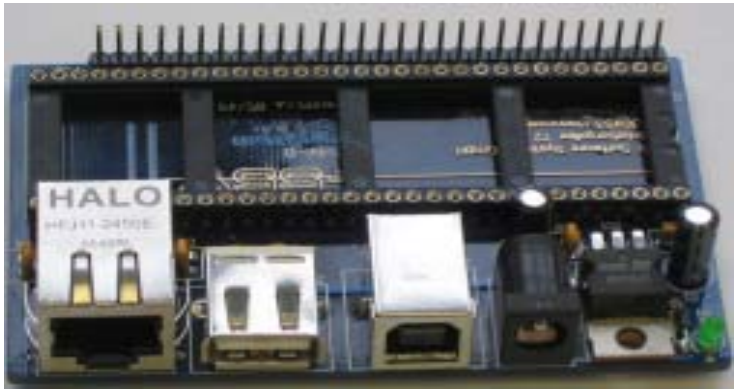
SSV EMBEDDED SYSTEMS

Assembly Instruction
DNP/EVA10



Kenneth Roos
SSV Embedded Systems
Heisterbergallee 72
D-30453 Hanover
kdw@ist1.de

Introduction

This document was created by the 15-year old school kid Kenneth Roos.

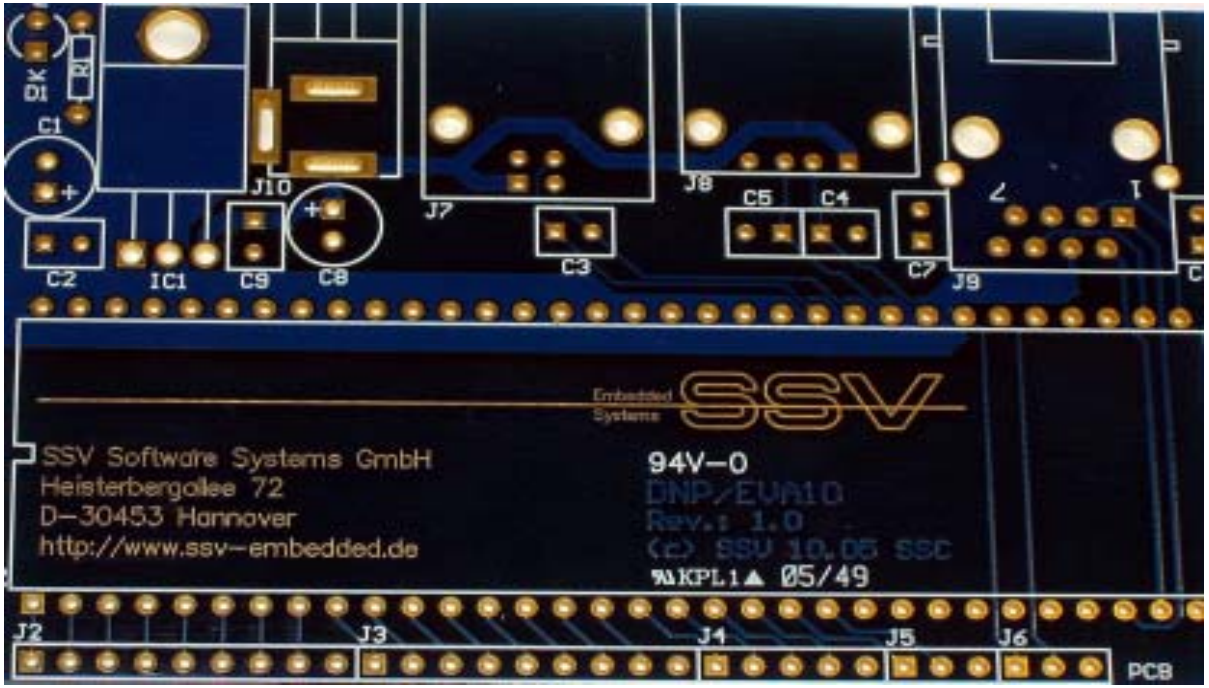
He assembled the board, made the photos and wrote the instructions all by himself during his practical work placement in February 2006 at the SSV GmbH.

Basic Components

Part Type	Designator	Description	Used in Step
100nF	C2 C6 C7 C9	Capacitor 100nF, 10%, Ceramic, 63V, RM2.54, leaded	Step 2 – 5
220R	R1	Resistor 220 Ohm, 0.6W, RM7.62 conv.	Step 10
47uF 16V	C1 C8	Elec. Cap. 47uF, Alu, 20%, 16V, RM2.50, radial, D=6.3mm, L=7mm, leaded	Step 11 and 12
C opt.	C3	for optional Placement, Capacitor 33pF, 10%, Ceramic, 63V, RM2.54, leaded	Step 8
C opt.	C4 C5	for optional Placement, Capacitor 47pF, 10%, Ceramic, 63V, RM2.54, leaded	Step 6 and 7
Power on	D1	LED 3mm green, conv.	Step 9
LT1086CT-3.3	IC1	Linear Regulator LT1086CT-3.3, 3.3V, 1.5A, Com.(0 .. +125°C), TO220-Package	Step 13
DNP DIL64 Socket	J1	DIP-Socket 64pol., RM2.54, DIP64	Step 18
Port_A	J2	Connector male 1x9pol., straight, RM2.54, Part: 0.25	Step 23
Port_B	J3	Connector male 1x9pol., straight, RM2.54, Part: 0.25	Step 22
Port_C	J4	Connector male 1x5pol., straight, RM2.54, Part: 0.14	Step 21
COM1	J5	Connector male 1x3pol., straight, RM2.54, Part:0.08	Step 20
COM2	J6	Connector male 1x3pol., straight, RM2.54, Part:0.08	Step 19
Power	J10	DC Power Jacket, 2.5mm, with ON/OFF-Switch, right angled	Step 14
USB Device Port	J7	USB Receptacle Single Port, 1x4pol., Typ B, right angled, shielded, conv.	Step 15
USB Host Port	J8	USB Receptacle Single Port, 1x4pol., Typ A, abgew., right angled, shielded,	Step 16
LAN 10/100BASE-TX	J9	Modular Jack 8pol., right angled, integr. Magnetic, shielded, w/o panel stop,	Step 17
Circuit Board	PCB	Circuit Board DNP/EVA10 Rev.1.00	All Steps

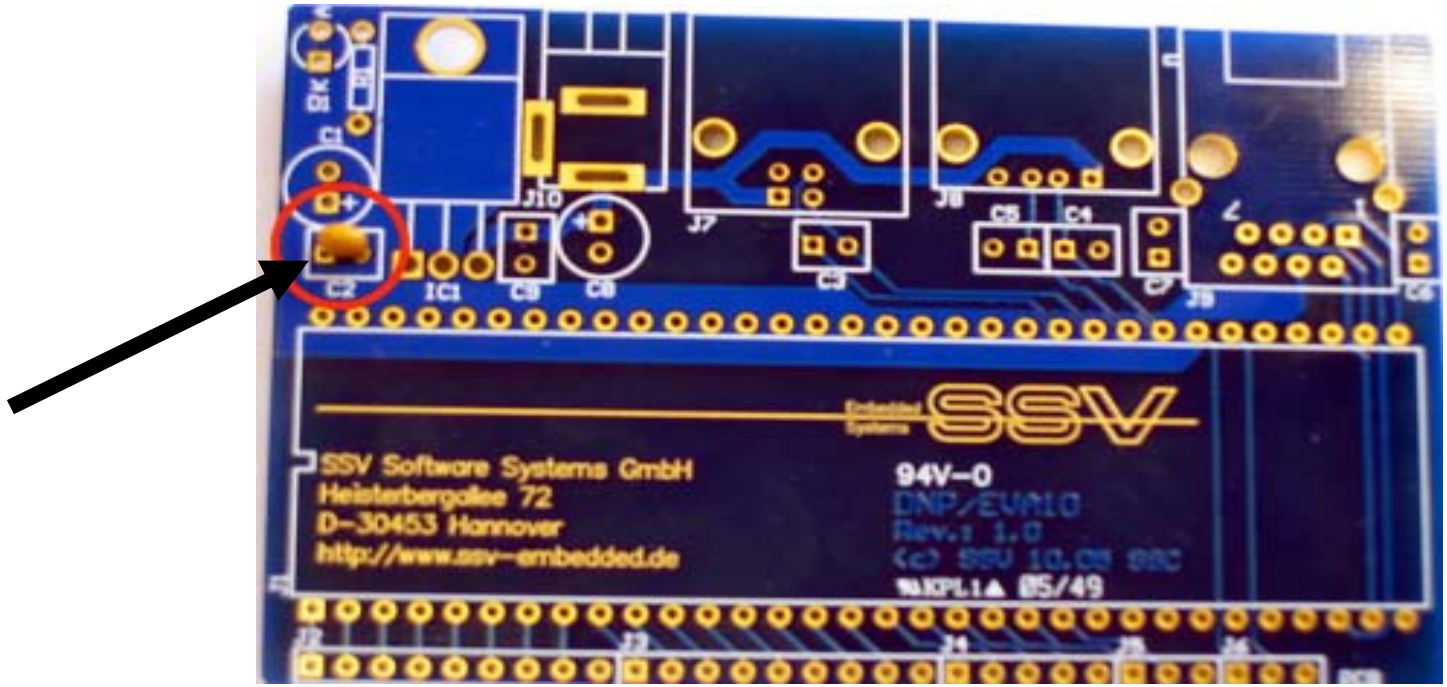
Step 1

- Place the circuit board in front of you.
- Keep all components ready for the next steps.



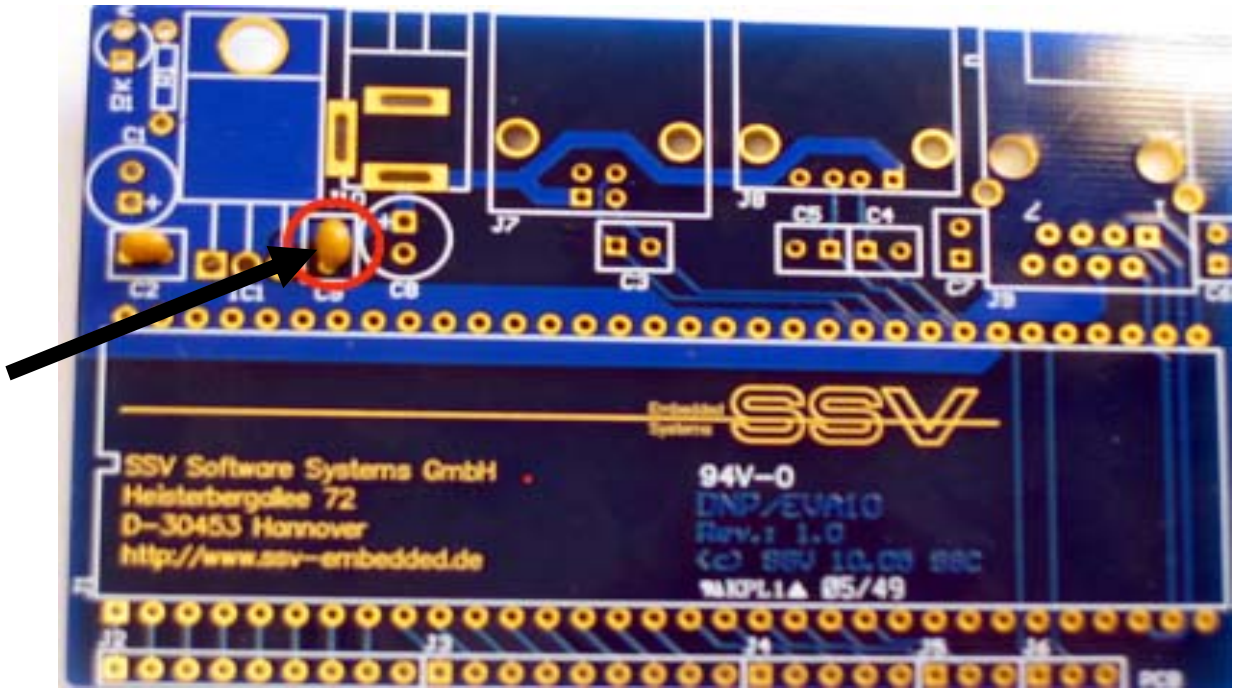
Step 2

- Insert the two wires of C2 into the holes and solder them from the backside.
- The polarity of this component does not matter.
- Cut the two wires after soldering.



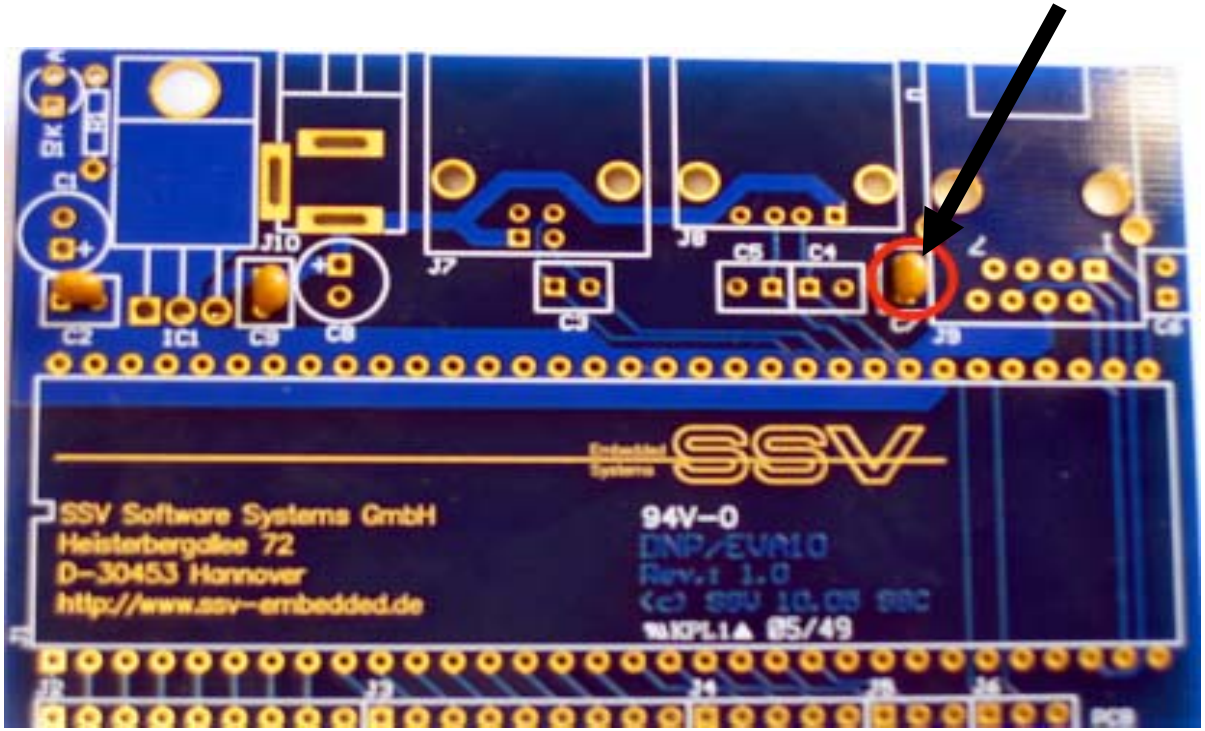
Step 3

➢ **Repeat step 2 for component C9.**



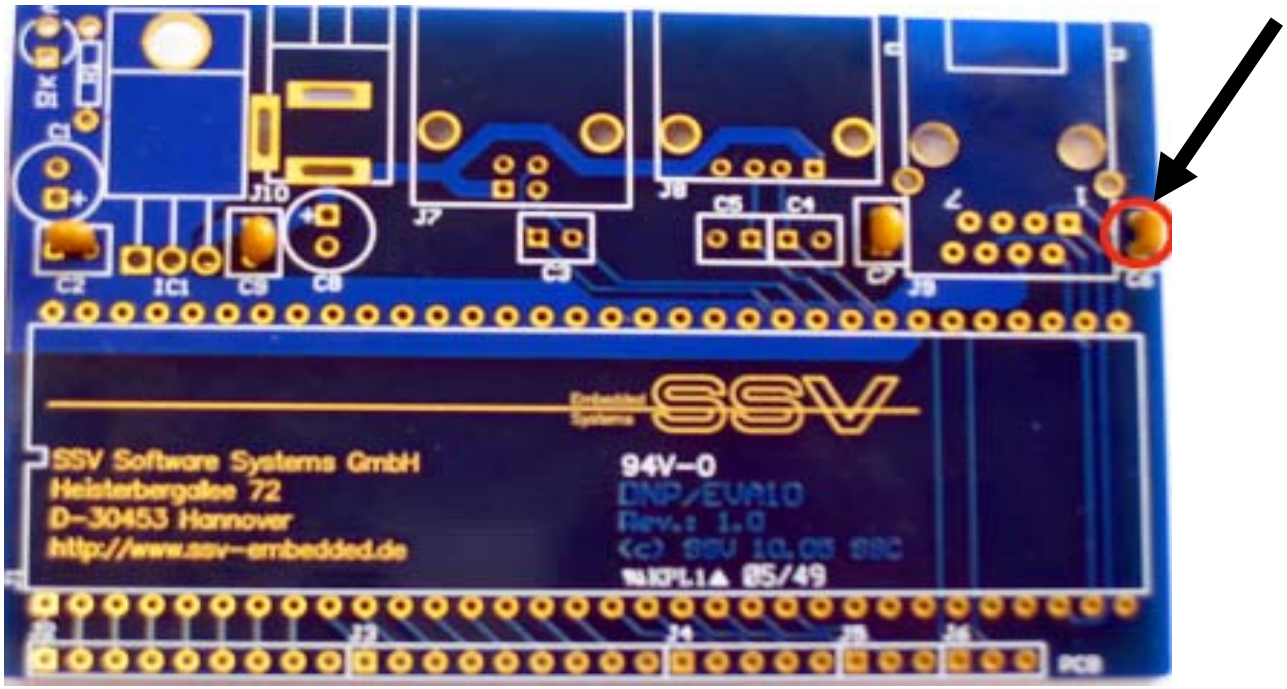
Step 4

➢ **Repeat step 2 for component C7.**



Step 5

➢ **Repeat step 2 for component C6.**

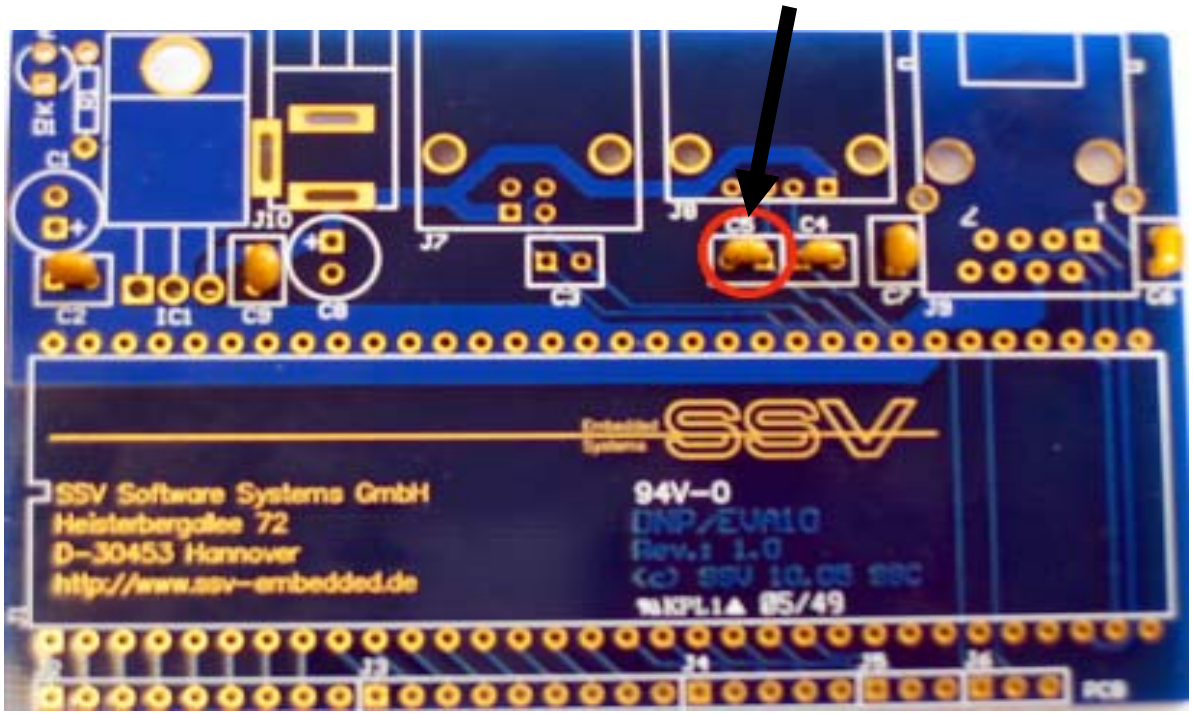


Step 6

- Insert C4 into the holes and solder it from the backside.
- The polarity of this component does not matter.
- Please note : This step is optional!

Step 7

- Repeat step 6 for component C5.
- Please note : This step is optional!

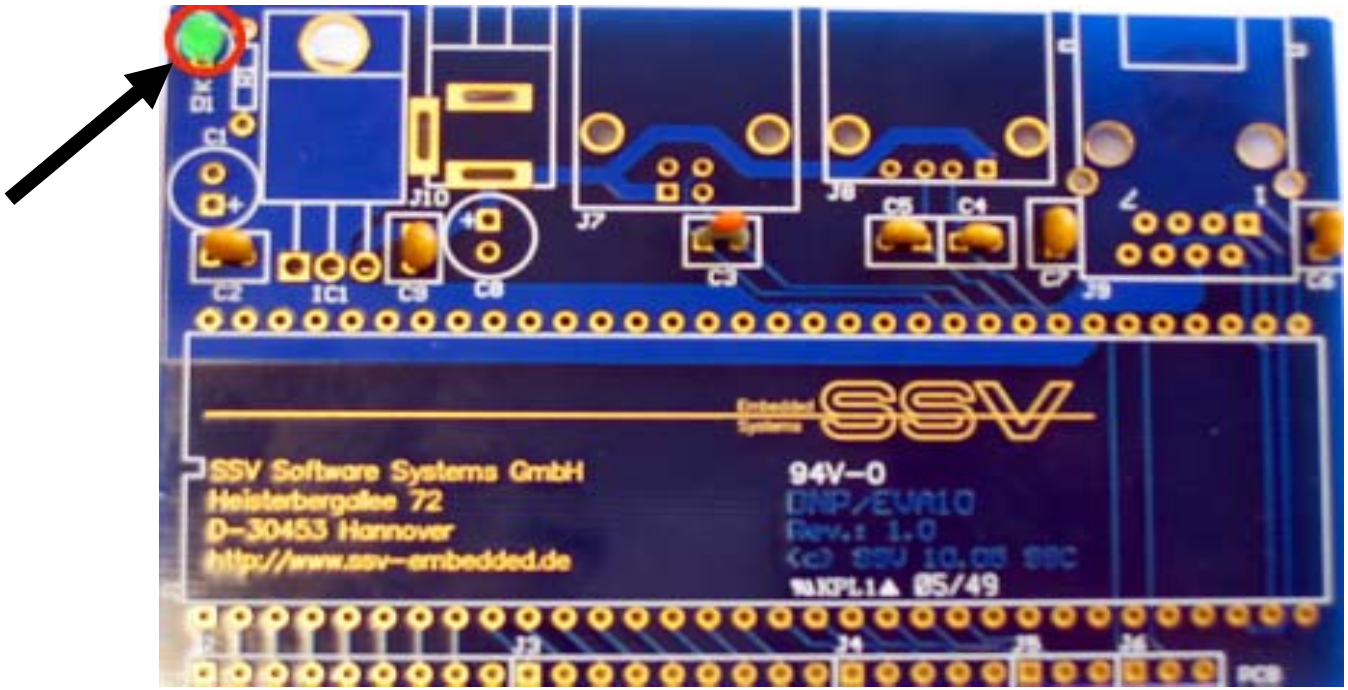


Step 8

- Insert C3 into the holes and solder it from the backside.
- Please note : This step is optional!

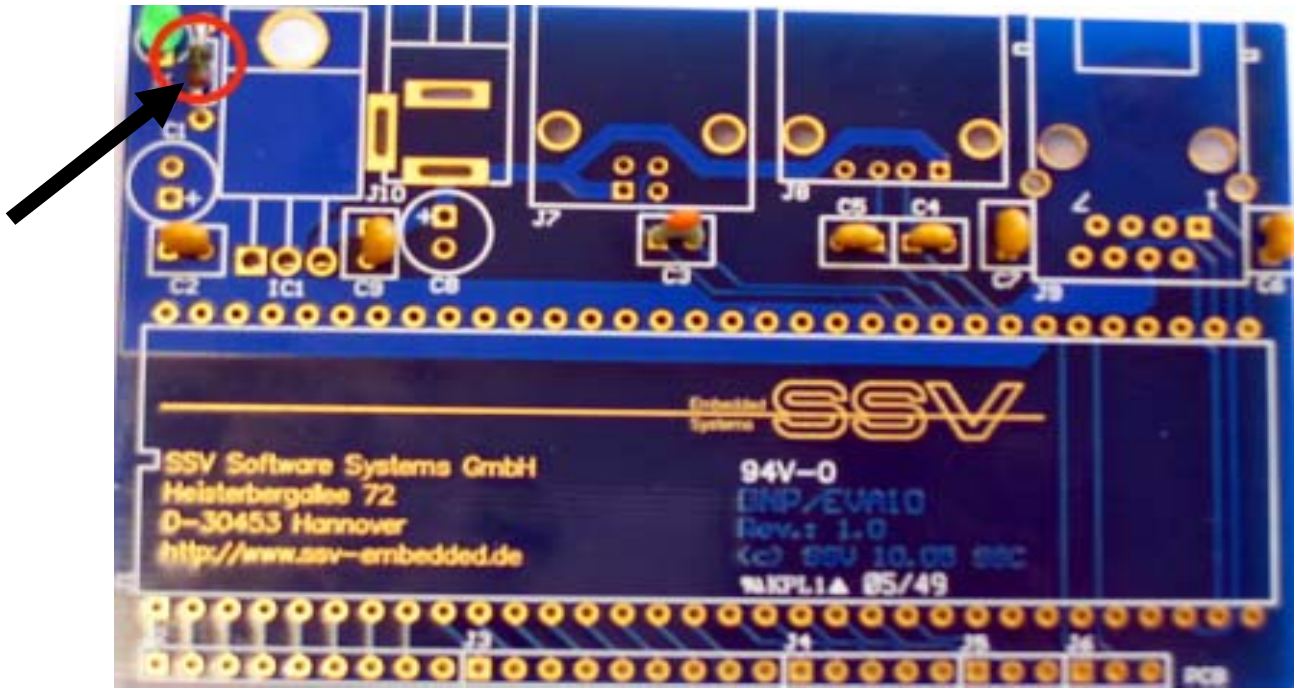
Step 9

- Insert D1 into the holes and solder it from the backside.
- Attend the polarity of D1: the drill hole for the short wire is marked with a “K”, the one for the long wire with an “A”.



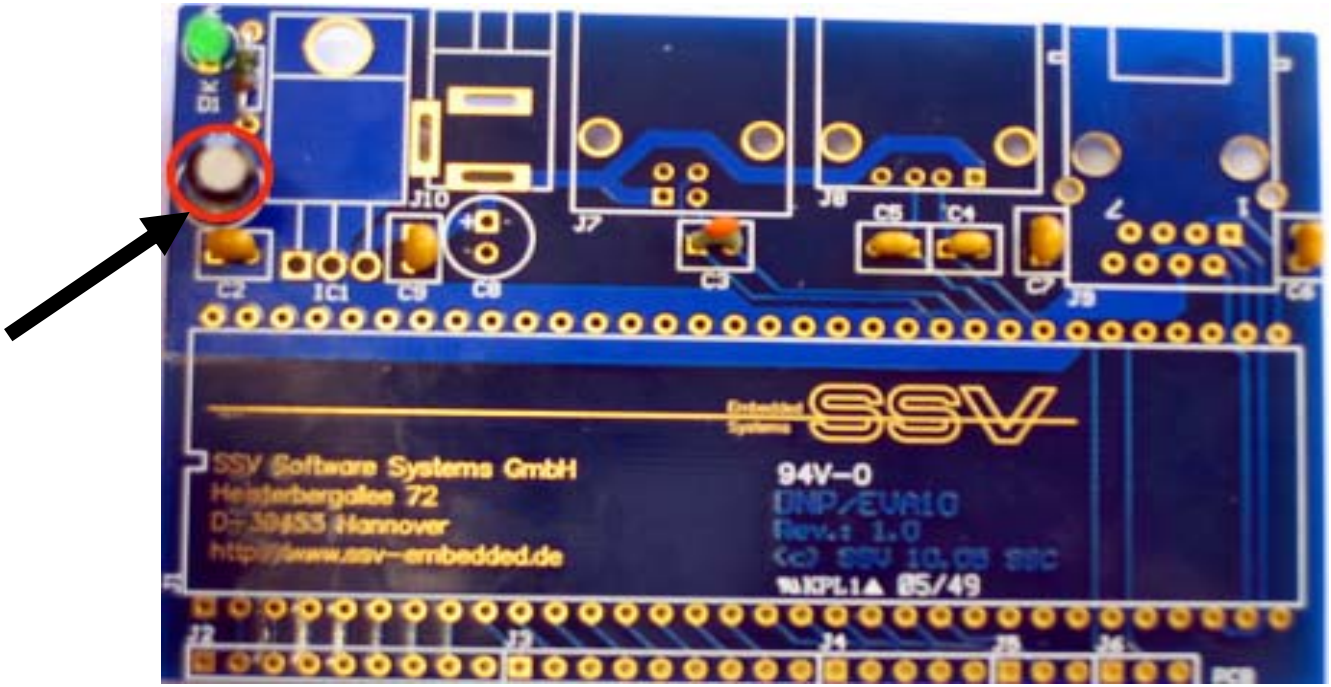
Step 10

- Bend the two wires of R1 with the same distance as the drill holes and insert them into the holes.
- Solder them from the backside.
- The direction does not matter.



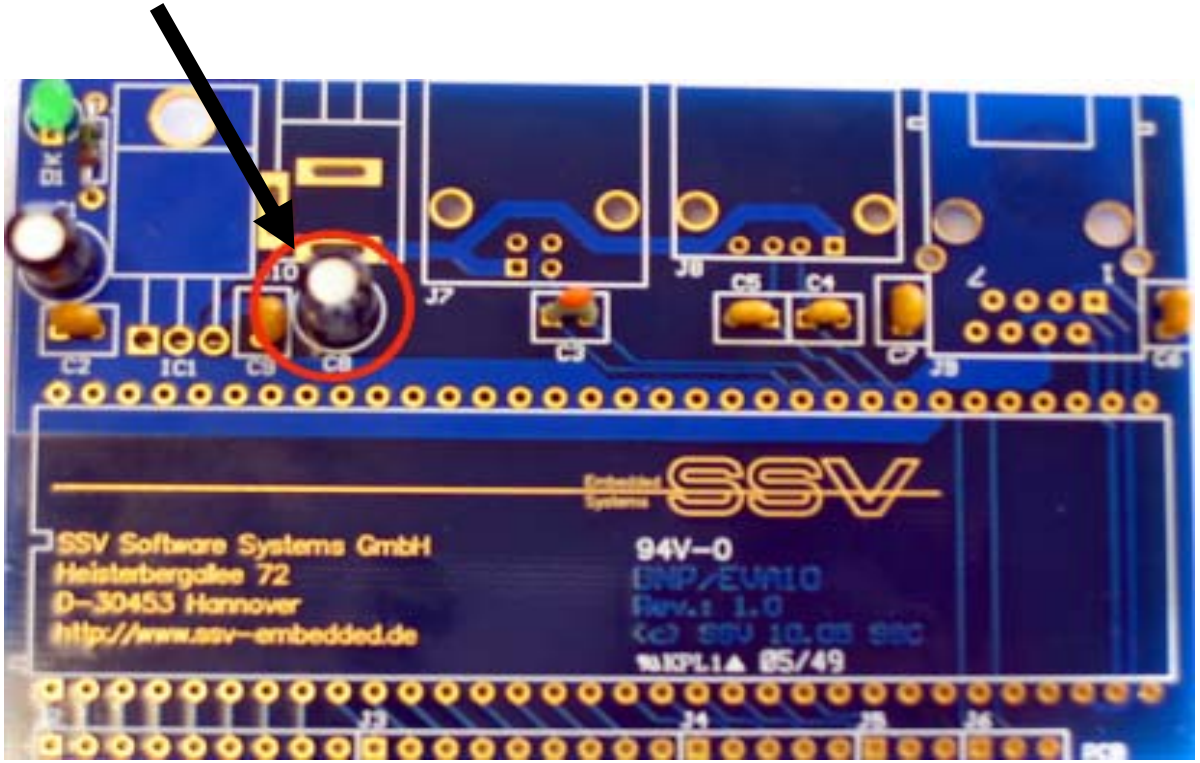
Step 11

- Insert C1 into the holes and solder it from the backside.
- Attend the polarity of C1; the hole for the longer wire is marked with a plus “+”.



Step 12

➢ **Repeat step 11 for component C8.**

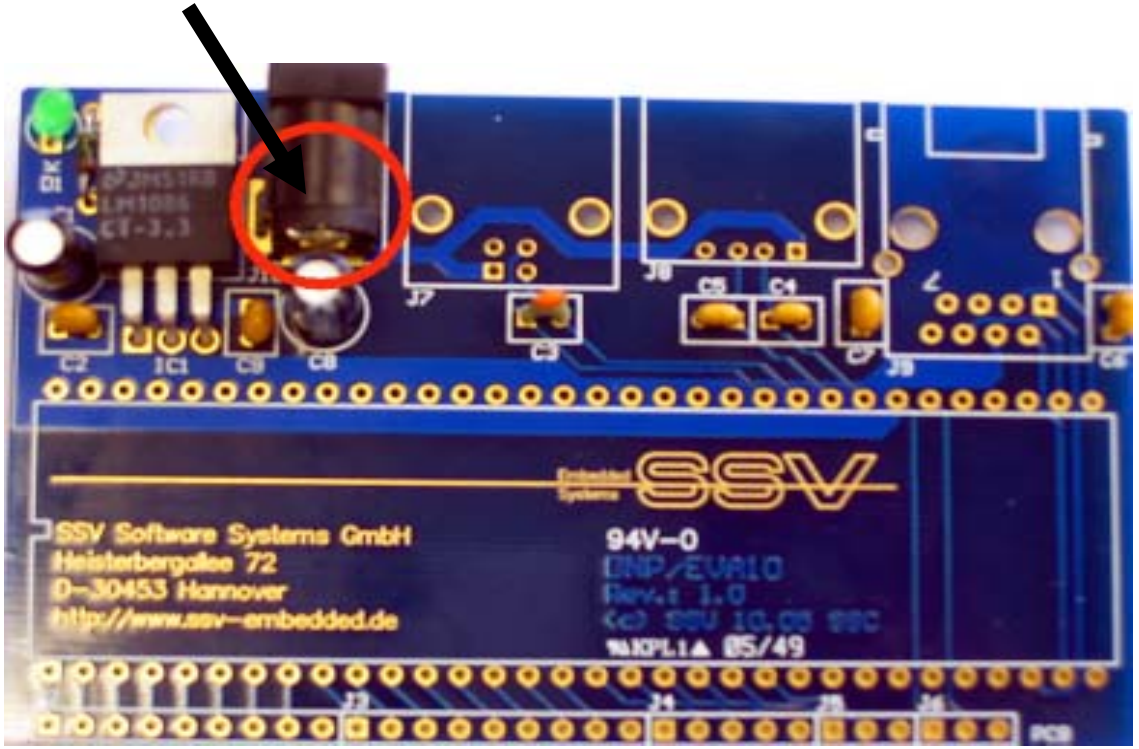


Step 13

- Insert IC1 into the holes and bend them into the right form.
- Solder them from the backside.
- Attend that the hole of IC1 and the hole on the board lie on top of each other.

Step 14

➢ **Insert the wires of J10 into the three holes and solder them from the backside.**

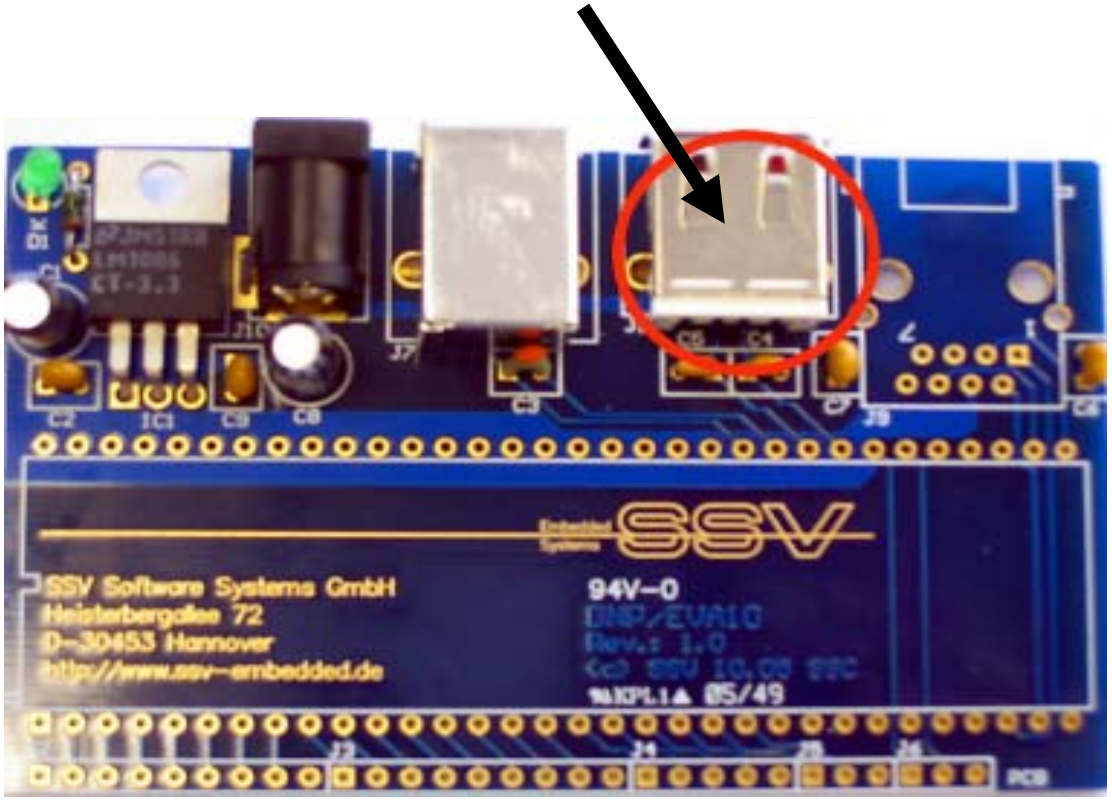


Step 15

➢ **Insert the contacts of J7 into the holes and solder them from the backside.**

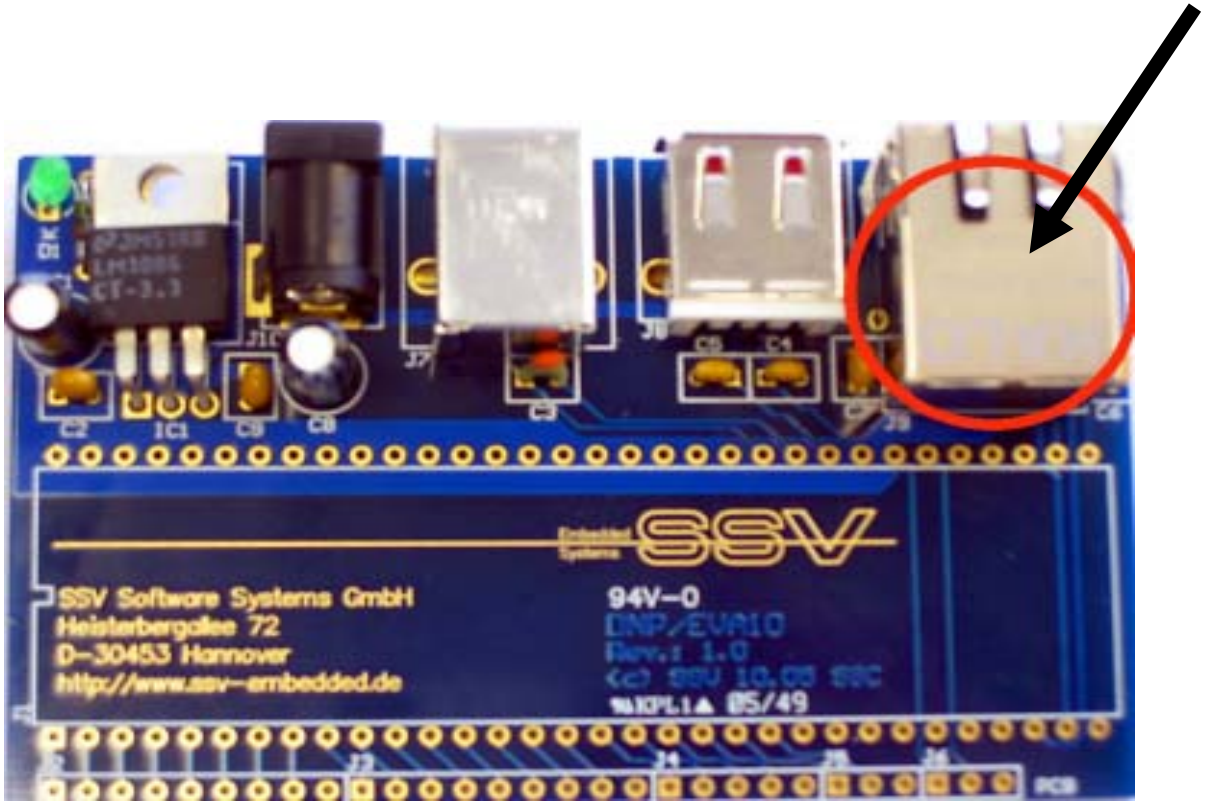
Step 16

➢ **Repeat step 15 for component J8.**



Step 17

➢ **Repeat step 15 for component J9.**



Step 18

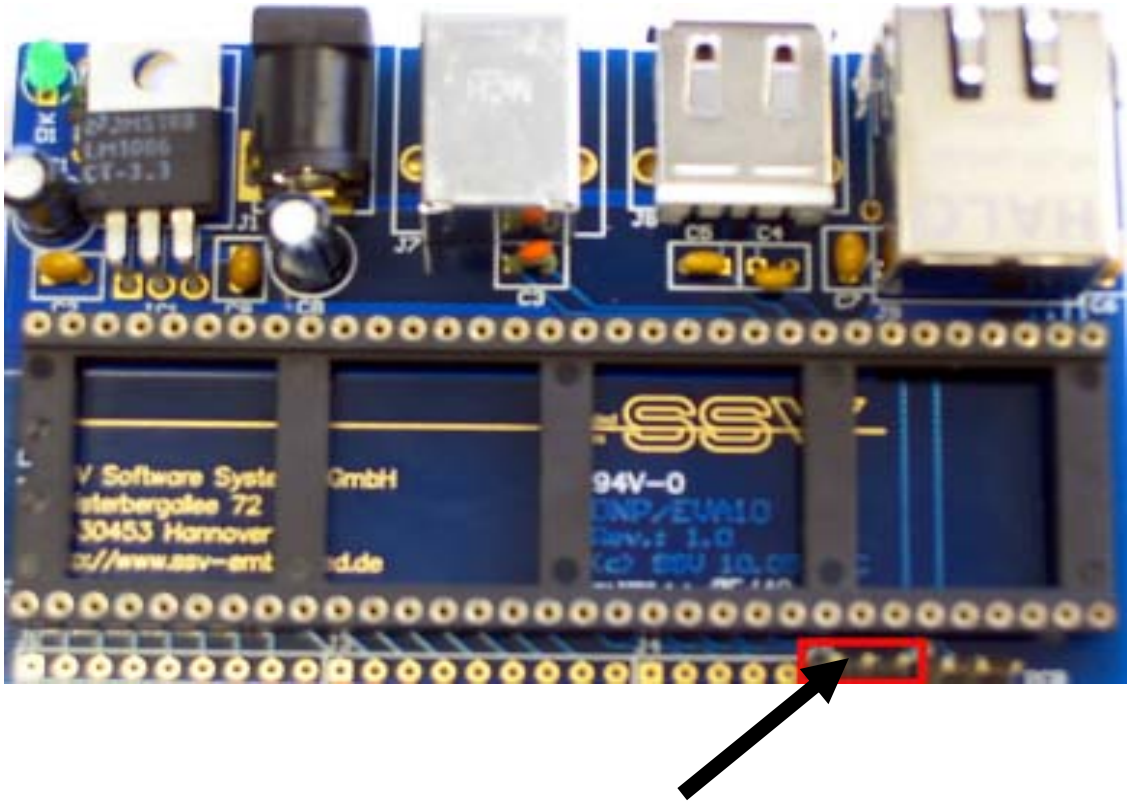
- Insert the contacts of J1 into the holes and solder them from the backside.
- Attend the direction which is marked with a little semicircle on the socket and a square on the circuit board.

Step 19

- Insert the contacts of J6 into the holes and solder them from the backside.
- You can skip Step 19 to 23 by using an connector which is as long as port_A, port_B, Port_C, COM1 and COM2 together. Just insert the contacts into all holes and solder them from the backside.

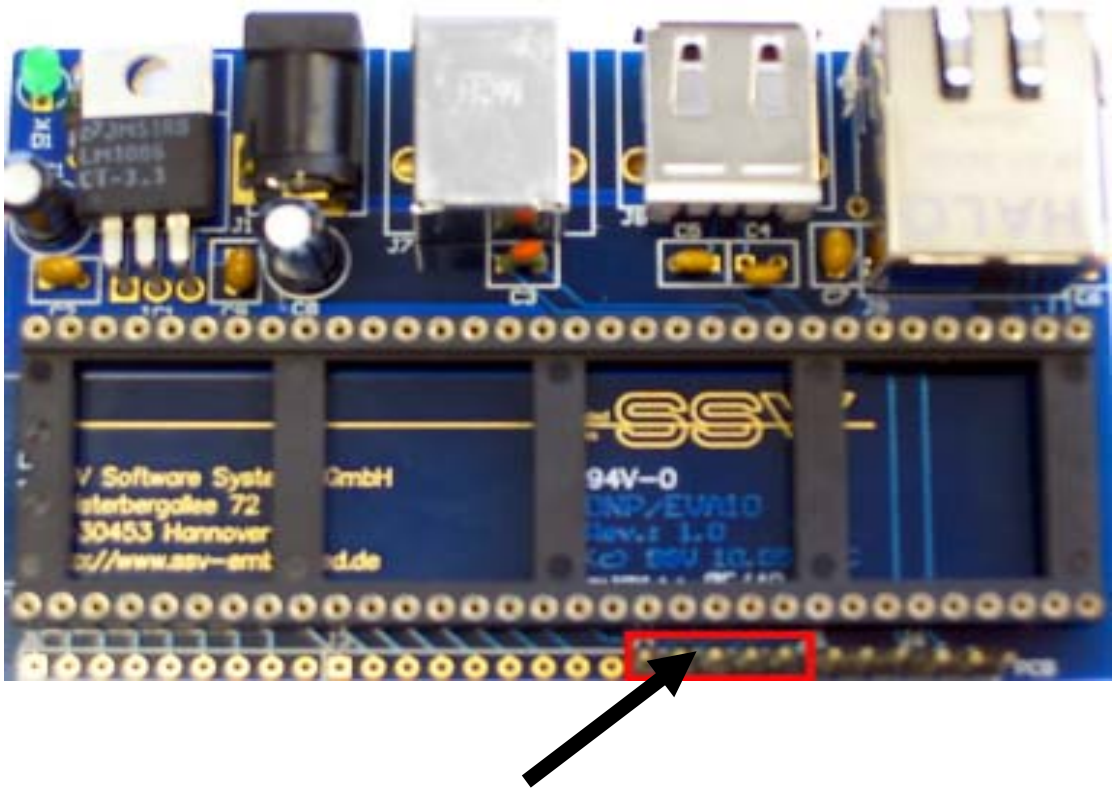
Step 20

➢ **Repeat step 19 for component J5.**



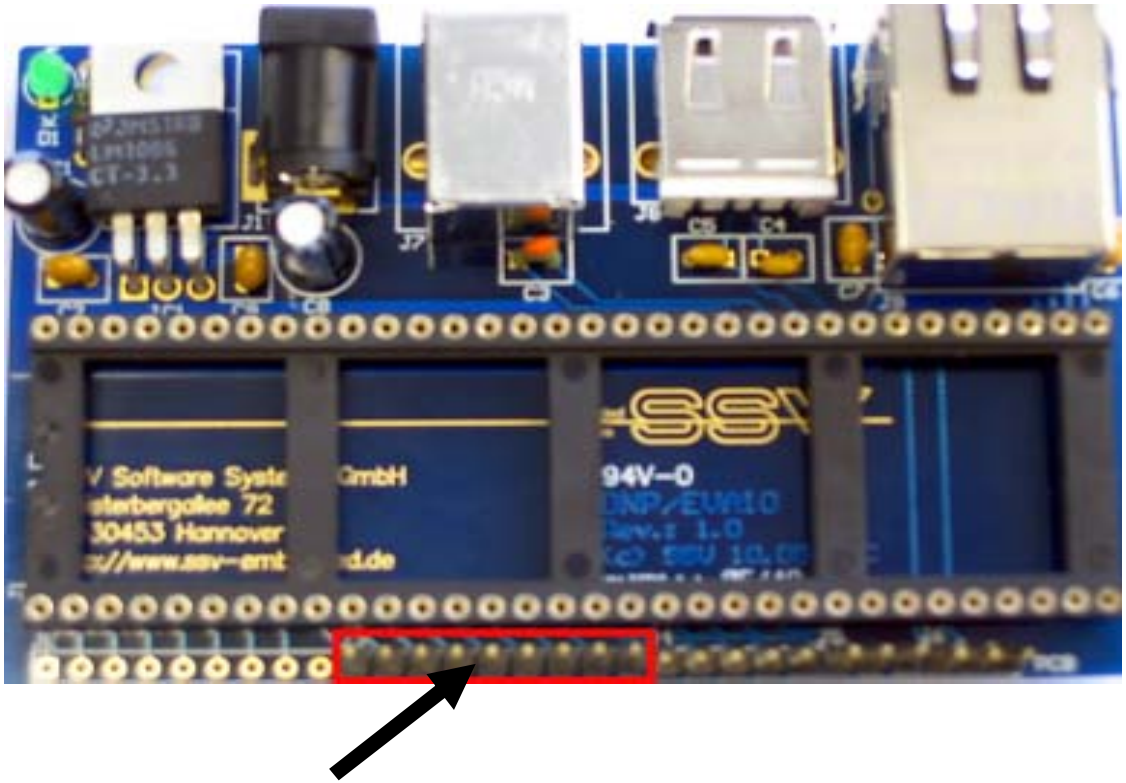
Step 21

➢ **Repeat step 19 for component J4.**



Step 22

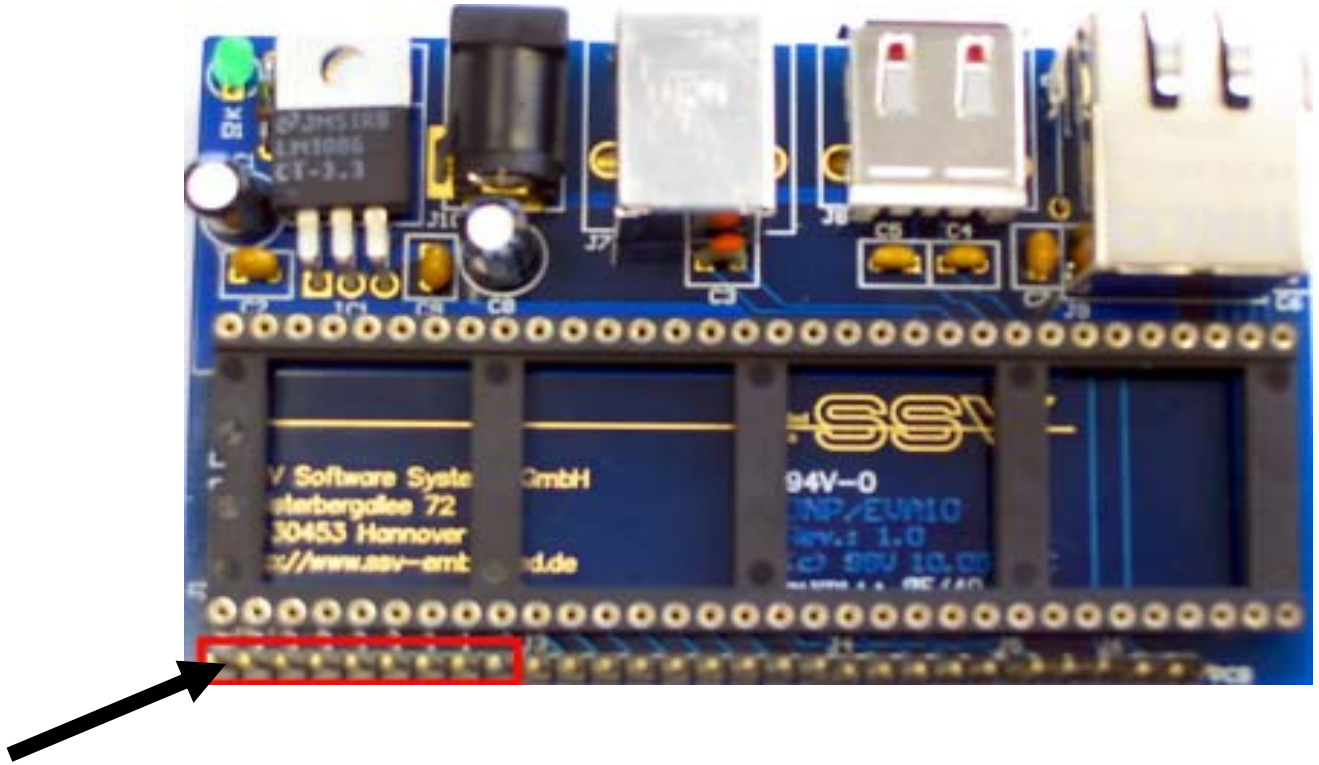
➢ **Repeat step 19 for component J3.**



Step 23

➢ **Repeat step 19 for component J2.**

Congratulations! You've built your own DNP/EVA10!



Copyright

SSV Embedded Systems

Heisterbergallee 72
D-30453 Hannover / Germany

Phone:	**+49 (0)511/40 000-0**
Fax:	**+49 (0)511/40 000-40**
E-mail:	**sales@ist1.de**
Internet:	**www.dilnetpc.com**