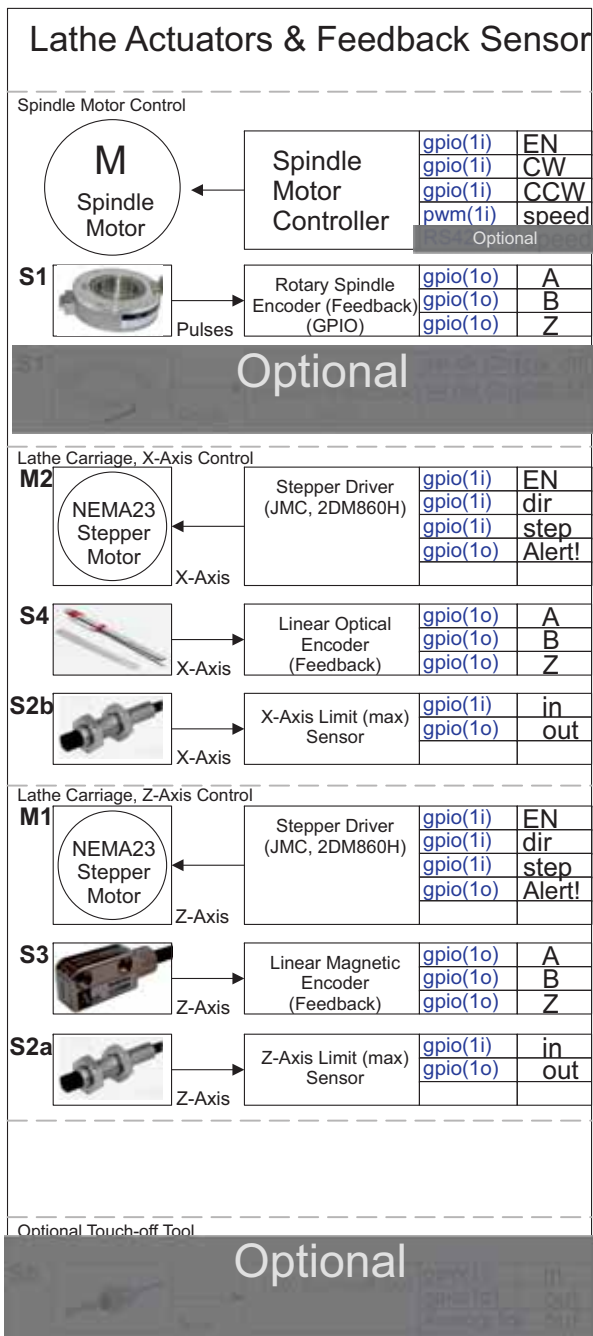


Basic (+Optional) Setup of Proxxon SD-300, Lathe CNC-Conversion (LinuxCNC)




MESA 7198 Anything I/O Ethernet card

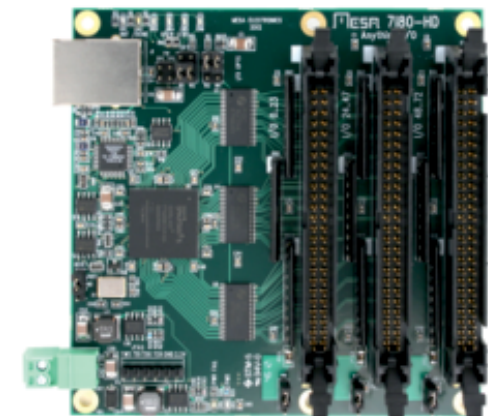
The MESA 7198 is a low cost, general purpose, FPGA based programmable I/O card intended for motion c..

● In Stock

97.45€

5ABOBX3

5ABOBx3 is a configuration intended to work with up to three common 5 Axis BOB like the SainSmart ST-V3 card. The configuration includes twelve hardware step generators, three encoder inputs and three PWM generators, a watchdog timer and GPIO.



MESA 7i80HD-25 Ethernet Anything I/O card

The MESA 7i80HD is a low cost, general purpose, FPGA based programmable I/O card with 100 BaseT Ethe..

● In Stock

197.62€

SVST8_4IM2

SVST8_4IM2 is a 8 axis servo/ 4 axis stepmotor configuration with 8 PWM outputs, 8 encoder inputs with index mask, 4 hardware stepgenerators, a watchdog timer and GPIO.

Summary of required IO for the MESA-Card:

Stepper Motor Control:

2x (EN,Dir,Step) = 6 GPIO.Outputs

Quadrature Encoders Feedback:

3x (A, B, Z) = 9 GPIO.Inputs

Spindle-Motor Speed-Signal:

1x PWM.Output

“Normal” GPIO.Outputs:

6X (for M.EN/M.CW/M.CCW/S2b.in/S2a.in/S6.in)

“Normal” GPIO.Inputs:

5X (for M2.Alert! / M1.Alert! /S2b.out / S2a.out / S6.out)

Optional:

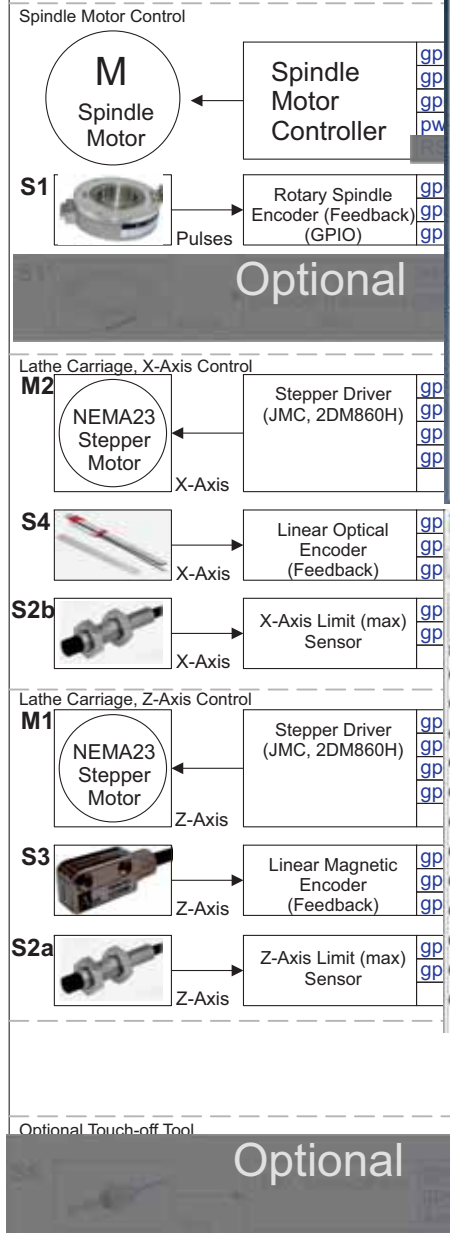
1x Analog-Input (0..3V)

1x RS422 IO & 1x SSI IO

The Available Machine-Signals, that need to be connected to a MESA Card

Basic Setup of Proxxon SD-300, Lathe CNC-Conversion (LinuxCNC)

Lathe Actuators & Feedback



Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page I/O Connector 2 I/O Connector 3 I/O Connector 4

Press the button to make the tabbed pages accept the changes.
Click on each page tab to configure signal names for each connector port.

Board name: 7180HD-Internal Data
Firmware: SV5T8_4
Card address: 192.168.1.121
PWM base frequency: 20000 Hz
PDM base frequency: 6000000 Hz
Watchdog timeout: 5000000 ns
Num of encoders: 4
Num of pwm generators: 4
Num of step generators: 4
Total number of pins: 72

Sanity Checks
7i29 daughter board
7i30 daughter board
7i33 daughter board
7i40 daughter board
7i48 daughter board

Accept components Changes

CFG.Page1

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page I/O Connector 2 I/O Connector 3 I/O Connector 4

Num	function	Pin Type	Inv
1:	X Encoder	Quad Enc-B	☐
0:	X Encoder	Quad Enc-A	☐
1:	Y Encoder	Quad Enc-B	☐
0:	Y Encoder	Quad Enc-A	☐
1:	X Encoder	Quad Enc-I	☐
0:	Y Encoder	Quad Enc-I	☐
1:	Spindle PWM	PWM Gen-P	☐
0:	Unused PWM Gen	PWM Gen-P	☐
1:	Spindle PWM	PWM Gen-D	☐
0:	Unused PWM Gen	PWM Gen-D	☐
1:	Spindle PWM	PWM Gen-E	☐
0:	Unused PWM Gen	PWM Gen-E	☐

CFG.Page2

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page I/O Connector 2 I/O Connector 3 I/O Connector 4

Num	function	Pin Type	Inv
024:	Unused Input	GPIO Input	☐
025:	Unused Input	GPIO Input	☐
026:	Unused Input	GPIO Input	☐
027:	Unused Input	GPIO Input	☐
028:	Unused Input	GPIO Input	☐
029:	Unused Input	GPIO Input	☐
030:	Unused Input	GPIO Input	☐
031:	Unused Input	GPIO Input	☐
032:	Unused Input	GPIO Input	☐
033:	Unused Input	GPIO Input	☐
034:	Unused Input	GPIO Input	☐
035:	Unused Input	GPIO Input	☐
036:	Unused Input	GPIO Input	☐
037:	Unused Input	GPIO Input	☐
038:	Unused Input	GPIO Input	☐
039:	Unused Input	GPIO Input	☐
040:	Unused Output	GPIO Output	☐
041:	Unused Output	GPIO Output	☐
042:	Unused Output	GPIO Output	☐
043:	Unused Output	GPIO Output	☐
044:	Unused Output	GPIO Output	☐
045:	Unused Output	GPIO Output	☐
046:	Unused Output	GPIO Output	☐
047:	Unused Output	GPIO Output	☐

CFG.Page3

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page I/O Connector 2 I/O Connector 3 I/O Connector 4

Num	function	Pin Type	Inv
0:	X Axis StepGen	Step Gen-A	☐
0:	X Axis StepGen	Dir Gen-B	☐
050:	Unused Input	GPIO Input	☐
051:	Unused Input	GPIO Input	☐
052:	X Maximum Limit	GPIO Input	☐
053:	Z Maximum Limit	GPIO Input	☐
1:	Z Axis StepGen	Step Gen-A	☐
1:	Z Axis StepGen	Dir Gen-B	☐
056:	Spindle Enable	GPIO Output	☐
057:	Spindle CW	GPIO Output	☐
058:	Spindle CCW	GPIO Output	☐
059:	Machine Is Enabled	GPIO Output	☐

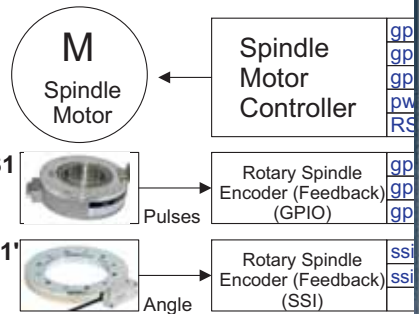
CFG.Page4

Assign the Available Machine-Signals to the Pins of the MESA Card (Using LinuxCNC 2.8 "pncconf")

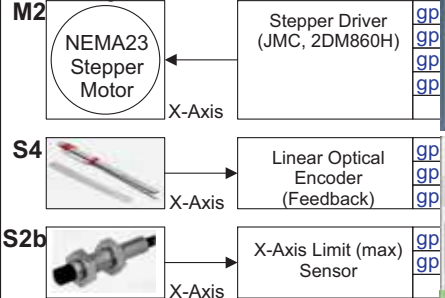
Basic Setup of Proxxon SD-300, Lathe CNC-Conversion (LinuxCNC)

Lathe Actuators & Feedback

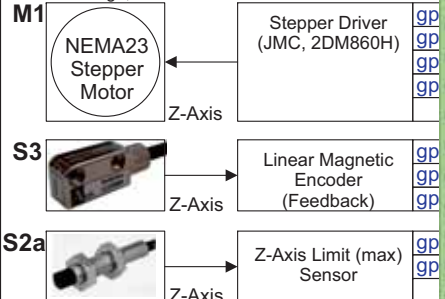
Spindle Motor Control



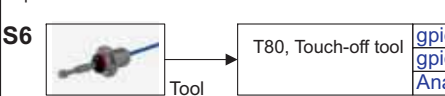
Lathe Carriage, X-Axis Control



Lathe Carriage, Z-Axis Control



Optional Touch-off Tool



Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page

Press the button to make the tabbed pages accept the changes.
Click on each page tab to configure signal names for each connector port.

Board name: 7i80HD-Internal Data
Firmware: 5VST8_4
Card address: 192.168.1.121
PWM base frequency: 20000 Hz
PDM base frequency: 6000000 Hz
Watchdog timeout: 5000000 ns
Num of encoders: 4
Num of pwm generators: 4
Num of step generators: 4
Total number of pins: 72

Sanity Checks

- 7i29 daughter board
- 7i30 daughter board
- 7i33 daughter board
- 7i40 daughter board
- 7i48 daughter board

Accept components Changes

CFG.Page1

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page

Num	function	Pin Type	Inv
1	X Encoder	Quad Enc-B	
0	X Encoder	Quad Enc-A	
1	Y Encoder	Quad Enc-B	
0	Y Encoder	Quad Enc-A	
1	X Encoder	Quad Enc-I	
0	Y Encoder	Quad Enc-I	
1	Spindle PWM	PWM Gen-P	
0	Unused PWM Gen	PWM Gen-P	
1	Spindle PWM	PWM Gen-D	
0	Unused PWM Gen	PWM Gen-D	
1	Spindle PWM	PWM Gen-E	
0	Unused PWM Gen	PWM Gen-E	

CFG.Page2

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page

Num	function	Pin Type	Inv
024	Unused Input	GPIO Input	
025	Unused Input	GPIO Input	
026	Unused Input	GPIO Input	
027	Unused Input	GPIO Input	
028	Unused Input	GPIO Input	
029	Unused Input	GPIO Input	
030	Unused Input	GPIO Input	
031	Unused Input	GPIO Input	
032	Unused Input	GPIO Input	
033	Unused Input	GPIO Input	
034	Unused Input	GPIO Input	
035	Unused Input	GPIO Input	
036	Unused Input	GPIO Input	
037	Unused Input	GPIO Input	
038	Unused Input	GPIO Input	
039	Unused Input	GPIO Input	
040	Unused Output	GPIO Output	
041	Unused Output	GPIO Output	
042	Unused Output	GPIO Output	
043	Unused Output	GPIO Output	
044	Unused Output	GPIO Output	
045	Unused Output	GPIO Output	
046	Unused Output	GPIO Output	
047	Unused Output	GPIO Output	

CFG.Page3

Point and click configuration - SD300_MESACards.pncconf

Mesa Card 0

Configuration Page

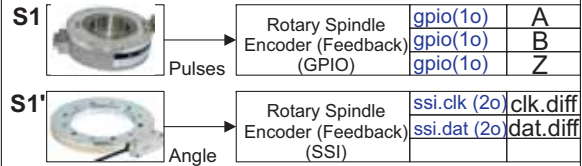
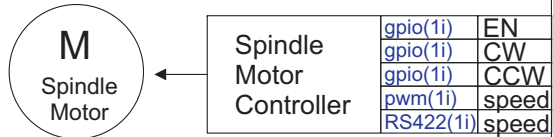
Num	function	Pin Type	Inv
0	X Axis StepGen	Step Gen-A	
1	X Axis StepGen	Dir Gen-B	
050	Unused Input	GPIO Input	
051	Unused Input	GPIO Input	
052	X Maximum Limit	GPIO Input	
053	Z Maximum Limit	GPIO Input	
1	Z Axis StepGen	Step Gen-A	
0	Z Axis StepGen	Dir Gen-B	
056	Spindle Enable	GPIO Output	
057	Spindle CW	GPIO Output	
058	Spindle CCW	GPIO Output	
059	Machine Is Enabled	GPIO Output	

CFG.Page4

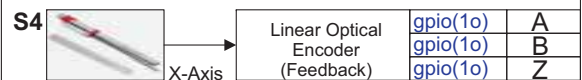
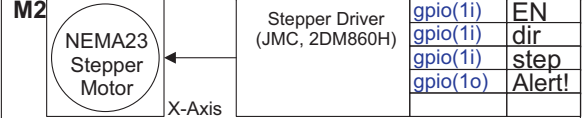
These Numbers correspond to the manual of the 7i80HD

These Numbers do not correspond with the 7i80HD Manual

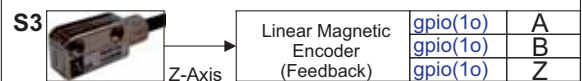
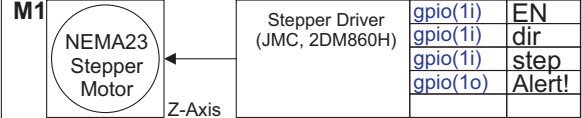
Spindle Motor Control



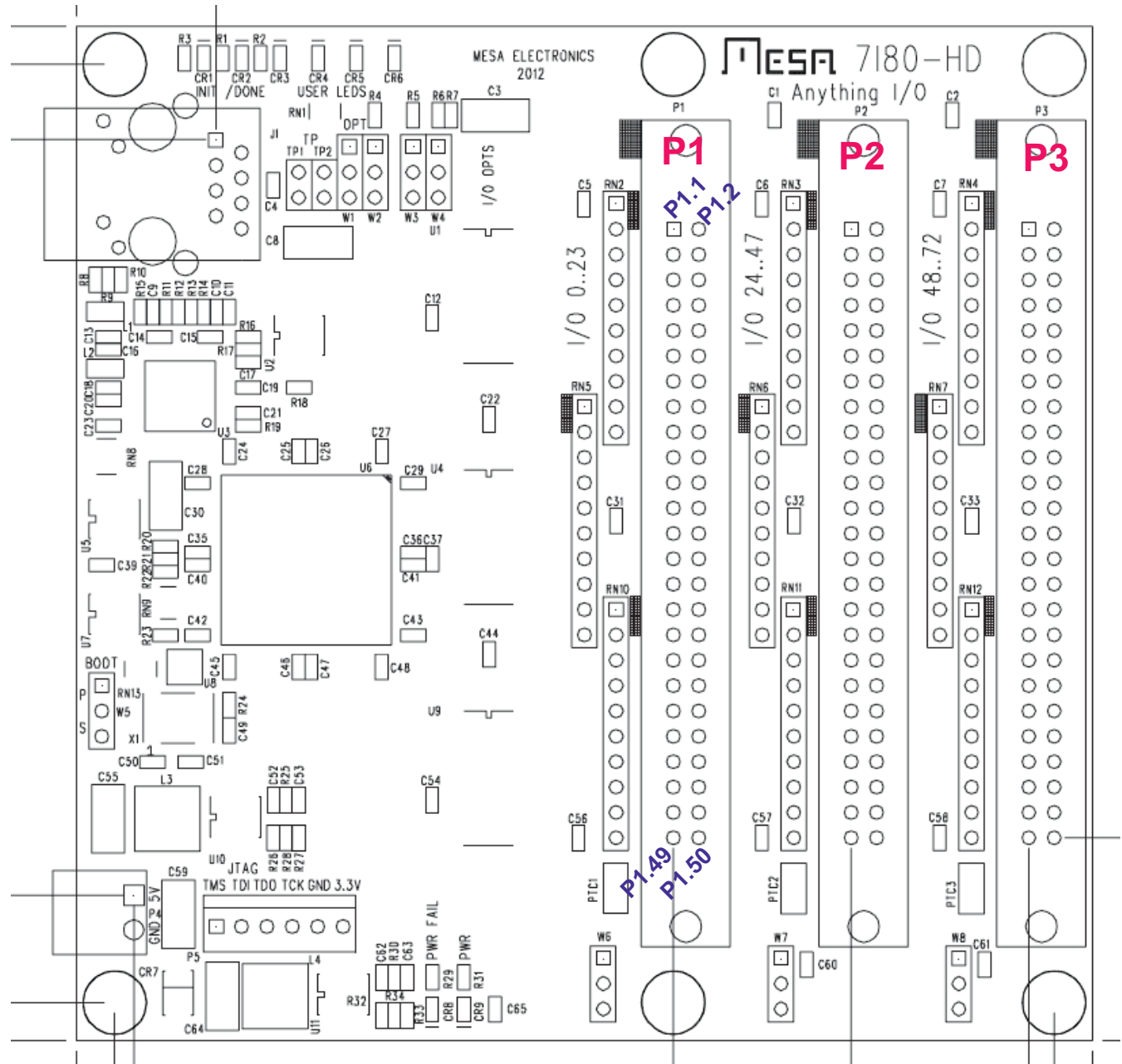
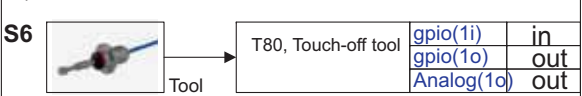
Lathe Carriage, X-Axis Control



Lathe Carriage, Z-Axis Control



Optional Touch-off Tool



Link to the MESA-Card: http://store.mesanet.com/index.php?route=product/product&product_id=62

Link to the Manual of the 7i80-HD: <http://www.mesanet.com/pdf/parallel/7i80hdman.pdf>