5V DC in
VBUS 1
GND 2
1
2

VBUS
D3
R13
0R
3
IN
GND
OUT
2*2
U1
1117/3V3
U1:NC
1
GND
3V3
3V3
10uF
0.1uF
C12
GND

J2
D2/INT0 1
D3/INT1 2
D4 3
D5 4
D6 5
D7 6
D8 7
D9 8
3V3 9
GND 10
GND 11

J4
A5/SCL 1
A4/SDA 2
A3 3
A2 4
A1 5
A0 6
D10 7
D11/MOSI 8
D12/MISO 9
D13/SCK 10
RESET 11
D0/RX 12
D1/TX 13
HEADER-13P

Maduino Power Line Modem v1.2
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USB TO SERIAL CONVERTER

3V3
330R
R3
Blue
PWR
GND

IC1G$1
CP2104
VIO
VDD
REGIN
#RST
#SUSPEND
SUSPEND
GPIO0/TXLED
GPIO1/RXLED
GPIO2
GPIO3
VBUS
D+
D-
VPP
NC
RI
DCD
DTR
DSR
TXD
RXD
RTS
CTS
VIO 1.8-VDD
CP2104
3V3
10uF
C1
VBUS
GND GND
4.7uF
C6
GND

J5
VCC
DM
DP
ID
GND
VBUS
D-
D+
E1*2
E2*2
GND
GND
USB-MICRO-5P
GND
GND

IC1G$2
THERMAL
PAD
GND

RESET
GND
DTR
C8
100nF
R2
10k
3V3

ATMEGA328P
RESET 29
GND 5
AREF 20
3V3 18
C5 100nF
C9 100nF
XTAL1
XTAL2
R1
1M
16MHZ
GND 3
21
4
6
C3 100nF
3V3
GND
GND
AREF
AVCC
VCC
VCC
PC6(/RESET)
PC0(ADC0)
PC1(ADC1)
PC2(ADC2)
PC3(ADC3)
PC4(ADC4/SDA)
PC5(ADC5/SCL)
ADC6
ADC7
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
PD0(RXD)
PD1(TXD)
PD2(INT0)
PD3(INT1)
PD4(XCK/T0)
PD5(T1)
PD6(AIN0)
PD7(AIN1)
PB0(ICP)
PB1(OC1A)
PB2(SS/OC1B)
PB3(MOSI/OC2)
PB4(MISO)
PB5(SCK)
23 A0
24 A1
25 A2
26 A3
27 A4/SDA
28 A5/SCL
19 A6
22 A7
30 D0/RX
31 D1/TX
32 D2/INT0
1 D3/INT1
2 D4
9 D5
10 D6
11 D7
12 D8
13 D9
14 D10
15 D11/MOSI
16 D12/MISO
17 D13/SCK
U2

220VAC
JP1
2 N
1
M025MM
L
N
F1
FUSE01
R8
10D471K
R9
1MR
R6
220K
OK3
H11AA1SM
3V3
R14
1K
R15
10K
GND
3V3
R16
10K
Q2
600mA/40V
R17
0R
D2/INT0
C2
27pF
GND
250VAC
L
R8:NC
C15
47nF/X2
L2
47μH/±20%
P$6 P$5 P$4
U4
78250MC
TP$1 TP$2 P$3
R4
100R
C18
0.1uF/25V
L1
22μH/±20%
GND
C14
10uF/16V
10nF
C11

VBUS
SS34
D5
5V
5.5x2.1mm Barrel
DC
C13
10uF
C25
0.1uF
C16
4.7uF/16V
GND
GND

POWER AND FILTERING

PD R5 0R D5
CLK_OUT R7 0R D6
DATA_OUT R11 0R D7
DATA_IN R12 0R D8

5V
C23
47nF/16V
C21
47UF-POLAR-PANASONIC_D-50V-20%
GND GND
DATA_IN 1
DATA_OUT 2
3
CLK_OUT 4
5
6
7
8
DATA_IN
DATA_OUT
VDDD
CLK_OUT
DGND
SCANTEST
OSC1
OSC2
TEST1 16
PD 15
RX_IN 14
VDDA 13
AGND 12
VDDAP 11
TX_OUT 10
APGND 9
PD
U3
TDA5051A
GND
C10
27pF
Gnd
Q1
8Mhz
R10
2.2MR
GND
C7
27pF
GND
SA5.0A
D6
GND
5V
R20
NC
R21
NC
0R
C17
R23
0R
Q3
BC817-40
Q3:NC
R19
NC
R18
NC
GND