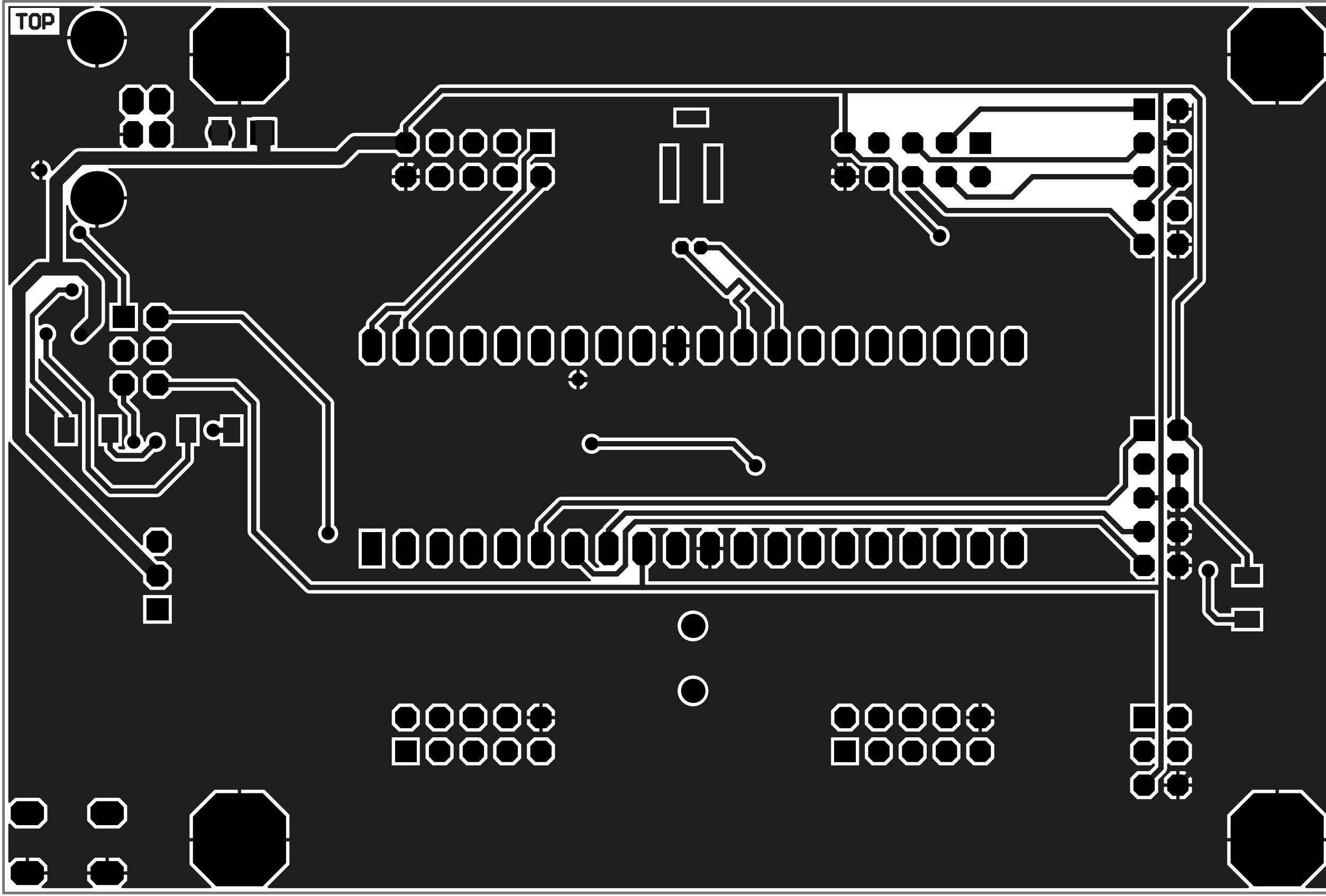
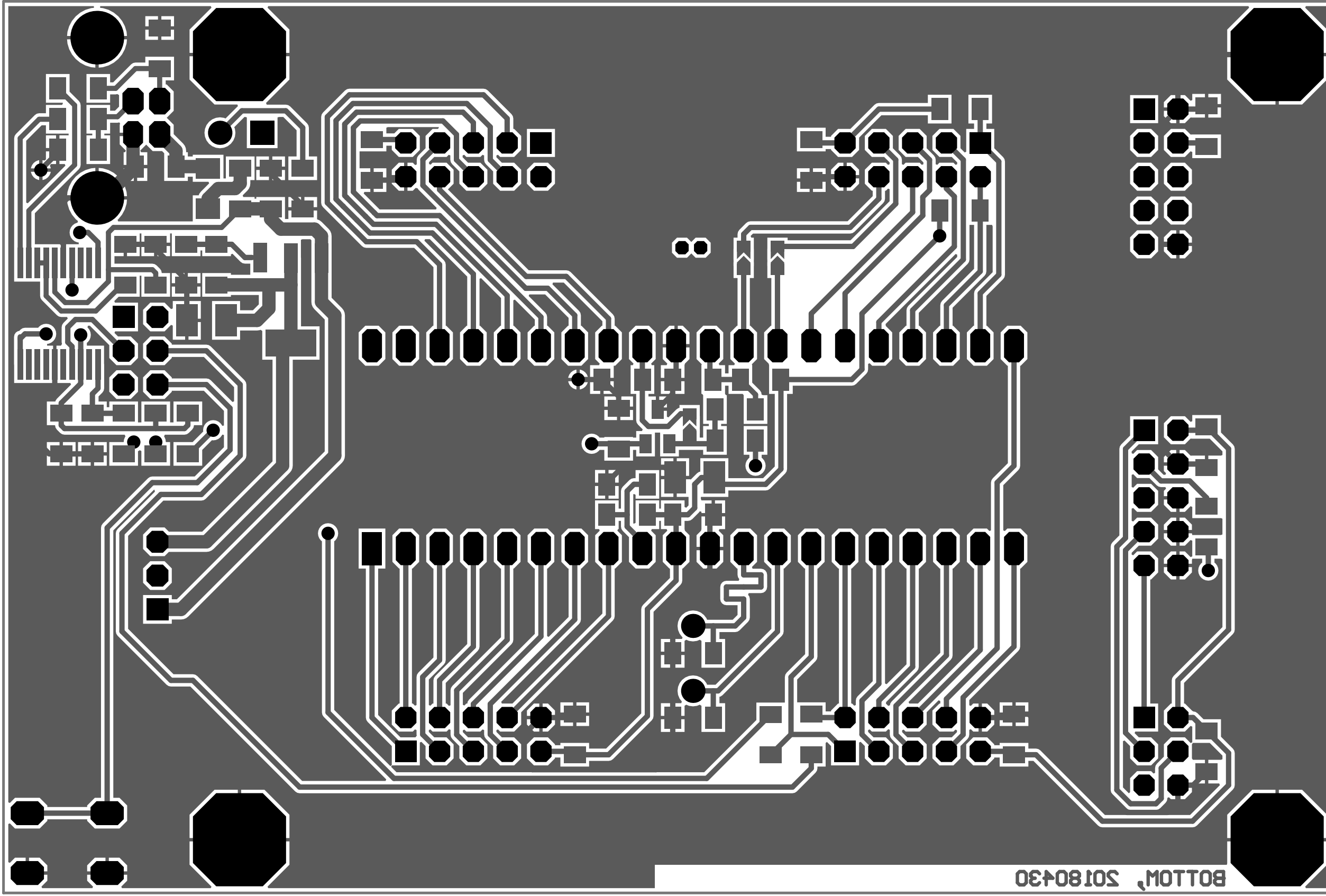




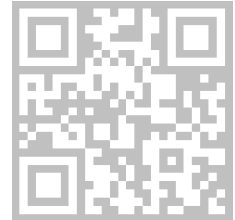
TOP



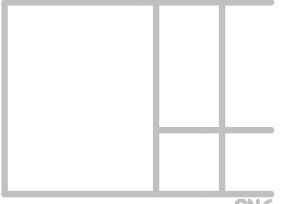


  
RESET

  
open source  
hardware



TARGET  
VOLTAGE


  
3V3  
5V0

USB-UART  
CONVERTER

RxD  
Tx

RxD0  
TxD0  
nDTR  
nRST

POWER



<http://bit.ly/2wq4n0I>

PORT B

0: T0  
2: AIN0  
4: nSS  
6: MISO  
VCC

1: CLKO  
3: AIN1  
5: MOSI  
7: SCK  
GND

PORT A

GND  
7: ADC7  
5: ADC5  
3: ADC3  
1: ADC1

VCC  
6: ADC6  
4: ADC4  
2: ADC2  
0: ADC0



PORT D

0: RXD0  
2: RXD1  
4: OC1B  
6: OC2B  
VCC

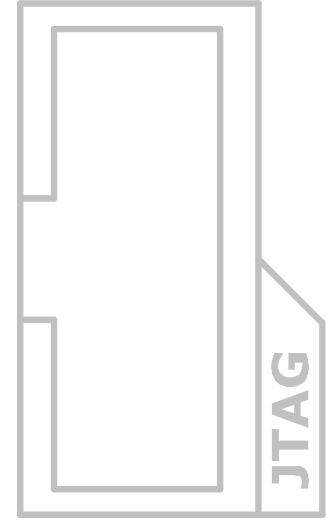
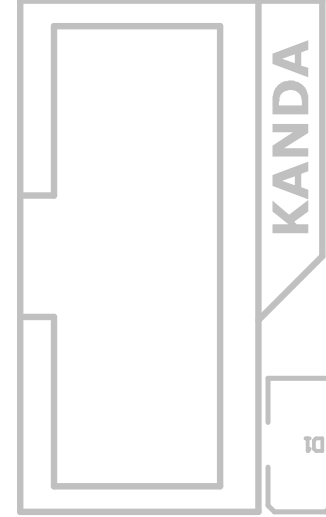
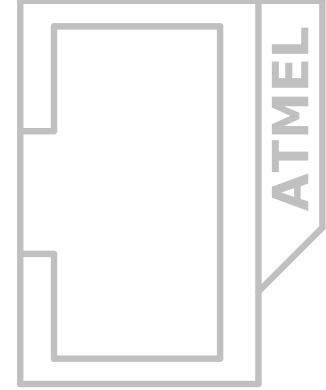
1: TXD0  
3: TXD1  
5: OC1A  
7: OC2A  
GND

PORT C

GND  
7: TOS2  
5: TDI  
3: TMS  
1: SDA

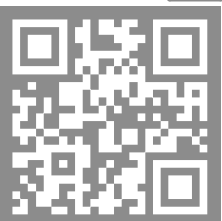
VCC  
6: TOS1  
4: TDO  
2: TCK  
0: SCL

ATmega164PA / 324PA / 644PA



http://elektronicky.p.lodz.pl

Katedra Przyrządów Półprzewodnikowych  
Instytut Elektroniki  
Katedra Mikroelektroniki i Technik Informacyjnych



ATMEL ISP:

MISO →

VCC →

SCK →

MOSI →

RESET →

GND →




Diagram showing the pin connections for the ATmega328P microcontroller. The pins are labeled: MISO, VCC, SCK, MOSI, RESET, and GND. The connections are as follows:

- MISO: Connected to a purple wire.
- VCC: Connected to a red wire.
- SCK: Connected to a yellow wire.
- MOSI: Connected to a green wire.
- RESET: Connected to a blue wire.
- GND: Connected to a black wire.

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## ATMEL ISP:

MISO →  
 VCC →  
 SCK →  
 MOSI →  
 nRES →  
 GND →

310

15

**BD6**  
**BD2**  
**BD4**  
**BD3**  
**BD5**  
**BD1**  
**BD0**  
**XLAT1**  
**XLAT5**

**KANDA I2S:**

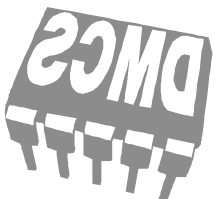
Pin	Signal
1	GND
2	MISO
3	GND
4	SCK
5	GND
6	RESET
7	GND
8	LED
9	VCC
10	MOSI

73

RS

KANDA 12P:

→ MOSI	
→ VCC	
→ LED	
→ GND	
→ NRES	
→ GND	
→ SCK	
→ GND	
→ MISO	
→ GND	






**BD6**  
**BD2**  
**BD4**  
**BD3**  
**BD5**  
**BD1**  
**BD0**  
**XLV**  
**XLV**  
**XLV**  
**GND**  
**ACC**  
**URE**  
**BB1**  
**BB6**  
**BB2**  
**BB4**  
**BB3**  
**BB5**  
**BB1**  
**BB0**

**BD2**  
**BC0**  
**BC1**  
**BC5**  
**BC3**  
**BC4**  
**BC2**  
**BC6**  
**BC7**  
**ACC**  
**GND**  
**REF**  
**BV7**  
**BV6**  
**BV2**  
**BV4**  
**BV3**  
**BV5**  
**BV1**  
**BV0**

**DATA**

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TCK →  
GND →  
TDO →  
VCC →  
TMS →  
RESET →  
VCC →  
N.C. →  
TDI →  
GND →

$$\left[ \begin{array}{c} \text{ } \end{array} \right] \text{Re} \left[ \begin{array}{c} \text{ } \end{array} \right]$$

□ □

13

13 15

111

etc

R17	C53	F85	L1	C18

[illegible]

40

	SU
--	----

RIO RIT CSO

R14	R13	R12	R11	R10

