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# UMDS

# ATMEGA-644

Beschrieb V 1.1

**CPU-MODUL für ATMEGA-644**  
**CPU-MODUL for ATMEGA-644**

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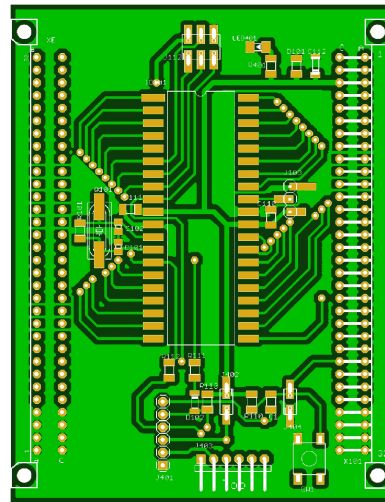
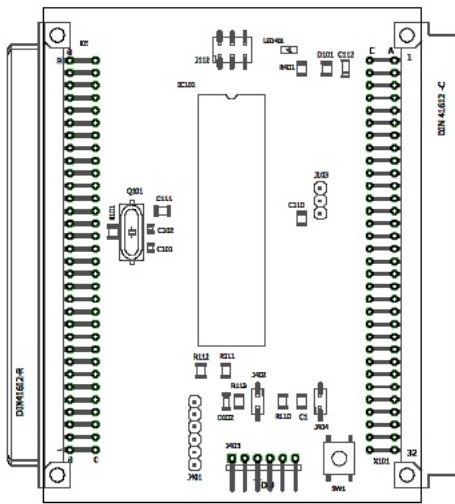
# Shortform



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J.Schnyder GmbH

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## UMDS-ATMEGA-644



Dimension: 100mm x 76.2mm

Version 1.1

## Beschrieb / Description / Descrizione

Modul für den ATMEGA-644(P) Microcontroller.

Ein Reset-Schalter ermöglicht das Ausführen von Reset's ohne zusätzliche Bauteile.

## Steckerbelegung / Pinout / Conessioni

### J103 AD-Referenz

1	GND
2	VAREF
3	+5V

### J112 Programmierstecker

1	MISO (PB6)	2	+5V
3	SCK (PB7)	4	MOSI (PB5)
5	/RESET	6	GND

### J401, J403 serielles Interface

1	GND
2	FTDI-/CTS (/RESET)
3	FTDI-VCC
4	FTDI-TXD (RXD0)
5	FTDI-RXD (TXD0)
6	FTDI-/RTS (/RESET)

### J404 /RESET

1	GND
2	/RESET

**X201,XE BUS-Stecker**

<b>1A</b>	+3.3V	<b>1C</b>	+3.3V
<b>2A</b>	+3.3V	<b>2C</b>	+3.3V
<b>3A</b>	+5V	<b>3C</b>	+5V
<b>4A</b>	+5V	<b>4C</b>	+5V
<b>5A</b>	PA0/GP0	<b>5C</b>	PA1/GP1
<b>6A</b>	PA2/GP2	<b>6C</b>	PA3/GP3
<b>7A</b>	PA4/GP4	<b>7C</b>	PA5/GP5
<b>8A</b>	PA6/GP6	<b>8C</b>	PA7/GP7
<b>9A</b>	PB0/GP8	<b>9C</b>	PB1/GP9
<b>10A</b>	PB2/GP10	<b>10C</b>	PB3/GP11
<b>11A</b>	PB4/GP12	<b>11C</b>	PB5/GP13
<b>12A</b>	PB6/GP14	<b>12C</b>	PB7/GP15
<b>13A</b>	PC0/GP16	<b>13C</b>	PC1/GP17
<b>14A</b>	PC2/GP18	<b>14C</b>	PC3/GP19
<b>15A</b>	PC4/GP20	<b>15C</b>	PC5/GP21
<b>16A</b>	PC6/GP22	<b>16C</b>	PC7/GP23
<b>17A</b>	PD0/GP24	<b>17C</b>	PD1/GP25
<b>18A</b>	PD2/GP26	<b>18C</b>	PD3/GP27
<b>19A</b>	PD4/GP28	<b>19C</b>	PD5/GP29
<b>20A</b>	PD6/GP30	<b>20C</b>	PD7/GP31
<b>21A</b>	PE0/GP32	<b>21C</b>	PE1/GP33
<b>22A</b>	PE2/GP34	<b>22C</b>	PE3/GP35
<b>23A</b>	PE4/GP36	<b>23C</b>	PE5/GP37
<b>24A</b>	PE6/GP38	<b>24C</b>	PE7/GP39
<b>25A</b>	IRQ	<b>25C</b>	/RESET
<b>26A</b>	PWR	<b>26C</b>	PWR
<b>27A</b>	PWR	<b>27C</b>	PWR
<b>28A</b>	PWR	<b>28C</b>	PWR
<b>29A</b>	GND	<b>29C</b>	GND
<b>30A</b>	GND	<b>30C</b>	GND
<b>31A</b>	GND	<b>31C</b>	GND
<b>32A</b>	GND	<b>32C</b>	GND

## Stückliste / Bill of Material / Distinta Componenti

Part	Value	Device	Package	Description
C1	100N	C-1206	1206	
C101	22P	C-805	805	
C102	22P	C-805	805	
C110	10U	C-1206	1206	
C111	100N	C-1206	1206	
C112	100N	C-1206	1206	
D101	--	ZMMXX	MM	
D102	LL1N4148	DIODE-MM	MM	nur bei Parallelbetrieb sonst mit R0/1206 über- brücken
IC101	ATMEGA644P	ATMEGA644	DIL40SMD	auf Sockel DIL 40pol. Steckkontakte abgewin- kelt
J103	CON03X1SMD	CON03X1SMD	1X03SMD	Stiftleiste 3x1pol.
J112	CON03X2-SMD	CON03X2-SMD	2X03SMD	Stiftleiste 3x1pol.
J401	CON06X1SMD	CON06X1SMD	1X06SMD	Stiftleiste 6x1pol.
<b>J402</b>	<b>CON02X1SMD</b>	<b>CON02X1SMD</b>	<b>1X02SMD</b>	Stiftleiste 2x1pol.
J403	CON06X1W	CON06X1W	1X06W	Stiftleiste 6x1pol.
J404	CON02X1SMD	CON02X1SMD	1X02SMD	Stiftleiste 2x1pol. SMD
LED401	LED-1206	LED-1206	LED-1206	yellow
Q101	16MHz or 20MHz	SM49	SM49	
R101	10M	R-1206	1206	
R110	4K7	R-1206	1206	
R111	220	R-1206	1206	
R112	220	R-1206	1206	
R113	2K2	R-1206	1206	nur bei Parallelbetrieb sonst weglassen
R401	1K	R-1206	1206	
SW1	LSG	LSG	LSG	Reset-Schalter SMD z.B MC32882
X101	DIN41612-ac-64pol-M	MAC64LE	MAC64L	z.B. AMPHENOL ICC 86094647113755E1LF
XE	DIN41612-ac-64pol-F	FAC64W	FAC64R	z.B. ETP 103-40034
Print	UMDS-ATMEGA-644	V 1.1		

Links / Colegamenti

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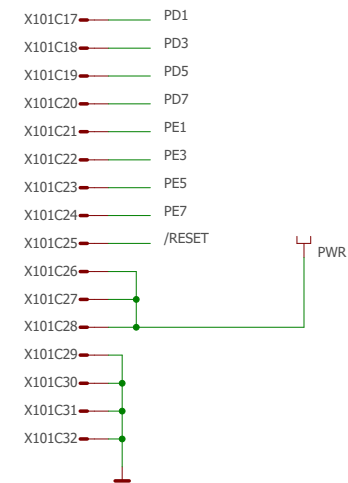
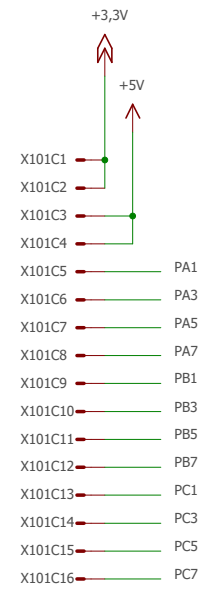
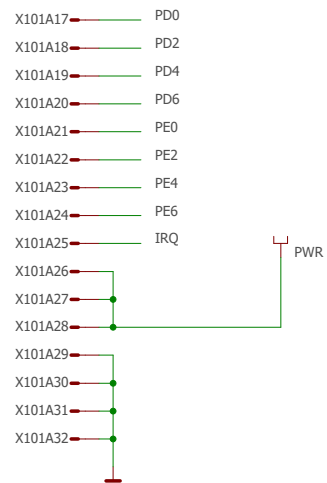
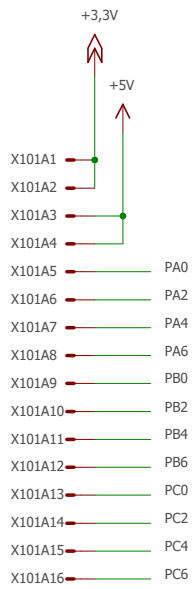
Entwicklung von Hard- und Software

Schulungs-Systeme

Kurse für Maker

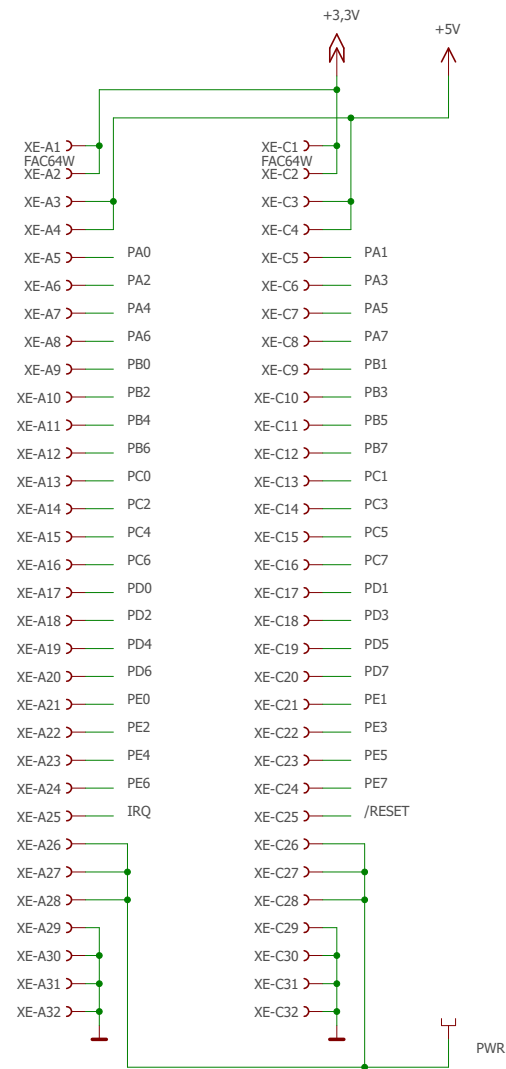
## **Anhang**

- Schema**
- Bestückungspläne**
- Print-Layouts**

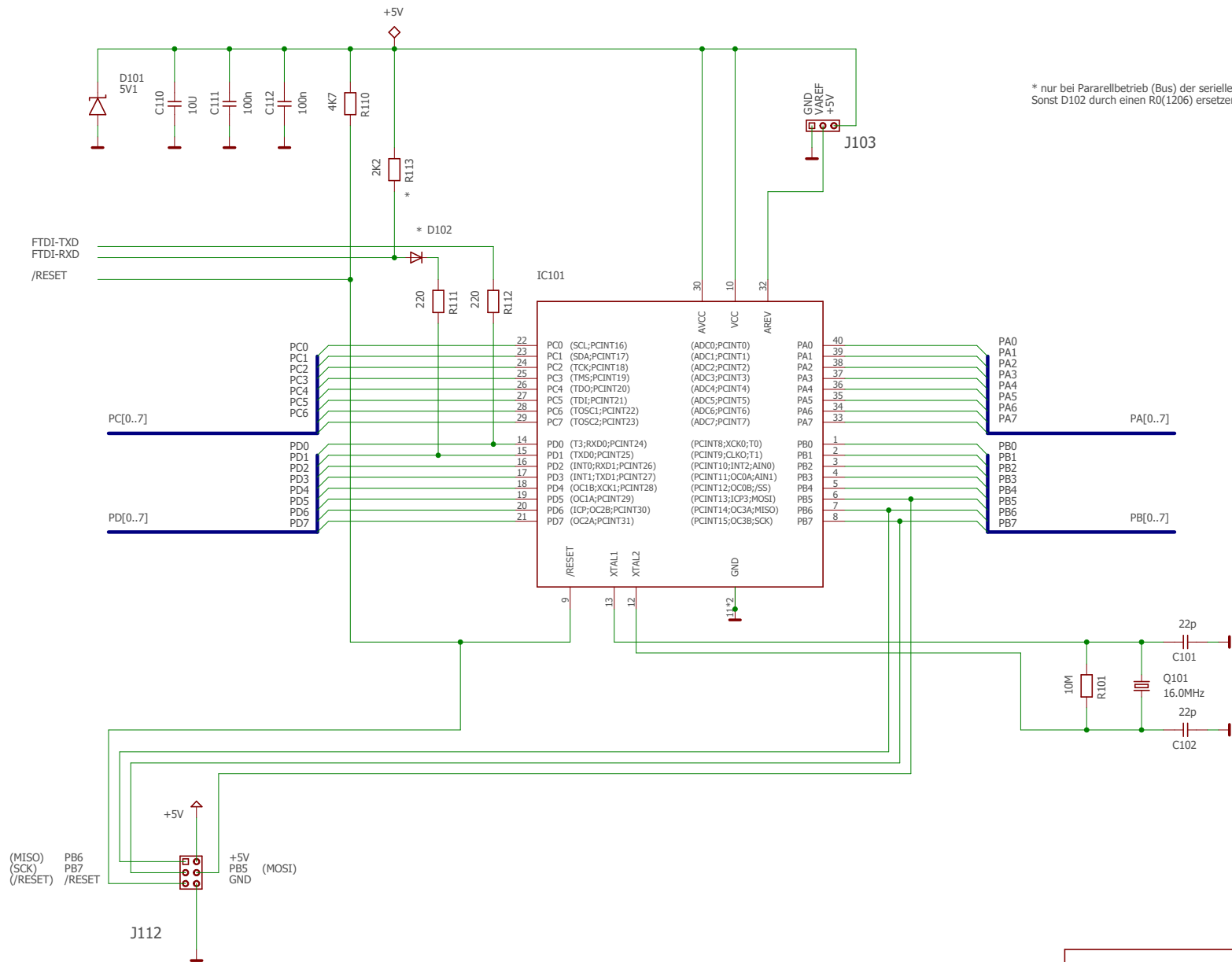


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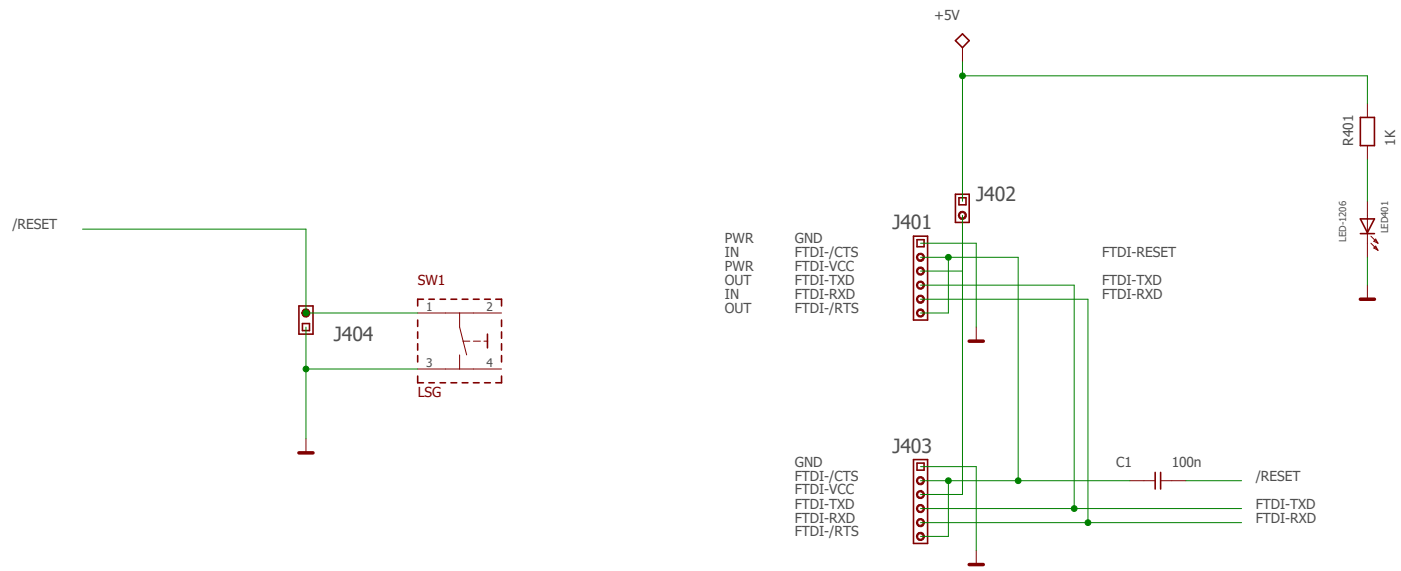


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\* nur bei Parallelbetrieb (Bus) der seriellen Schnittstelle nötig.  
 Sonst D102 durch einen R0(1206) ersetzen und R 113 weglassen!

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