U15
STM32F4_Black_Pill

Pin	Signal
18	+5V
40	+5V
20	+3v3
38	+3v3
21	VBAT
19	GND
39	GND
25	NRST

Signal	Pin		Pin	Signal
SR_IN_LATCH	1	B12	B10	37	MUX_S3
SPI_CLK	2	B13	B2	36	MUX_S2
SR_IN_DATA	3	B14	B1	35	MUX_S0
	4	B15	B0	34	MUX_S1
	5	A8	A7	33	MUX_COMMON_4
DMX_TSCREEN_TX	6	A9	A6	32	MUX_COMMON_3
TSCREEN_RX	7	A10	A5	31	MUX_COMMON_2
	8	A11/USB_D–	A4	30	MUX_COMMON_1
	9	A12/USB_D+	A3	29	MIDI_RX
	10	A15	A2	28	MIDI_TX
	11	B3	A1	27	TRAFFIC_IN
	12	B4	A0/Key	26	TRAFFIC_OUT
DEC_DI_A0	13	B5	C15	24	MAX7219_DIN
SCL	14	B6	C14	23	MAX7219_LOAD
SDA	15	B7	C13/LED	22	
DEC_DI_A1	16	B8			
DEC_DI_A2	17	B9			

U16
Arduino_Nano_33

Pin	Signal
12	+5V
2	+3V3
15	VIN
14	GND
19	GND
3	AREF
13	RESET
18	RESET

Signal	Pin		Pin	Signal
DEC_DI_A0	1	D13	D12	30	MAX7219_DIN
SPI_CLK	4	A0	D11	29	DEC_DI_A1
SR_IN_LATCH	5	A1	D10	28	DEC_DI_A2
MUX_COMMON_4	6	A2	D9	27	TSCREEN_RX
MUX_COMMON_3	7	A3	D8	26	DMX_TSCREEN_TX
SDA	8	A4	D7	25	SR_IN_DATA
SCL	9	A5	D6	24	MUX_S2
MUX_COMMON_2	10	A6	D5	23	MUX_S3
MUX_COMMON_1	11	A7	D4	22	MUX_S0
			D3	21	MUX_S1
			D2	20	MAX7219_LOAD
			RX	17	MIDI_RX
			TX	16	MIDI_TX

+5V C15 10u C16 100n GND

Indicators
TRAFFIC_IN — TRAFFIC_IN
TRAFFIC_OUT — TRAFFIC_OUT

DMX
DMX_TX — DMX_TSCREEN_TX

DIN MIDI
MIDI_TX — MIDI_TX
MIDI_RX — MIDI_RX

H1 — GND
H2 — GND
H3 — GND
H4 — GND

J5
	Pin	
MIDI_RX	1	
GND	2	

Note:
Used as bootloader button only on startup.

J6
Signal	Pin
SDA	1
SCL	2
GND	3
+3.3V	4

J7
Signal	Pin
GND	1
	2
+3.3V	3
	4

J8
Signal	Pin
GND	1
	2
+5V	3
	4

J3
Signal	Pin
GND	1
TSCREEN_RX	2
DMX_TSCREEN_TX	3
	4

U?
SPX3819M5
+5V GND
Pin		Pin
1 IN	OUT	5
2 GND		
3 EN	ADJ	4
→ +3.3VADC
C? 1u GND

U?
74HC138
C? 100n +3.3V GND
Pin	Signal		Signal	Pin
16	VCC	Y0	15	BC_1
8	GND	Y1	14	BC_2
1	A0	Y2	13	BC_3
2	A1	Y3	12	BC_4
3	A2	Y4	11	BC_5
4	E1	Y5	10	BC_6
5	E2	Y6	9	BC_7
6	E3	Y7	7	BC_0

DEC_DI_A0 1 A0
DEC_DI_A1 2 A1
DEC_DI_A2 3 A2
GND +3.3V

BA0?
To Any Breakout Board

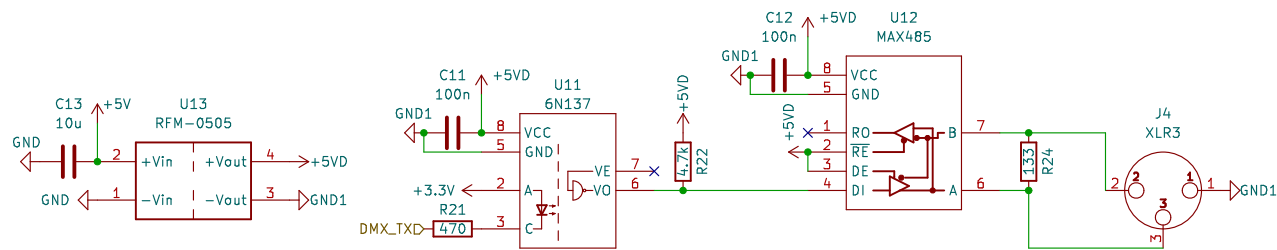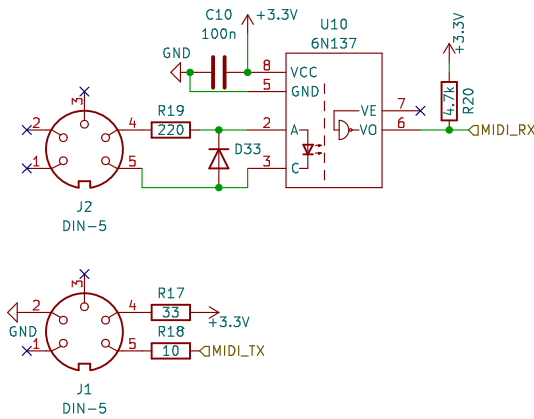| Signal	Pin		Pin	Signal
MAX7219_LOAD	1		13	MAX7219_DIN
SR_IN_LATCH	2		14	MUX_COMMON_1
SR_IN_DATA	3		15	MUX_COMMON_2
SPI_CLK	4		16	MUX_COMMON_3
BC_0	5		17	MUX_COMMON_4
BC_1	6		18	MUX_S0
BC_2	7		19	MUX_S1
BC_3	8		20	MUX_S2
BC_4	9		21	MUX_S3
BC_5	10		22	GND
BC_6	11		23	+3.3V
BC_7	12		24	+5V

Authors: Shantea Controls & Tim Nelson
Board: BaseBoard

Sheet: /
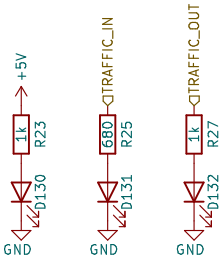File: ModularDeck-r1.0.0.kicad_sch
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Size: A3   Date: Rev:
KiCad E.D.A. kicad 6.0.7-1.fc36   Id: 1/4

C13
10u
U13
RFM-0505
+5V
GND
+Vin   +Vout   4   +5VD
2
GND   1   -Vin   -Vout   3   GND1

C11
100n
+5VD
U11
6N137
GND1
VCC
GND
8
5
+3.3V   2   A   VE   7
VO   6
DMX_TXD   R21   3   C
470

+5VD
R22
4.7k

C12
100n
+5VD
U12
MAX485
GND1
VCC
GND
8
5
+5VD
1   RO   B   7
2   RE
3   DE
4   DI   A   6

R24
133

J4
XLR3
2
3
1   GND1
3

C10
100n +3.3V

GND

U10
6N137

+3.3V

VCC 8
GND 5

VE 7
VO 6

4,7k
R20

MIDI_RX

R19
220

2 A

3 C

D33

J2
DIN-5

R17
33

+3.3V

R18
10

MIDI_TX

GND

J1
DIN-5

+5V

R23 1k

D130

GND

TRAFFIC_IN

R25 680

D131

GND

TRAFFIC_OUT

R27 1k

D132

GND

Note:
In/Out indicators used only for Black Pill.
Arduino already has indicators integrated in board.

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Size: A3   Date:
KiCad E.D.A. kicad 6.0.7-1.fc36
Rev:
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