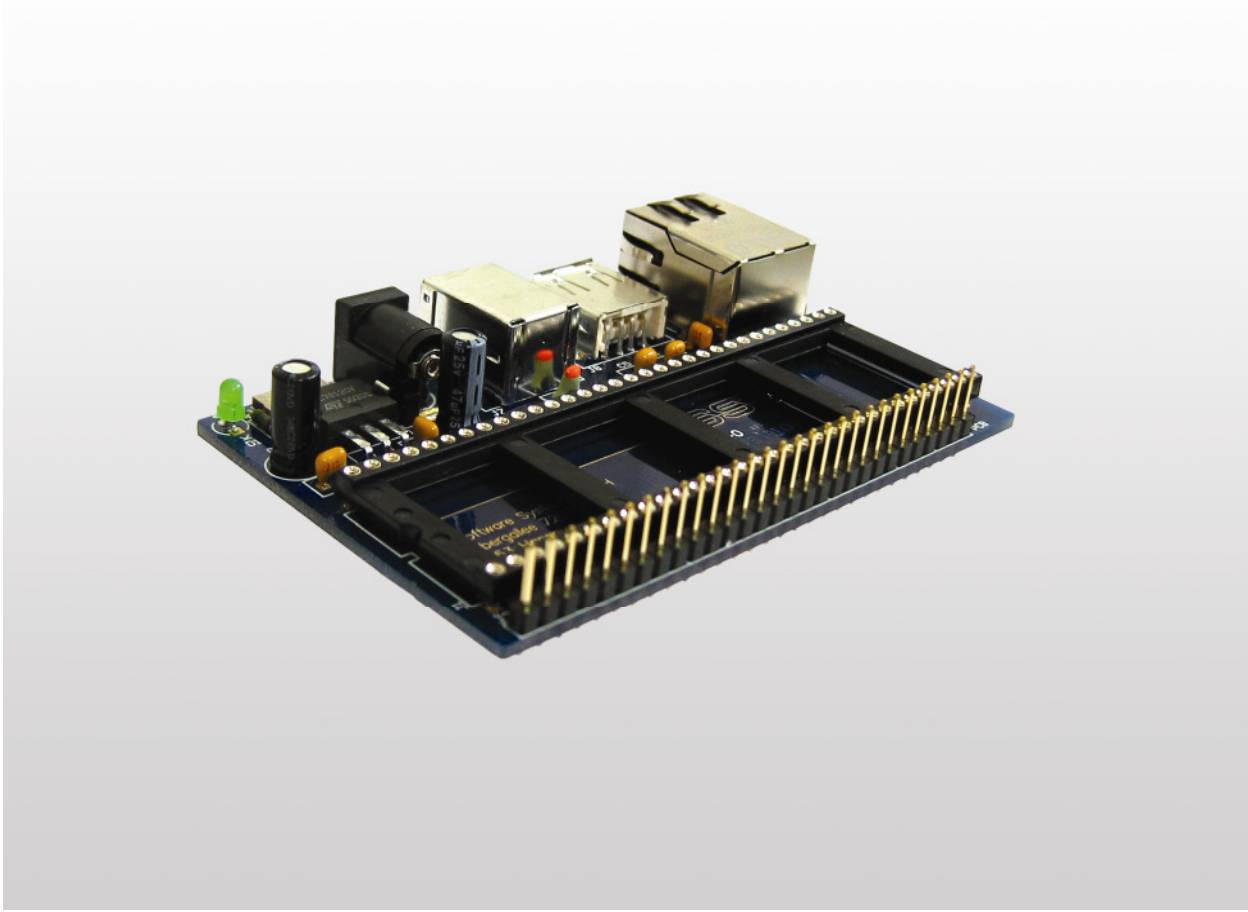
DNP/EVA10

Board Revision 1.0

Hardware Reference



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For further information regarding our products please visit us at www.dilnetpc.com

CONTENT

1 INTRODUCTION

This document describes the hardware components of the Evaluation Board DNP/EVA10. For further information about the individual components of this product you may follow the links from our website at `http://www.dilnetpc.com`. Our website contains a lot of technical information, which will be updated in regular periods.

1.1 Safety Guidelines

Please read the following safety guidelines carefully! In case of property or personal damage by not paying attention to this document and/or by incorrect handling, we do not assume liability. In such cases any warranty claim expires.

ATTENTION: Observe precautions for handling – electrostatic sensitive device!

- Discharge yourself before you work with the device, e.g. by touching a heater of metal, to avoid damages.
- Stay grounded while working with the device to avoid damage through electrostatic discharge.

1.2 Conventions

Convention	Usage
bold	Important terms
italic	Filenames, user inputs
`monospace`	Pathnames, program code, command lines

Table 1: Conventions used in this document

1.3 Block Diagram

Figure 1 shows the block diagram with the main components of the DNP/EVA10. The DIL-64 socket (J1) forms the center of this figure. This socket connects a 64-pin DIL/NetPC with the DNP/EVA10 functions.

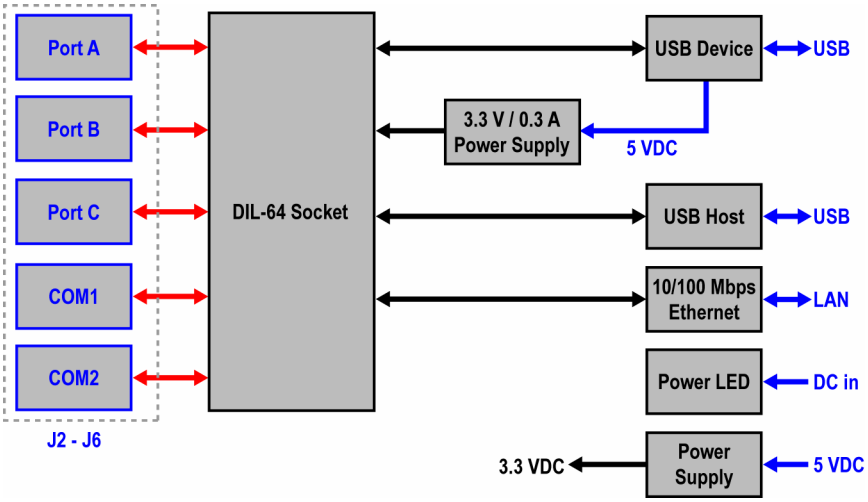
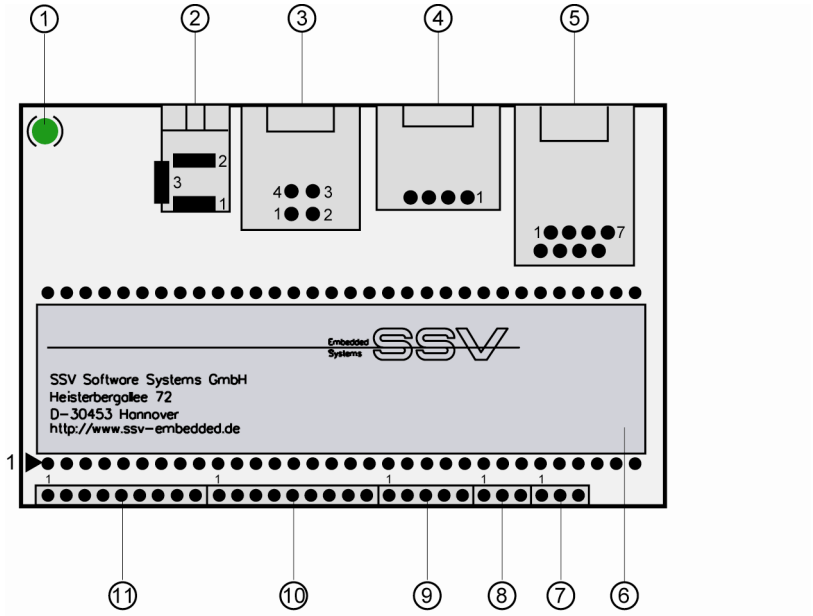


Figure 1: Block diagram of DNP/EVA10

1.4 Feature Overview

- One DIL-64 socket for DIL/NetPCs
- Two serial interfaces COM1/COM2 (RS232)
- One 10/100 Mbps Ethernet LAN interface
- One USB host port connector with 5 VDC power supply output
- One USB device port connector
- One connector with PIO and COM1/COM2 signals
- One 5 VDC power input connector
- One power LED

2 BOARD LAYOUT



① D1 - Power LED
② J10 - Power connector
③ J7 - USB device port
④ J8 - USB host port
⑤ J9 - 10/100 Mbps Ethernet LAN interface
⑥ J1 - DIL-64 socket
⑦ J6 - COM2
⑧ J5 - COM1
⑨ J4 - PIO Port C
⑩ J3 - PIO Port B
⑪ J2 - PIO Port A

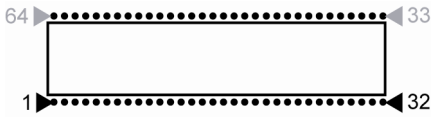
Figure 2: Board layout DNP/EVA10

3 PINOUTS

3.1 DIL-64 Socket – J1 (1. Part)

Pin	Name	Group	Function
1	PA0	PIO	Parallel I/O, Port A, Bit 0
2	PA1	PIO	Parallel I/O, Port A, Bit 1
3	PA2	PIO	Parallel I/O, Port A, Bit 2
4	PA3	PIO	Parallel I/O, Port A, Bit 3
5	PA4	PIO	Parallel I/O, Port A, Bit 4
6	PA5	PIO	Parallel I/O, Port A, Bit 5
7	PA6	PIO	Parallel I/O, Port A, Bit 6
8	PA7	PIO	Parallel I/O, Port A, Bit 7
9	PB0	PIO	Parallel I/O, Port B, Bit 0
10	PB1	PIO	Parallel I/O, Port B, Bit 1
11	PB2	PIO	Parallel I/O, Port B, Bit 2
12	PB3	PIO	Parallel I/O, Port B, Bit 3
13	PB4	PIO	Parallel I/O, Port B, Bit 4
14	PB5	PIO	Parallel I/O, Port B, Bit 5
15	PB6	PIO	Parallel I/O, Port B, Bit 6
16	PB7	PIO	Parallel I/O, Port B, Bit 7
17	PC0	PIO	Parallel I/O, Port C, Bit 0
18	PC1	PIO	Parallel I/O, Port C, Bit 1
19	PC2	PIO	Parallel I/O, Port C, Bit 2
20	PC3	PIO	Parallel I/O, Port C, Bit 3
21	RXD1	SIO	COM1 Serial Port, RXD Pin
22	TXD1	SIO	COM1 Serial Port, TXD Pin
23	---	---	Not Connected
24	---	---	Not Connected
25	---	---	Not Connected
26	---	---	Not Connected
27	---	---	Not Connected
28	---	---	Not Connected
29	---	---	Not Connected
30	TX+	LAN	10BASE-T/100BASE-TX Ethernet Interface, TX+ Pin
31	TX-	LAN	10BASE-T/100BASE-TX Ethernet Interface, TX- Pin
32	GND	---	Ground

Table 2: Pinout DIL-64 socket – pin 1 to 32



3.2 DIL-64 Socket – J1 (2. Part)

Pin	Name	Group	Function
33	RX+	LAN	10BASE-T/100BASE-TX Ethernet Interface, RX+ Pin
34	RX-	LAN	10BASE-T/100BASE-TX Ethernet Interface, RX- Pin
35	---	---	Not Connected
36	---	---	Not Connected
37	---	---	Not Connected
38	TXD2	PSP*	COM2 Serial Port, TXD Pin
39	RXD2	PSP*	COM2 Serial Port, RXD Pin
40	HDMA	PSP*	USB Host Port-
41	HDPA	PSP*	USB Host Port+
42	DDM	PSP*	USB Device Port-
43	DDP	PSP*	USB Device Port+
44	---	---	Not Connected
45	---	---	Not Connected
46	---	---	Not Connected
47	---	---	Not Connected
48	---	---	Not Connected
49	---	---	Not Connected
50	---	---	Not Connected
51	---	---	Not Connected
52	---	---	Not Connected
53	---	---	Not Connected
54	---	---	Not Connected
55	---	---	Not Connected
56	---	---	Not Connected
57	---	---	Not Connected
58	---	---	Not Connected
59	---	---	Not Connected
60	---	---	Not Connected
61	---	---	Not Connected
62	---	---	Not Connected
63	---	---	Not Connected
64	Vcc	---	3.3 Volt Power Input

Table 3: Pinout DIL-64 socket – pin 33 to 64

*** Please note:** Some pins are called "Product Specific Pins (PSP)". Other members of the *DIL/NetPC* family will differ with these pins from the *DNP/9200*. All other pins will have the same primary functions. The DNP/9200 alternate functions (pin 1 to 20) are AT91RM9200-specific.

3.3 Port A Connector – J2

Pin	Name	DIL-64 Pin	Function
1	PA0	1	Parallel I/O, Port A, Bit 0
2	PA1	2	Parallel I/O, Port A, Bit 1
3	PA2	3	Parallel I/O, Port A, Bit 2
4	PA3	4	Parallel I/O, Port A, Bit 3
5	PA4	5	Parallel I/O, Port A, Bit 4
6	PA5	6	Parallel I/O, Port A, Bit 5
7	PA6	7	Parallel I/O, Port A, Bit 6
8	PA7	8	Parallel I/O, Port A, Bit 7
9	GND	---	Ground

Table 4: Pinout Port A connector

3.4 Port B Connector – J3

Pin	Name	DIL-64 Pin	Function
1	PB0	9	Parallel I/O, Port B, Bit 0
2	PB1	10	Parallel I/O, Port B, Bit 1
3	PB2	11	Parallel I/O, Port B, Bit 2
4	PB3	12	Parallel I/O, Port B, Bit 3
5	PB4	13	Parallel I/O, Port B, Bit 4
6	PB5	14	Parallel I/O, Port B, Bit 5
7	PB6	15	Parallel I/O, Port B, Bit 6
8	PB7	16	Parallel I/O, Port B, Bit 7
9	GND	---	Ground

Table 5: Pinout Port B connector

3.5 Port C Connector – J4

Pin	Name	DIL-64 Pin	Function
1	PC0	17	Parallel I/O, Port C, Bit 0
2	PC1	18	Parallel I/O, Port C, Bit 1
3	PC2	19	Parallel I/O, Port C, Bit 2
4	PC3	20	Parallel I/O, Port C, Bit 3
5	GND	---	Ground

Table 6: Pinout Port C connector

3.6 COM1 Connector – J5

Pin	Name	DIL-64 Pin	Function
1	RXD1	21	RXD
2	TXD1	22	TXD
3	GND	---	Ground

Table 7: Pinout COM1 connector

3.7 COM2 Connector – J6

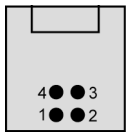
Pin	Name	DIL-64 Pin	Function
1	RXD2	39	RXD
2	TXD2	38	TXD
3	GND	---	Ground

Table 8: Pinout COM2 connector

3.8 USB Device Port – J7

Pin	Name	DIL-64 Pin	Function
1	Reserved	---	Reserved
2	DATA-	42	USB Device Port -
3	DATA+	43	USB Device Port +
4	GND	---	Ground

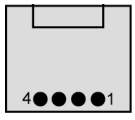
Table 9: Pinout USB device port



3.9 USB Host Port – J8

Pin	Name	DIL-64 Pin	Function
1	5 VDC	---	5 VDC Output
2	DATA-	40	USB Host Port -
3	DATA+	41	USB Host Port +
4	GND	---	Ground

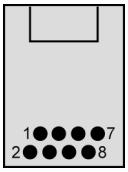
Table 10: Pinout USB host port



3.10 10/100 Mbps Ethernet LAN Interface – J9

Pin	Name	DIL-64 Pin	Function
1	TX+	30	10/100 Mbps LAN, TX+ pin
2	TX-	31	10/100 Mbps LAN, TX- pin
3	RX+	33	10/100 Mbps LAN, RX+ pin
4	---	---	Not Connected
5	---	---	Not Connected
6	RX-	34	10/100 Mbps LAN, RX- pin
7	---	---	Not Connected
8	---	---	Not Connected

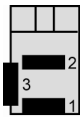
Table 11: Pinout 10/100 Mbps Ethernet LAN interface



3.11 Power Connector – J10

Pin	Name	Function
1	5 VDC	Power Input (max. 5.5 VDC)
2	GND	Ground
3	GND	Ground

Table 12: Pinout power connector



4 MECHANICAL DIMENSIONS

All length dimensions have a tolerance of 0.5 mm.

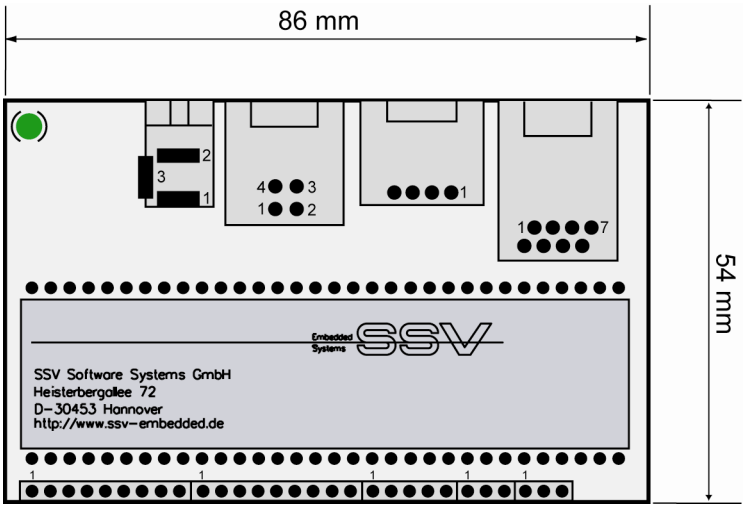


Figure 3: Mechanical dimensions of DNP/EVA10

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For actual information about the Evaluation Board DNP/EVA10 visit us in the internet: `http://www.dilnetpc.com`.

DOCUMENT HISTORY

Revision	Date	Remarks	Name
1.0	2006-08-17	first version	WBU
1.1	2006-09-04	small errors corrected	WBU