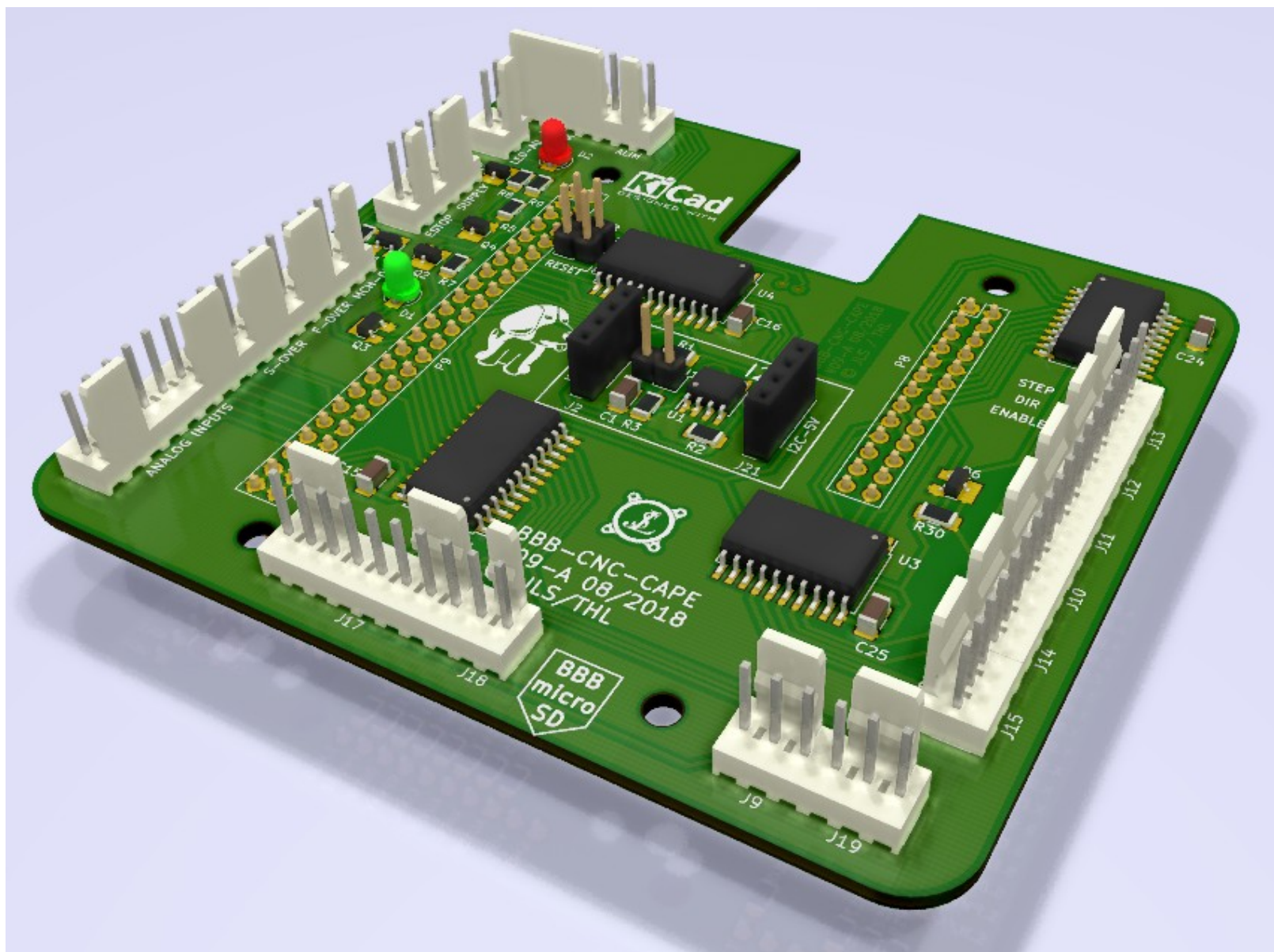
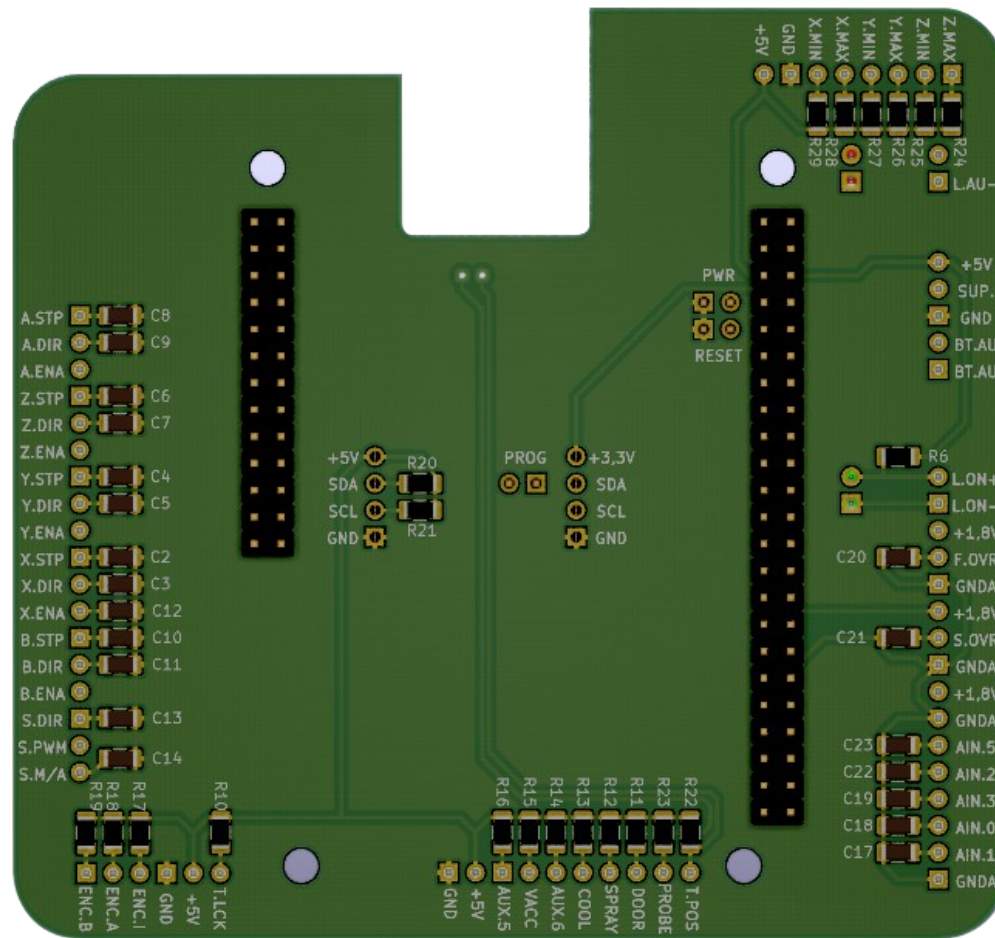
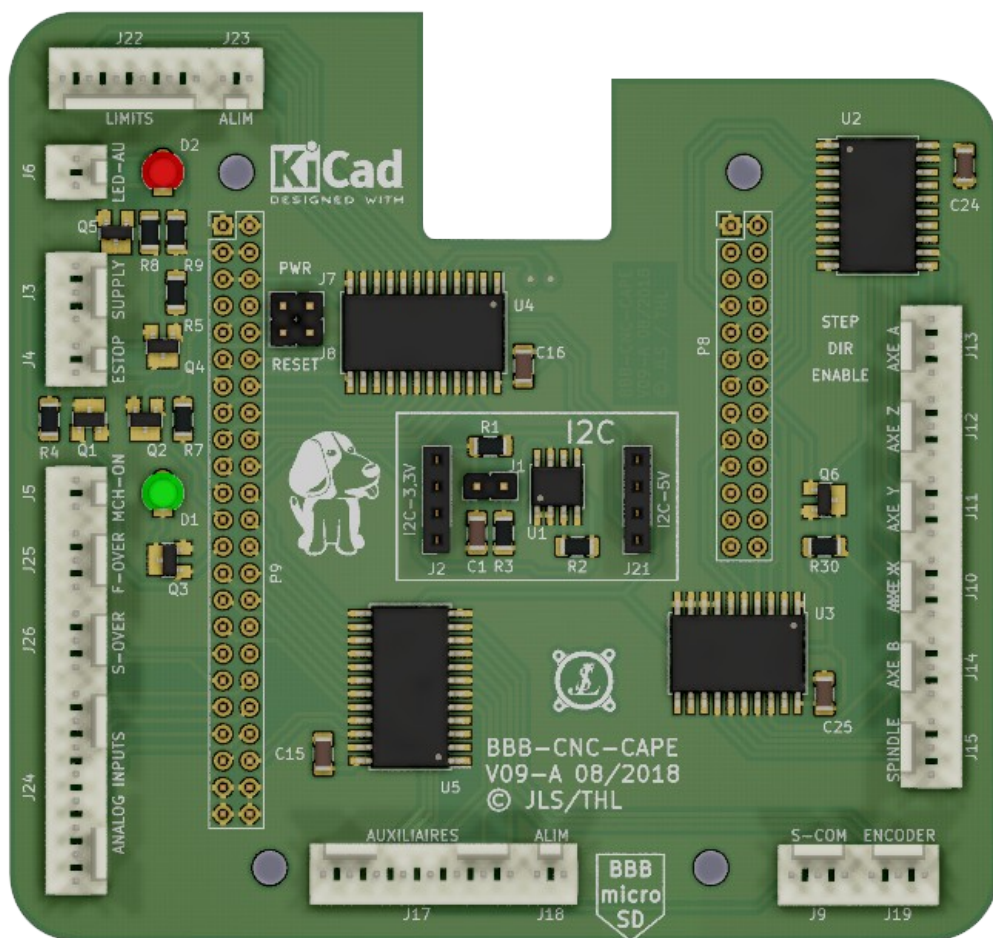


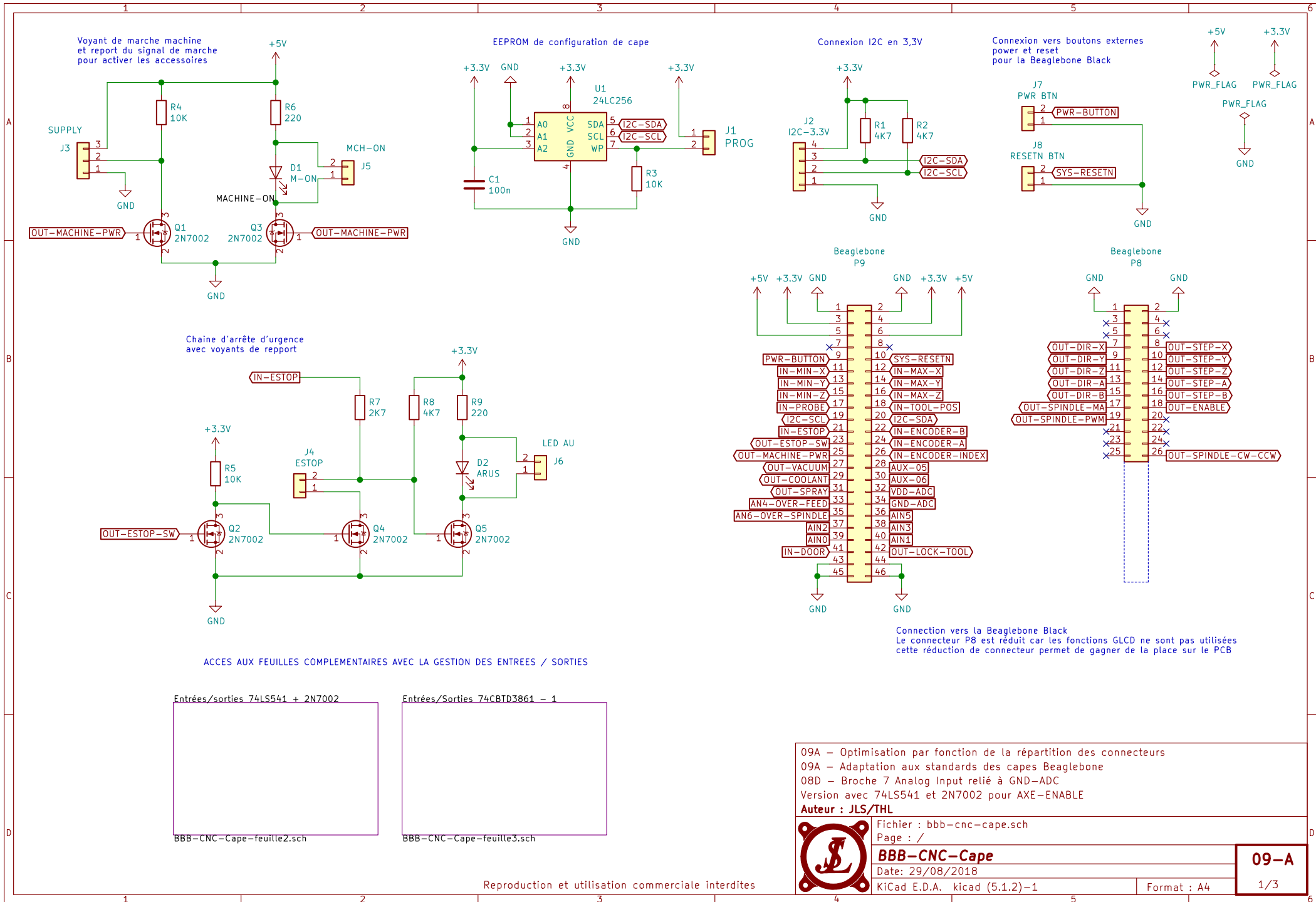
***SCHEMAS et PLANS de FABRICATION
BBB-CNC-Cape V09-A***



Vue des composants côté face et repérage des entrées/sorties côté arrière (côté Beaglebone Black)

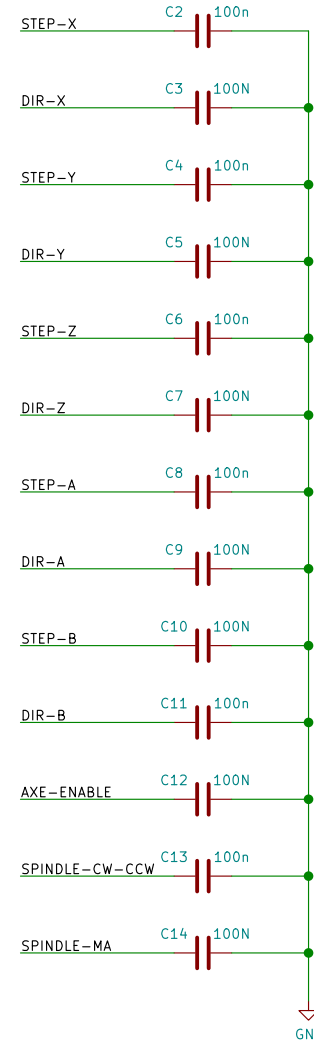
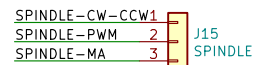
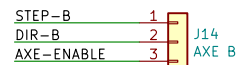
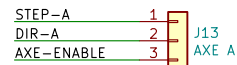
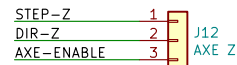
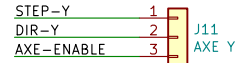
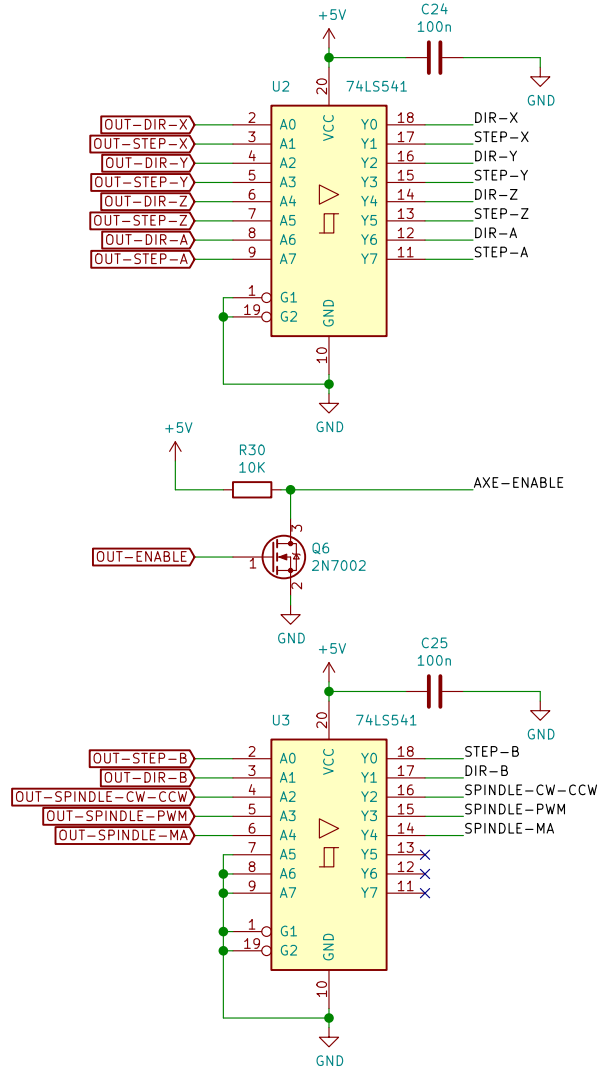
Les connecteurs sont au pas de 2,54mm et peuvent être droits ou coudés





Gestion des sorties de commandes moteurs et broche
 L'adaptation des tensions 3,3V vers 5V est réalisée par les 74LS541
 Ils tolèrent un courant de sortie de maxi 30mA
 Ils est conseillé de relier les sorties en pull-up

AXE-ENBL>E nécessite un courant de sortie plus important
 que 30mA, l'adaptation de tension est donc réalisée par un
 2N7002 qui tolère 300mA à relier en pull-up.



Condensateurs antiparasites
 sur les sorties autres que PWM

09A - Optimisation par fonction de la répartition des connecteurs
 09A - Adaptation aux standards des capes Beaglebone
 08D - Broche 7 Analog Input relié à GND-ADC
 Version avec 74LS541 et 2N7002 pour AXE-ENABLE
 Auteur : JLS/THL



Fichier : BBB-CNC-Cape-feuille2.sch
 Page : /Entrées/sorties 74LS541 + 2N7002/

BBB-CNC-Cape

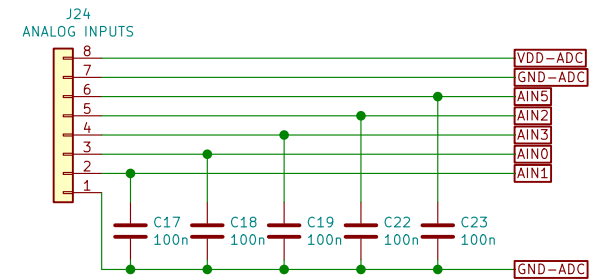
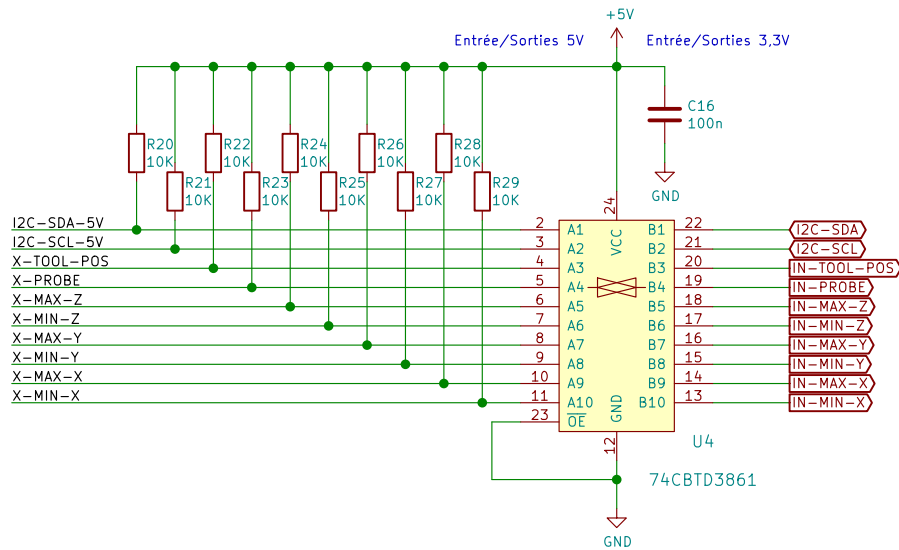
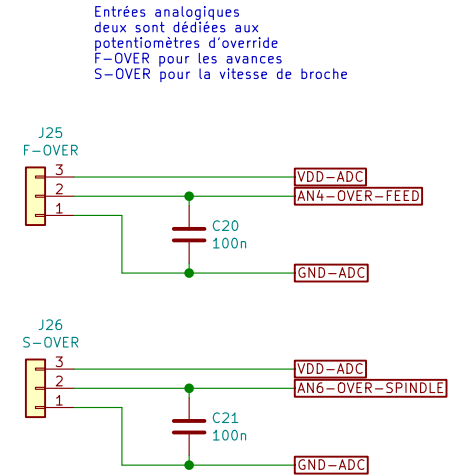
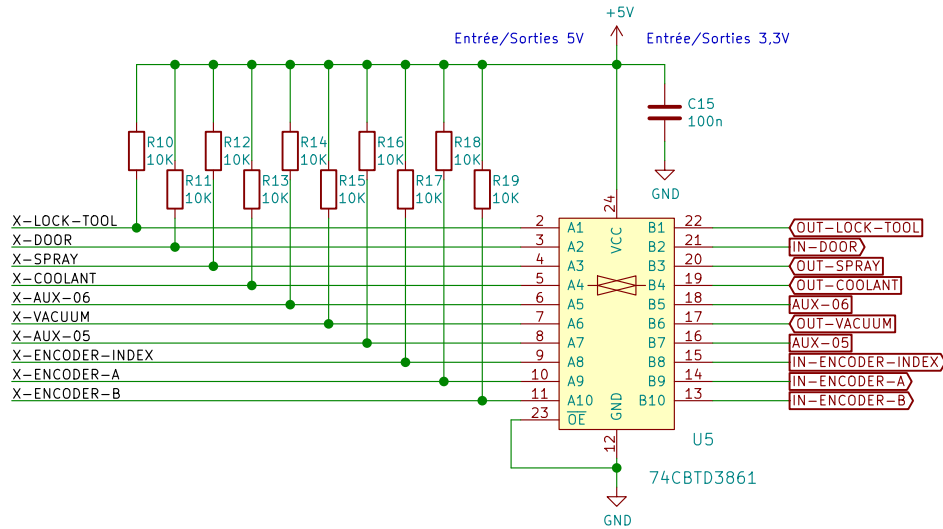
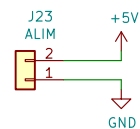
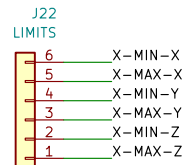
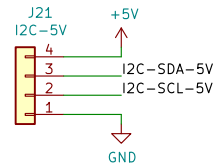
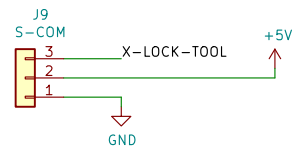
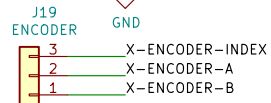
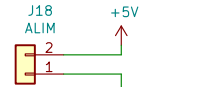
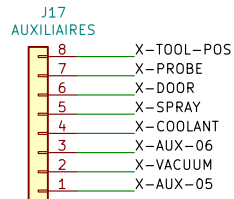
Date: 29/08/2018

KiCad E.D.A. kicad (5.1.2)-1

Format : A4

09-A

2/3



09A - Optimisation par fonction de la répartition des connecteurs
 09A - Adaptation aux standards des capes Beaglebone
 08D - Broche 7 Analog Input relié à GND-ADC
 Version avec 74LS541 et 2N7002 pour AXE-ENABLE
 Auteur : JLS/THL



Fichier : BBB-CNC-Cape-feuille3.sch
 Page : /Entrées/Sorties 74CBTD3861 - 1/

BBB-CNC-Cape

Date: 29/08/2018

KiCad E.D.A. kicad (5.1.2)-1

Format : A4

09-A

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Nomenclature composants

Référence	Quantité	Désignation / Valeur	Boîtier
J11	1	AXE Y	BBB-CNC-PinHeader_1x03_P2.54mm
J15	1	SPINDLE	BBB-CNC-PinHeader_1x03_P2.54mm
C1,C2,C4,C6,C8,C11,C13,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25	18	100n	C_1206_3216Metric
C3,C5,C7,C9,C10,C12,C14	7	100N	C_1206_3216Metric
D1	1	M-ON	LED_D3.0mm_green
D2	1	ARUS	LED_D3.0mm_red
J1	1	PROG	PinHeader_1x02_P2.54mm_Vertical
J3	1	SUPPLY	BBB-CNC-PinHeader_1x03_P2.54mm
J4	1	ESTOP	BBB-CNC-PinHeader_1x02_P2.54mm
J5	1	MCH-ON	BBB-CNC-PinHeader_1x02_P2.54mm
J6	1	LED AU	BBB-CNC-PinHeader_1x02_P2.54mm
J7	1	PWR BTN	PinHeader_1x02_P2.54mm_Vertical
J8	1	RESETN BTN	PinHeader_1x02_P2.54mm_Vertical
J10	1	AXE X	BBB-CNC-PinHeader_1x03_P2.54mm
J12	1	AXE Z	BBB-CNC-PinHeader_1x03_P2.54mm
J13	1	AXE A	BBB-CNC-PinHeader_1x03_P2.54mm
J14	1	AXE B	BBB-CNC-PinHeader_1x03_P2.54mm
J17	1	AUXILIAIRES	BBB-CNC-PinHeader_1x08_P2.54mm
J18,J23	2	ALIM	BBB-CNC-PinHeader_1x02_P2.54mm
J19	1	ENCODER	BBB-CNC-PinHeader_1x03_P2.54mm
J24	1	ANALOG INPUTS	BBB-CNC-PinHeader_1x08_P2.54mm
J25	1	F-OVER	BBB-CNC-PinHeader_1x03_P2.54mm
J26	1	S-OVER	BBB-CNC-PinHeader_1x03_P2.54mm
P8	1	Beaglebone	BBB-PinHeader_2x13_P2.54mm_Vertical
P9	1	Beaglebone	BBB-PinHeader_2x23_P2.54mm_Vertical
Q1,Q2,Q3,Q4,Q5,Q6	6	2N7002	SOT23-W-large-pad
R1,R2,R8	3	4K7	R_1206_3216Metric
R3,R4,R5,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30	24	10K	R_1206_3216Metric
R6,R9	2	220	R_1206_3216Metric
R7	1	2K7	R_1206_3216Metric
U1	1	24LC256	SOIC-8_3.9x4.9mm_P1.27mm
U2,U3	2	74LS541	SOIC-20W_7.5x12.8mm_P1.27mm
U4,U5	2	74CBTD3861	SOIC-24W_7.5x15.4mm_P1.27mm
J9	1	S-COM	BBB-CNC-PinHeader_1x03_P2.54mm
J2	1	I2C-3.3V	PinSocket_1x04_P2.54mm_Vertical
J21	1	I2C-5V	PinSocket_1x04_P2.54mm_Vertical
J22	1	LIMITS	BBB-CNC-PinHeader_1x06_P2.54mm

