L1
Core_64_Github_Link

YL: 6
SENSE: 2
I2C: 2
GND, 3V3: 2
MHS: 4 (hall switches)
TOTAL=16

Core_Memory_8x8_Array_Front_Facing

XT: 4
XB :8
LED MATRIX: 3
(V+, SIGNAL, GND)
SPARE: 1 for 2nd GPIO of SAO3 (LED signal shared as 1st GPIO)
TOTAL=16

J1
TSM-116-03-T-SV

CM1

J2
TSM-116-03-T-SV

J3
LED ARRAY

X1
SFH11-NBPC-D03-ST-BK

SIG1 on the PCB silkscreen

DIGITAL LOGIC GROUND

SYSTEM POWER GROUND

v0.3 Testing I2C sensor instead of just switch.
Silicon Labs SI7210-B-04-IVR (configurable with 4 addresses, 0x30 up to 0x33 as P/N Si7210-B-01- IV(R) through Si7210-B-04- IV(R)
Low (push-pull) up to 20 mT, SOT23-5
https://www.digikey.com/product-detail/en/silicon-labs/SI7210-B-04-IVR/336-4129-1-ND/7648844

U5
SI7210-B-01

U6
SI7210-B-02

U7
SI7210-B-03

U8
SI7210-B-04

U1
A3214ELHL-T

U2
DRV5032FADBZR

U3
DRV5032DUDBZR

U4
DRV5032

JP1
Hall_1

JP2
Hall_2

JP3
Hall_3

JP4
Hall_4

HALL SWITCH 1 (MODE)
v0.1 used hall sensor Allegro A3214ELHLT-T, Omnipolar N/S, ±7mT trip, ±1mT release SOT23W
https://www.digikey.com/product-detail/en/allegro-microsystems/A3214ELHLT-T/620-1519-1-ND/4171832

HALL SWITCH 2 (A)
v0.3 Try more sensitive option:
TI DRV5032FADBZR, Omni, 4.8mT, 20Hz, Push-Pull output, SOT23-3
https://www.digikey.com/product-detail/en/texas-instruments/DRV5032FADBZR/296-47765-1-ND/8133114

HALL SWITCH 3 (B)
v0.3 Try more sensitive option:
TI DRV5032DUDBZR, Unipolar, 3.9mT, ±20Hz, Push-pull output, SOT23-3
https://www.digikey.com/product-detail/en/texas-instruments/DRV5032DUDBZR/296-DRV5032DUDBZRCT-ND/10435200

HALL SWITCH 4 (SET)
???

As prototyped 2020-04-17

Andy Geppert – Machine Ideas, LLC

Sheet: /
File: Interactive Core Memory Badge (Cores) v0.3.sch

Title: Core 64 – Interactive Core Memory Badge (Cores)

Size: A	Date: 2020-04-17	**Rev: 0.3**
KiCad E.D.A. kicad (5.1.2-1)-1		Id: 1/1