USB

VBUS VCC
PWR_FLAG PWR_FLAG

MCU

VCC   VBUS VCC

R1
10k

RESET
RESET
UVCC VCC AVCC
PB0 PB0 SCK
PB1 PB1
PB2 PB2 MOSI
PB3 PB3 MISO
PB4 PB4
PB5 PB5
PB6 PB6
PB7 PB7 RGBLED
XTAL1
XTAL2
AREF
VBUS
PC6 PC6
PC7 PC7

C1 10p
Y1
X322516MLB4SI
C2 10p
GND GND

R4 22
D−
D+
22
R5
C6 1u
UCAP

PD0 PD0 SDA
PD1 PD1 SCL
PD2 PD2
PD3 PD3
PD4 PD4
PD5 PD5
PD6 PD6
PD7 PD7

VBUS

GND

HWB/PE2
PE6 PE6
GND

PF0 PF0
PF1 PF1
PF4 PF4
PF5 PF5
PF6 PF6
PF7 PF7

VCC
C7 0.1u   C8 0.1u   C9 0.1u   C10 0.1u
GND GND GND GND

UGND GND
U1
ATmega32U4−AU
GND

TO KEY MATRIX

VCC

RGBLED

PD0
PD1
PD2
PD3
PB0
PB1
PB2
PB3

PE6
PF0
PF1
PF4
PF5
PF6
PF7
PC7

PC6
PB6
PB5
PB4
PD7
PD6
PD5
PD4

Interrupt Pins (Additional Cols)
Recommended for
A−pin of Rotary Encoders

ICSP   14 Cols

6 Rows

J1
Conn_01x30_MountingPin

GND   GND

USB1
HRO−TYPE−C−31−M−12

VBUS A4 R2 5.1k
CC1   A5
CC2   B5
A7
D− B7
D+ A6
D+ B6
R3 5.1k
D−
D−
D+
D+

SHIELD
SBU1 A8
SBU2 B8

S1   A1
GND GND

VBUS VCC
F1
Polyfuse
C4 0.1u   C5 1u
GND   GND

VBUS
D1
PRTR5V0U2X
VCC
D+ I/O1
D− 2
I/O2 D−
GND
GND

GND

ICSP

VCC
J2
ICSP
MISO 1   2 MOSI
SCK   3   4 MOSI
RESET 5   6
RESET
GND

TP1
TestPoint
TP2
TestPoint
GND

MECHANICAL HOLES & SILKS

M2 Holes
H4   H1   H2   H3
MountingHole MountingHole MountingHole MountingHole
GND

Mousebite
H5   H6   H7
MountingHole MountingHole MountingHole

H9   H10
MountingHole MountingHole

OSHW Logo
H8
MountingHole