BUS OUT

MIDI Parser

GND

J2

MIDI_CH1
MIDI_CH2
MIDI_CH3
MIDI_CH4
IN_0

IN_1
IN_2
IN_3
IN_4
IN_5

Header2x6

GND

MIDI IN

J3

1
2

B2B-XH-A (LF)(SN)

Values to be changed,
1206, 0805, and 0603
footprints

VCC_P5V0

C1
4.7uF

C2
1uF

C3
100nF

GND

J1

Gate
CV
+5V
+12V
GND
GND
-12V

VCC_P5V0
VCC_P12V

VCC_N12V

VCC_P5V0
VCC_P12V

VCC_N12V

GND

Header2x8

GND

U5A

ATXMEGA64A3U-AU

U5B
ATXMEGA64A3U-AU

AVCC
DAP
GND

VCC
VCC
VCC
VCC
VCC
GND
GND
GND
GND
GND

J4

2x5_header_1,27mm

P1

Pin Header 2x5

P2

Pin Header 2x5

SCK
MISO
MOSI

Synth 1

VCC_P5V0

U1

VDD
VDD

PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7

MOSI
MISO
SCK
SS1

C?
100nF

GND

VCC_P5V0

AVDD

PB0
PB1
PB2
PB3
PB4
PB5

C?
100nF

GND

VCC_P5V0

PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7

C?
100nF

GND

VCC_P5V0

PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7

C?
100nF

GND

PE0
PE1
PE2
PE3

PF0
PF1
PF2
PF3
PF4
PF5
PF6

GND
GND
GND

UPDI

GND

ATmega4809

VCC_P5V0

J5

2x5_header_1,27mm

GND

Synth 2

VCC_P5V0

U2

VDD
VDD

PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7

MOSI
MISO
SCK
SS1

C?
100nF

GND

VCC_P5V0

AVDD

PB0
PB1
PB2
PB3
PB4
PB5

C?
100nF

GND

VCC_P5V0

PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7

C?
100nF

GND

VCC_P5V0

PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7

C?
100nF

GND

PE0
PE1
PE2
PE3

PF0
PF1
PF2
PF3
PF4
PF5
PF6

GND
GND
GND

UPDI

GND

ATmega4809

VCC_P5V0

J6

2x5_header_1,27mm

GND

Synth 3

VCC_P5V0

U3

VDD
VDD

PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7

MOSI
MISO
SCK
SS1

C?
100nF

GND

VCC_P5V0

AVDD

PB0
PB1
PB2
PB3
PB4
PB5

C?
100nF

GND

VCC_P5V0

PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7

C?
100nF

GND

VCC_P5V0

PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7

C?
100nF

GND

PE0
PE1
PE2
PE3

PF0
PF1
PF2
PF3
PF4
PF5
PF6

GND
GND
GND

UPDI

GND

ATmega4809

VCC_P5V0

J7

2x5_header_1,27mm

GND

Synth 4

VCC_P5V0

U4

VDD
VDD

PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7

MOSI
MISO
SCK
SS1

C?
100nF

GND

VCC_P5V0

AVDD

PB0
PB1
PB2
PB3
PB4
PB5

C?
100nF

GND

VCC_P5V0

PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7

C?
100nF

GND

VCC_P5V0

PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7

C?
100nF

GND

PE0
PE1
PE2
PE3

PF0
PF1
PF2
PF3
PF4
PF5
PF6

GND
GND
GND

UPDI

GND

ATmega4809

VCC_P5V0

J8

2x5_header_1,27mm

GND

Title: *

Size: A3   Revision: 6   Author: *
Date: 29/01/2020   Sheet * of *   *
File: C:\Git\tesla-driver\05_Hardware\TK100_Tonegenerator\TK106_MIDI\TK106_MIDI.SchDoc

OMEGA VERKSTED

J3

C1 C2 C3

U5

U1

TQFP48

U2

TQFP48

U3

TQFP48

U4

TQFP48

Designator	Quantity	navn	beskrivelse	leverandor	leverandor_varenr	antall
P1, P2	2					
C2	1	1uF		Farnell	1735541	
C1	1	4.7uF				
C?	12	33uF		Farnell	1834148	120
C3	1	100nF		Farnell	1759122	
U1, U2, U3, U4	4	ATmega4809	8-bit mikrokontroller			
U5	1	ATXMEGA64 A3U-AU	Mikrokontroller			900
J3	1	B2B-XH-A (LF)(SN)	JST 2pin (pris pr. stk.)	Farnell	1516276	206
J1	1	Header Shrouded 2X8P	Header			
J4, J5, J6, J7, J8	5	Header SMD 127 2x5	1,27mm Pitch SMD Header			55
J2	1	sawed off PCI edge connector 10pin	hacky way to use a sawed off PCI as a PCB edge connector			