



**SYSTECH J.Schnyder GmbH**

www.systemech-gmbh.ch

# UMDS

# ATMEGA-644

Beschrieb V 1.1a

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

## Inhalt

Shortform .....	2
Beschrieb / Description / Descrizione .....	4
Steckerbelegung / Pinout / Conessioni .....	4
J103 AD-Referenz .....	4
J112 Programmierstecker .....	4
J401, J403 serielles Interface .....	4
J404 /RESET .....	4
X201, XE BUS-Stecker .....	5
Stückliste / Bill of Material / Distinta Componenti .....	6
Anhang .....	8

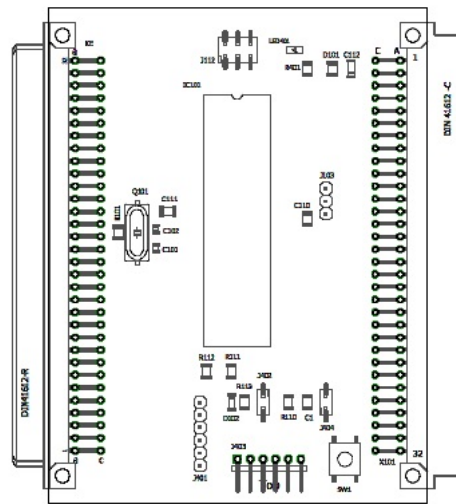
# Shortform



**SYSTECH**  
J.Schnyder GmbH

[www.systemech-gmbh.ch](http://www.systemech-gmbh.ch)

## UMDS-ATMEGA-644



Dimension: ~100mm x 80mm

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

1A	+5V	1C	+5V
2A	+5V	2C	+5V
3A	+3,3V	3C	+3,3V
4A	+3,3V	4C	+3,3V
5A	PA0	5C	PA1
6A	PA2	6C	PA3
7A	PA4	7C	PA5
8A	PA6	8C	PA7
9A	PB0	9C	PB1
10A	PB2	10C	PB3
11A	PB4	11C	PB5
12A	PB6	12C	PB7
13A	PC0	13C	PC1
14A	PC2	14C	PC3
15A	PC4	15C	PC5
16A	PC6	16C	PC7
17A	PD0	17C	PD1
18A	PD2	18C	PD3
19A	PD4	19C	PD5
20A	PD6	20C	PD7
21A	PE0	21C	PE1
22A	PE2	22C	PE3
23A	PE4	23C	PE5
24A	PE6	24C	PE7
25A	IRQ	25C	/RESET
26A	PWR	26C	PWR
27A	PWR	27C	PWR
28A	PWR	28C	PWR
29A	GND	29C	GND
30A	GND	30C	GND
31A	GND	31C	GND
32A	GND	32C	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	
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.
J402	CON02X1SMD	CON02X1SMD	1X02SMD	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	
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

## **Systech J.Schnyder GmbH**

[www.systech-gmbh.ch](http://www.systech-gmbh.ch)

**Entwicklung von Hard- und Software**  
**Schulungs-Systeme**  
**Kurse für Maker**

## **Anhang**

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

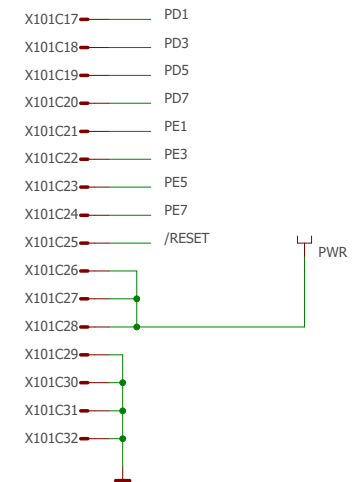
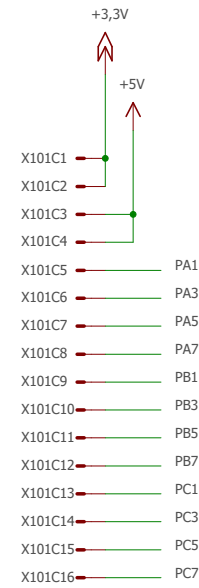
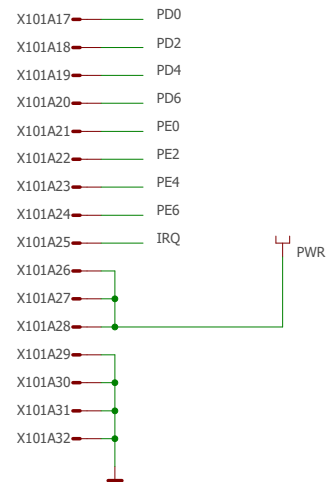
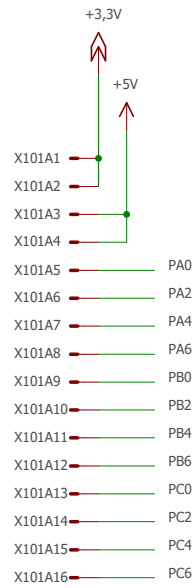
# UMDS-Pinout's

## UMDS-BUS-Signal

## ATMEGA644 (SANGUINO)

	Digital	PWM	AD	T	DA	Spez
PA0	D31		A0			
PA1	D30		A1			
PA2	D28		A2			
PA3	D28		A3			
PA4	D27		A4			
PA5	D26		A5			
PA6	D25		A6			
PA7	D24		A7			
PB0	D0					
PB1	D1					
PB2	D2					INT2
PB3	D3	YES				
PB4	D4	YES				SS
PB5	D5					MOSI
PB6	D6					MISO
PB7	D7					SCK
PC0	D16					SCL
PC1	D17					SDA
PC2	D18					TCK
PC3	D19					TMS
PC4	D20					TDO
PC5	D21					TDI
PC6	D22					
PC7	D23					
PD0	D8					RX0
PD1	D9					TX0
PD2	D10					INT0/RX1
PD3	D11					INT1/TX1
PD4	D12	YES				
PD5	D13	YES				
PD6	D14	YES				
PD7	D15					
PE0						
PE1						
PE2						
PE3						
PE4						
PE5						
PE6						
PE7						





SYSTECH J.Schnyder GmbH

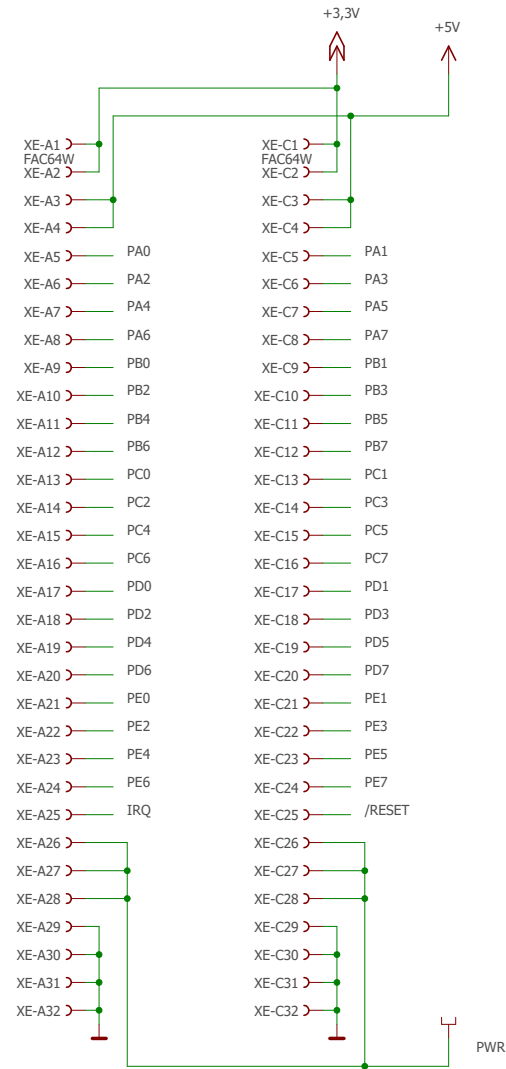
TITLE: ATMEGA-644

Document Number:

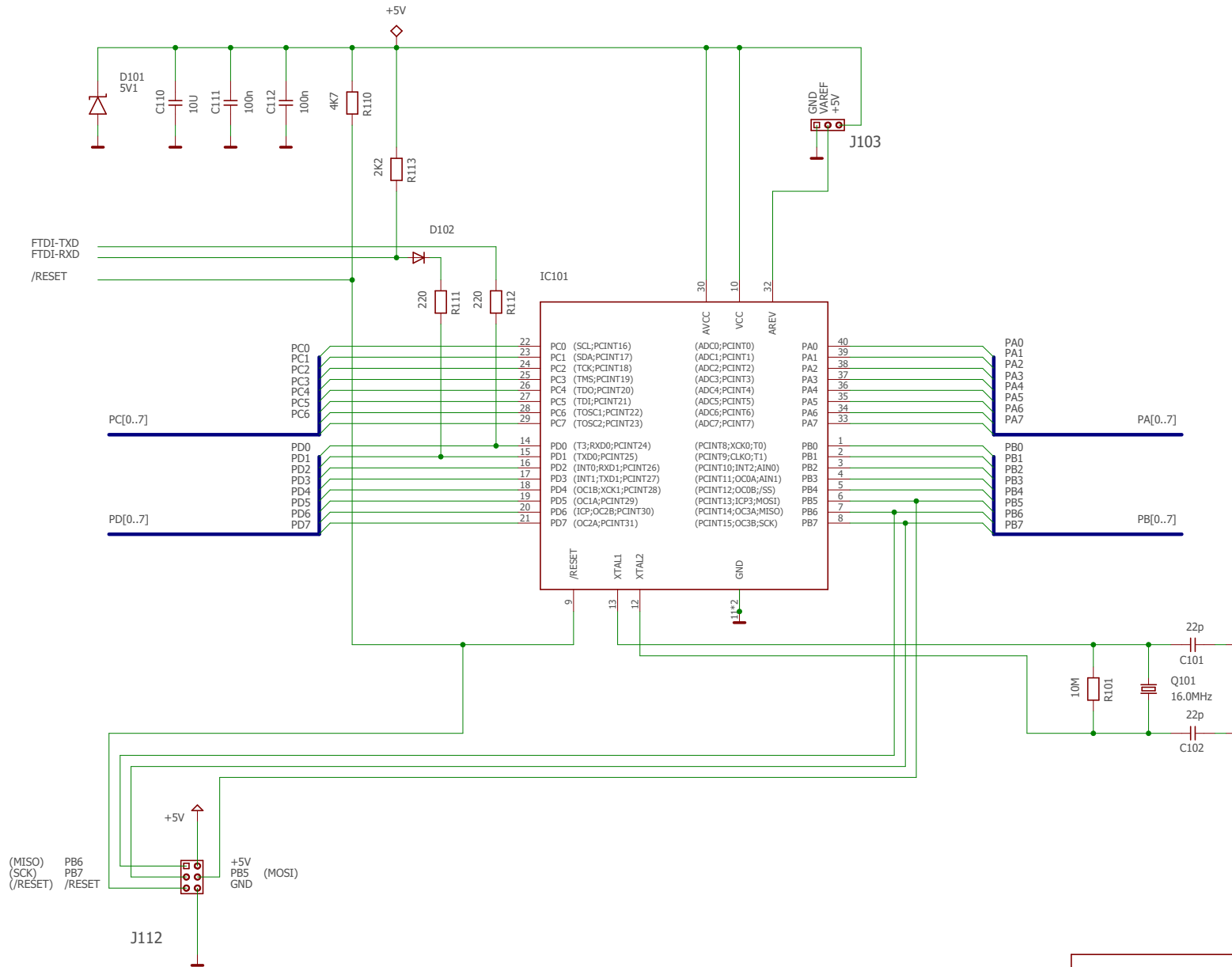
REV:

Date: 15.12.2020 21:23

Sheet: 1/4



SYSTECH J.Schnyder GmbH	
TITLE: ATMEGA-644	
Document Number:	REV:
Date: 15.12.2020 21:23	Sheet: 2/4



SYSTECH J.Schnyder GmbH

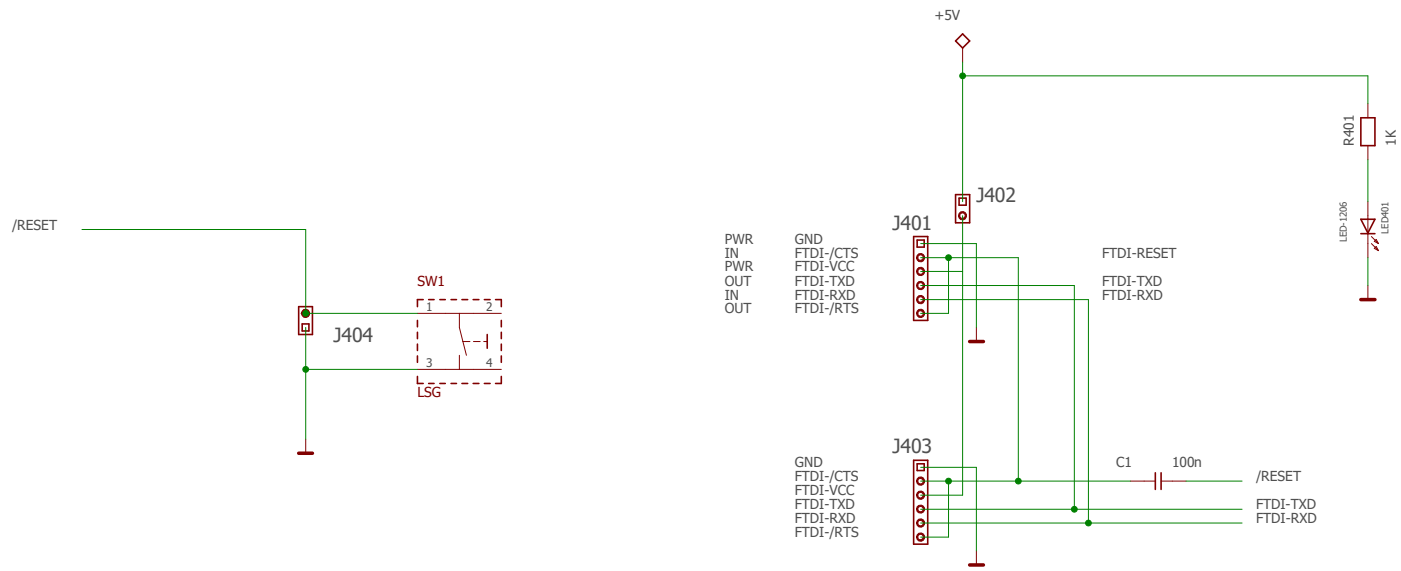
TITLE: ATMEGA-644

Document Number:

REV:

Date: 15.12.2020 21:23

Sheet: 3/4



SYSTECH J.Schnyder GmbH	
TITLE: ATMEGA-644	
Document Number:	REV:
Date: 15.12.2020 21:23	Sheet: 4/4

