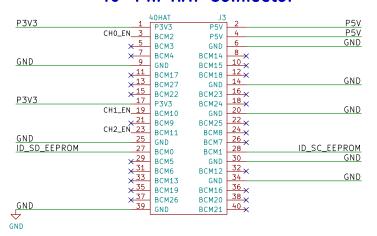This is based on the official Raspberry Pi spec to be able to call an extension board a HAT.
https://github.com/raspberrypi/hats/blob/master/designguide.md

40-Pin HAT Connector

40HAT J3

P3V3	1	P3V3	P5V	2	P5V
CH0_EN	3	BCM2	P5V	4	P5V
	5	BCM3	GND	6	
	7	BCM4	BCM14	8	
GND	9	GND	BCM15	10	
	11	BCM17	BCM18	12	
	13	BCM27	GND	14	GND
P3V3	15	BCM22	BCM23	16	
	17	P3V3	BCM24	18	
CH1_EN	19	BCM10	GND	20	GND
	21	BCM9	BCM25	22	
CH2_EN	23	BCM11	BCM8	24	
GND	25	GND	BCM7	26	
ID_SD_EEPROM	27	BCM0	BCM1	28	ID_SC_EEPROM
	29	BCM5	GND	30	GND
	31	BCM6	BCM12	32	
	33	BCM13	GND	34	GND
	35	BCM19	BCM16	36	
	37	BCM26	BCM20	38	
GND	39	GND	BCM21	40	

GND

Pullup Resistors

These are just pullup resistors for the I2C bus on the EEPROM.
The resistor values are per the HAT spec.

ID_SD_EEPROM_pu — 3.9K R6 — P3V3
ID_SD_EEPROM

ID_SC_EEPROM_pu — 3.9K R8
ID_SC_EEPROM

Mounting Holes

H1 3mm_Mounting_Hole
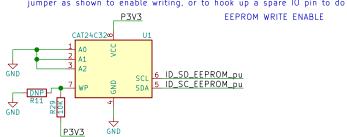H2 3mm_Mounting_Hole
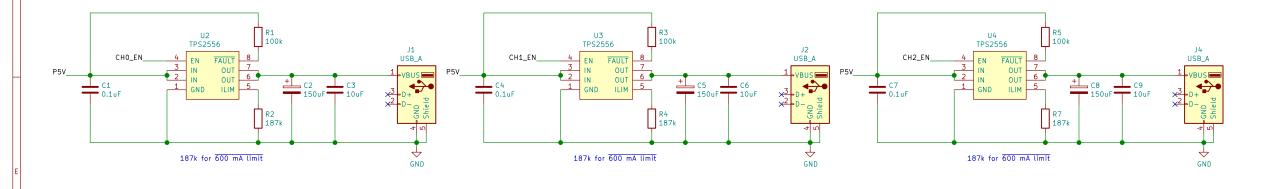H3 3mm_Mounting_Hole
H4 3mm_Mounting_Hole

HAT EEPROM

The HAT spec requires this EEPROM with system information
to be in place in order to be called a HAT. It should be set up as write
protected (WP pin held high), so it may be desirable to either put a
jumper as shown to enable writing, or to hook up a spare IO pin to do so.

EEPROM WRITE ENABLE

P3V3

CAT24C32 U1

2	A0	VCC	8
1	A1		
3	A2		
7	WP	SCL	6	ID_SD_EEPROM_pu
	GND	SDA	5	ID_SC_EEPROM_pu

GND
DNP R11
R29 10K
GND
P3V3
GND

U2 TPS2556
CH0_EN
4	EN	FAULT	8
3	IN	OUT	7
2	IN	OUT	6
1	GND	ILIM	5
P5V
C1 0.1uF
R1 100k
R2 187k
C2 150uF
C3 10uF
J1 USB_A
VBUS
D+
D-
GND
Shield
GND
187k for 600 mA limit

U3 TPS2556
CH1_EN
4	EN	FAULT	8
3	IN	OUT	7
2	IN	OUT	6
1	GND	ILIM	5
P5V
C4 0.1uF
R3 100k
R4 187k
C5 150uF
C6 10uF
J2 USB_A
VBUS
D+
D-
GND
Shield
GND
187k for 600 mA limit

U4 TPS2556
CH2_EN
4	EN	FAULT	8
3	IN	OUT	7
2	IN	OUT	6
1	GND	ILIM	5
P5V
C7 0.1uF
R5 100k
R7 187k
C8 150uF
C9 10uF
J4 USB_A
VBUS
D+
D-
GND
Shield
GND
187k for 600 mA limit