17HS24-2104S

24awg

Soldered

26awg automotive
Female connector

A+
A-
B+
B-

26awg automotive
Male connector

Soldered

14awg automotive
4ft approx length

Proof of concept V1

To do:
Add limit switches

TB6600 Drivers

Microstep Driver

Microstep	Pulse/rev	S1	S2	S3
NC	NC	ON	ON	ON
1	200	ON	ON	OFF
2/A	400	ON	OFF	ON
2/B	400	OFF	ON	ON
4	800	ON	OFF	OFF
8	1600	OFF	ON	OFF
16	3200	OFF	OFF	ON
32	6400	OFF	OFF	OFF

	Current	S4	S5	S6
0.5	0.7	ON	ON	ON
1.0	1.2	ON	OFF	ON
1.5	1.7	ON	ON	OFF
2.0	2.2	ON	OFF	OFF
2.5	2.7	OFF	ON	ON
2.8	2.9	OFF	OFF	ON
3.0	3.2	OFF	ON	OFF
3.5	4.0	OFF	OFF	OFF

PWR/ALARM

ENA-
ENA+
DIR-
DIR+
PUL-
PUL+

B-
B+
A-
A+
GND
VCC

DC:9-42VDC

5v signals
26awg Ribbon
YR axis

YL axis
X axis
Z axis

24V power
16awg automotive

MEAN WELL LRS-350-24

Southwire 5120 20 Amp

P4
5V PWR

W6 P1 POWER
OPTION

FPGA
7I96S

P1 EXPANSION CONNECTOR

STEP/DIR 0   STEP/DIR 1   STEP/DIR 2   STEP/DIR 3

IP ADDRESS SELECTION
W4, W5

FPGA STATUS LEDS
USER LEDS

ETHERNET HOST INTERFACE

FRAME GROUND

TB1 STEP/DIR 0...3

TB2 STEP/DIR 4
ENC/SERIAL/ANALOG

TB3 ISOLATED I/O

ENCODER   SERIAL   ANALOG

Ethernet

19V adapter

NUC11PAHi5

MEAN WELL RT-50D

5v

24v   12v   5v

Stabilizing load
20W 120ohm

12v 120mm fans x2

5v LED strip with switch