Digital and Stepper

File: DigitalStepper.kicad_sch

SCSI

File: SCSI.kicad_sch

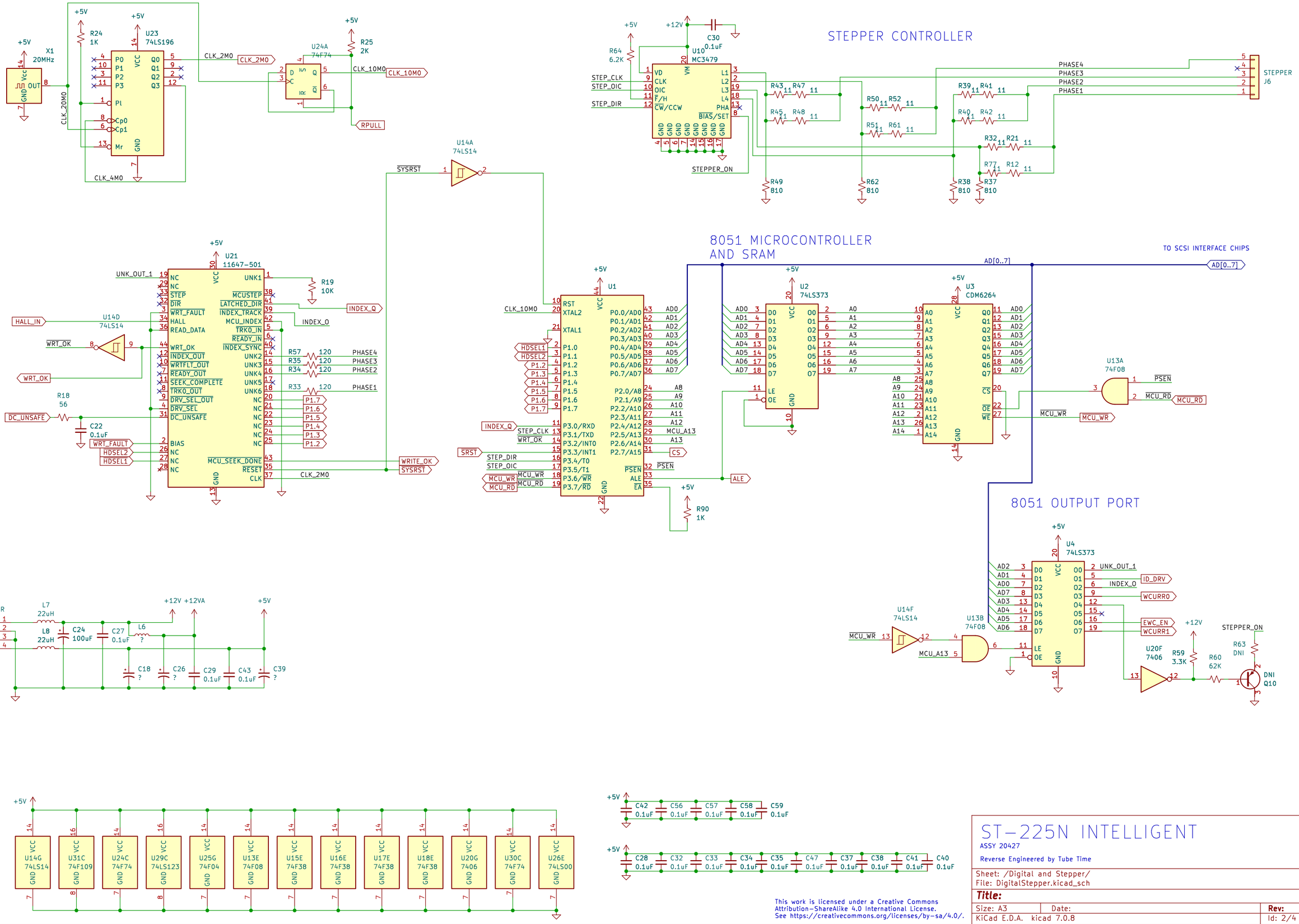
Analog and Interface

File: Analog.kicad_sch

Sheet: /
File: st225_20427.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 1/4


STEPPER CONTROLLER
8051 MICROCONTROLLER AND SRAM
8051 OUTPUT PORT
TO SCSI INTERFACE CHIPS
ST-225N INTELLIGENT
ASSY 20427
Reverse Engineered by Tube Time
Sheet: /Digital and Stepper/
File: DigitalStepper.kicad_sch
Title:
Size: A3
Date:
Rev:
KiCad E.D.A. kicad 7.0.8
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READ CHANNEL

U22 SSI257_2
WCURR1
WCURR0
HDSEL1
HDSEL2
WRT_OK
RIWR1
RIWR2
IWR2
IWR1
HDSEL1
HDSEL2
HDSEL4
WRT_FAULT_IN
HDC6
HDC5
HDC4
HDC3
HDC2
HDC1
VHS
VCTAP
C25 0.1uF
C2 0.01uF
R30 2K
R8 2.8K
R11 1.36K
R7 54.9
R44 5.1
R9 698
R10 330
C17 ?

J1 HEADS
HDC1
HDC2
HDC3
HDC4

U32 11642-501
R75 22
C1 0.1uF
C4 0.1uF
C5 0.1uF
C19 0.012uF
R46 510
C6 22pF

U33A SSI280.2
WCURR
WD+
WD-
WGATE
WRT_OK
WRT_FAULT
VCT
DCUNSAFE
VHS
DRVSEL
WD+
WD-

U25F 74F04
WGATE2
WGATE

DC_UNSAFE
WRT_FAULT

VERIFY

R1 162
L1 22uH
L3 10uH
C3 100pF
R2 162
L2 22uH
L4 10uH
C7 330pF
R3 357

U33B SSI280.2
DI-
DI+ON
-ON
GND
DO-
DO+
C8 0.1uF
R4 ?
C9 ?
L5 ?

C11 ?
C10 0.1uF
C13 0.1uF
C12 ?

U33C SSI280.2
DI-
DI+
TMG1
5V
-RD
+RDO
GND
+RD
R5 2.4K
C14 47pF
C15 22pF
R6 100
RDDATA
ENC_DATA

U25C 74F04
RDDATA

WRITE CHANNEL

MFMC
WRITE_OK
EWC_EN
U13D 74F08

MFM ENCODER/DECODER

U8 AIC-250L
NRZ
WAM/AMD
MFMI
RDDATA
EWC
WG
OSC_IN
1'S_RST
SEP_DATA
1FVFO
SEPCLK
RG
V2.0
V1.5
V1.0
CS
MFMC
MFMO
OSC_OUT
CLAMP
RAW_DATA
RD/REFCLK
VCC
GND
CLK_10M0
JP3 ?
CLAMP
U20C 7406
R88 221
R89 100
C55 ?
RDREFCLK

READ GATE

RGATE2
U29A 74LS123
R36 3.3K
C23 22pF
JP2 ?
JP1 ?
RDDATA
RPULLUP3
U24B 74F74
LOCKDET
RPULL
1S_RST
U26D 74LS00
U26A 74LS00
U25E 74F04
RPULL4
U31B 74F109
CLAMP
RGATE

R87 4.32K
R85 511
R86 ?
C54 ?

SPINDLE DRIVER

CR2 1N5818
Q5 BD436
Q6 DNI
D2 1N4148
CR1 1N5818
R76 3.3K
R91 470
R74 3.3K
R13 560
R31 3.3K
J4 SPINDLE
COIL_TAP
COIL_A
COIL_B
ID_DRV
R73 1K
Q7 DNI
R71 51
R72 100
U20A 7406
U25A 74F04
HALL_IN
U27 75448
R65 100
R66 100
CR3 1N5818
R20 330
R22 100
Q1 BD436
Q3 BD436
R28 330
R29 100
R26 100
C20 0.47uF
R15 10
C21 DNI
U28 11695-502
H-IN
COIL_A
SENSE
COIL_B
H-OUT
FREF
CLK_2M0
R17 22.1K
R23 750
R69 51
R67 6.2K
Q2 2N6039
R68 6.2K
Q4 2N6039
R70 51
R27 0.39
R14 DNI

DATA SEPARATOR

ENC_DATA
CLK_10M0
U9 DP8455
SYNC_DATA
VCO
SEP_DATA
SEPCLK
1FVFO
U26C 74LS00
U31_J
U31A 74F109
U30A 74F74
U30B 74F74
RPULLUP3
RPULL4
R78 1K
R82 4.75K
R79 1.8K?
C52 ?
C53 ?
R83 680
R84 680
C36 100pF
C48 ?
R80 47
C44 ?
C50 ?
C51 ?
R81 150
C49 ?

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ST-225N INTELLIGENT

ASSY 20427

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DUAL PORT BUFFER CONTROLLER

SCSI OUTPUT BUFFERS

TERMINATION

SCSI INPUT BUFFERS

PROGRAMMABLE SCSI CONTROLLER

SCSI BUFFER SRAM

SCSI ID JUMPER

J8 SCSI

RN1 TERM

RN2 TERM

RN3 TERM

J9 SCSI ID

U19 74LS373

U12 74LS240

U11 74LS240

U6 AIC-300L

U5 AIC-010L

U7 SRAM_6116

U17A 74F38

U17B 74F38

U17C 74F38

U17D 74F38

U18A 74F38

U18B 74F38

U18C 74F38

U18D 74F38

U16A 74F38

U15A 74F38

U15B 74F38

U15C 74F38

U15D 74F38

U16C 74F38

U16D 74F38

U26B 74LS00

U25B 74F04

U25D 74F04

U13C 74F08

U14A 74LS14

U14B 74LS14

U14C 74LS14

U14E 74LS14

U20B 7406

U20E 7406

U20D 7406

U29B 74LS123

U16B 74F38

R53 100

R54 51

R55 DNI

R56 DNI

R58 2K

D1 RED

+5V

SA[0..9]

AD[0..7]

SDB[0..7]

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ASSY 20427

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