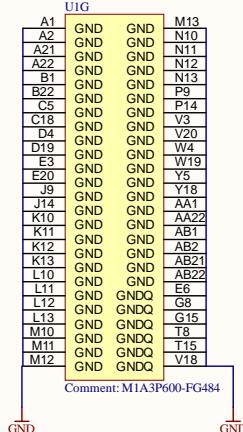
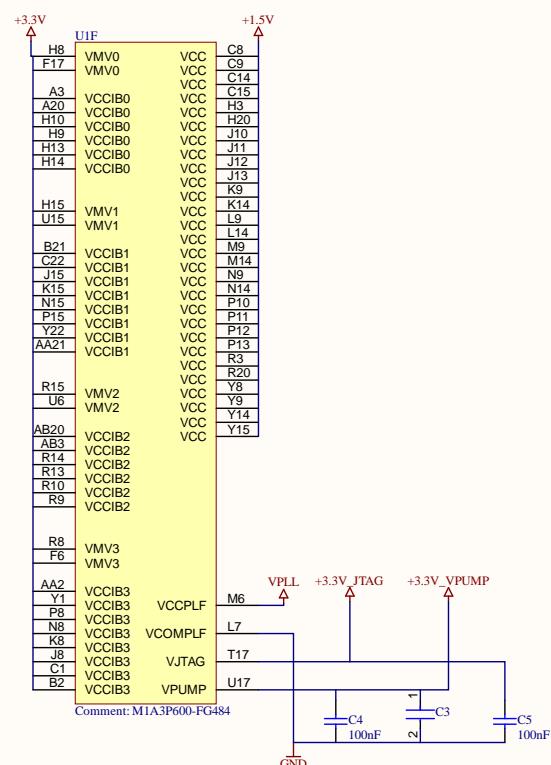
Pull-ups for SPI and UART



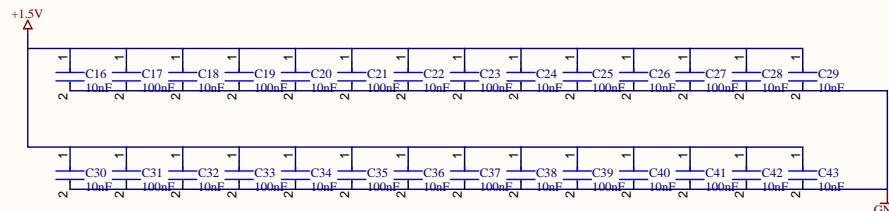
Surge voltage protectionOver/under-voltage detectionTestpoints1.5 V supply to FPGA coreLEDsMechanical fixation points

FPGA POWER

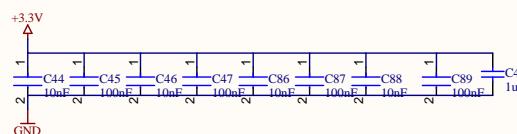
FPGA POWER PINS



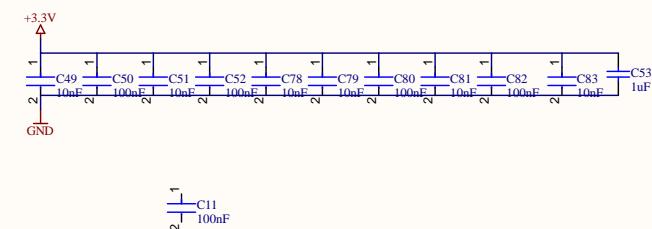
CORE DECOUPLING



BANKO DECOUPLING

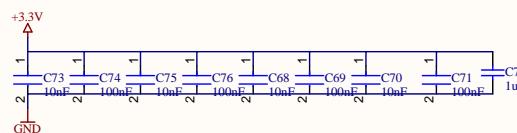


BANK1 DECOUPLING

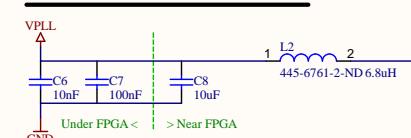


C11
100nF

BANK2 DECOUPLING

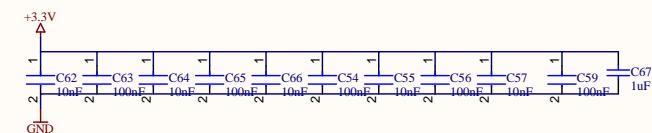


PLL DECOUPLING



C

BANK3 DECOUPLING

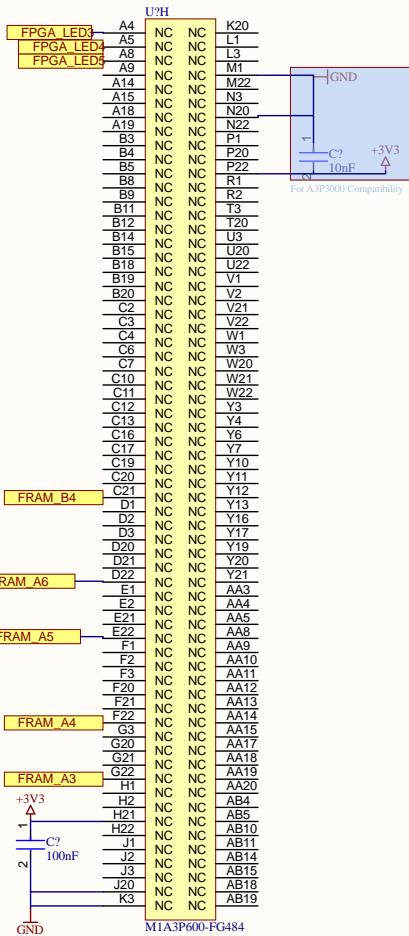


D

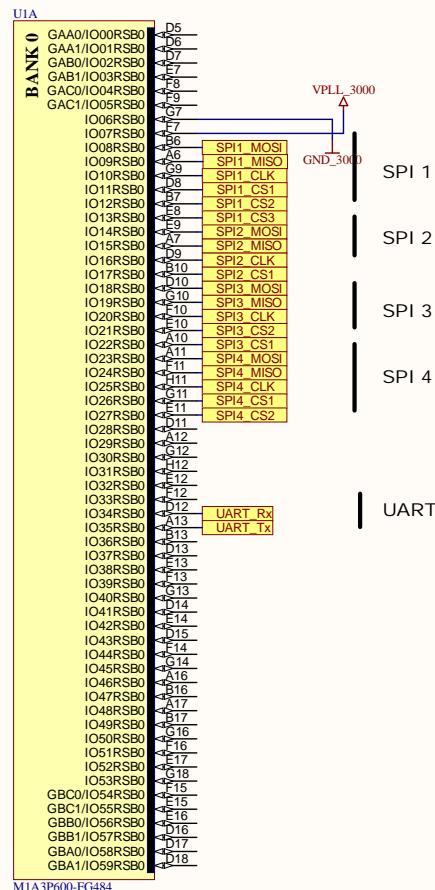
Title: FPGA - Power			Project: CHESS - OBC		EPFL SPACECRAFT TEAM
Size	Revision	File Name			
A3	1.0	FPGAPower.SchDoc	Last updated	05/04/2021	EPFL Spacecraft Team
			Designers	ML, PFA, EW	EPFL Space Center PPH335 station 13 CH-1015 Lausanne

FPGA BANKs (left side, bottom view)

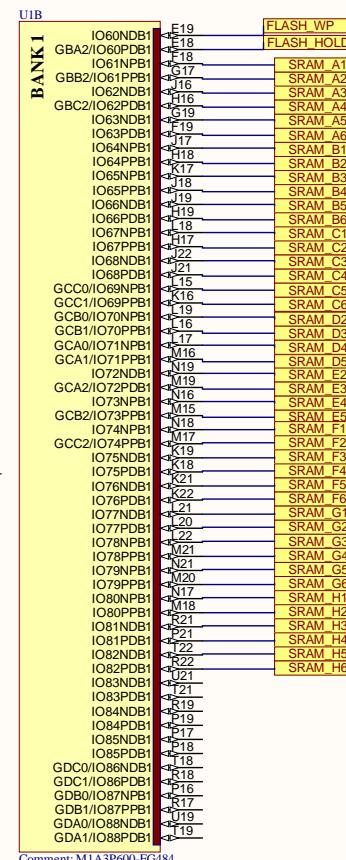
BANK0: SERIAL COMS



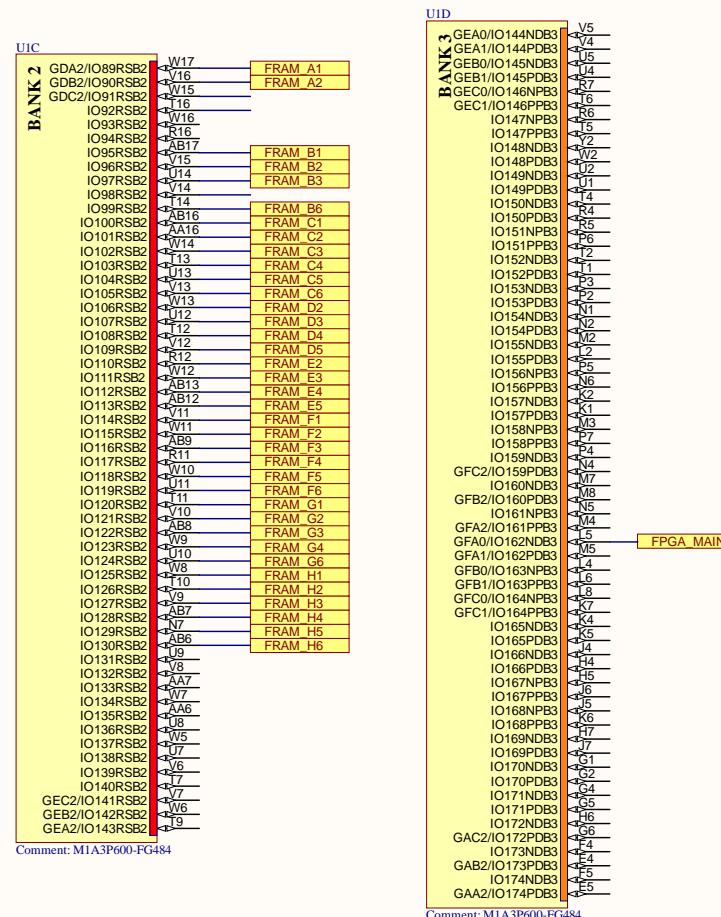
BANK1: SRAM



BANK2: USER INTERFACE

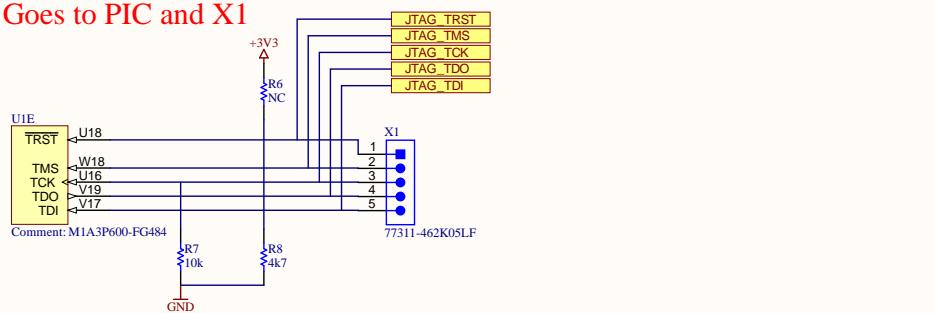


BANK3: USER IO

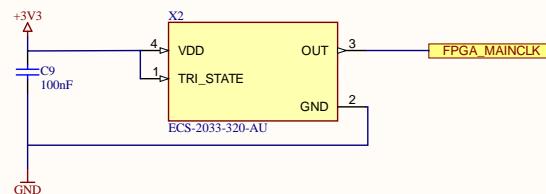


JTAG

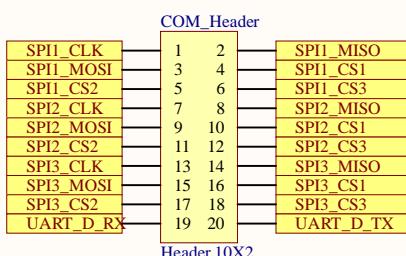
Goes to PIC and X1



FPGA OSCILLATOR (MAIN CLOCK): Sapristi board uses 32 MHz, same as on OBC on Astrocard sat.



Communication



A

A

B

B

C

C

D

D

Title Headers			Project CHESS - OBC	EPFL
Size A4	Revision 1.0	File Name GPIO_Headers.SchDoc	Last updated 05/04/2021	 EPFL SPACECRAFT TEAM
Page 8 of 8			Designers ML , PFA , EW	EPFL Spacecraft Team EPFL Space Center PPH335 station 13 CH-1015 Lausanne