

AVR070: Modifying AT90ICEPRO and ATICE10 to Support Emulation of AT90S8535

For the AT90ICEPRO and ATICE10 emulator to be able to emulate AVR® AT90S8535, three straps must be inserted.

All AT90ICEPRO emulators produced after September 1998 and all ATICE10 emulators produced after June 2001 are delivered with these straps mounted and no upgrade is necessary.

People with some solder experience can easily install these three straps themselves. This application note shows how to mount these straps in a safe way.

Contact your local Atmel representative if you prefer to have your emulator updated by Atmel.

Required Parts

- Three insulated wires, approximately 10 cm long, 5 mm of the insulation removed on each end. Exact length as shown in the pictures: ○ 85 mm, □ 95 mm, ☆ 100 mm, all with 5 mm of the insulation removed on each end. Recommended wire: solid wire, 0.4 to 0.8 mm diameter (AWG26 to AWG20). Maximum thickness is 1.0 mm (AWG18), the hole diameter on the board. As the wires will not conduct power, there is no minimum thickness. Stranded wire may cause short circuits.

Required Tools

- ESD-safe workstation
- A good soldering iron
- Solder
- Desolder wick
- Pliers
- Cutter
- Pozidriv No.1 screwdriver

Work Description

1. This work must only take place on an ESD-safe workstation. The AT90ICEPRO and ATICE10 contains ESD sensitive components that may be damaged if not handled correctly.
2. Remove the top lid of the AT90ICEPRO or ATICE10 emulator by removing the two upper most screws on each side.
3. Locate the area where the straps will be installed. It is in the corner near the pod connector. In Figure 1, the pod connector is at the top.



8-bit **AVR**®
Microcontroller

Application Note

Rev. 1213C-AVR-05/02



4. Identify the pads where the straps are to be installed. The ends of the three straps are identified by ○, □ and ☆. See Figure 2, Figure 3, Figure 4 and Figure 5 for details.
5. All the pads are 1.0 mm holes. They may have been filled with solder during production. If necessary, use a desolder wick to remove excessive solder before mounting the straps.
6. Mount all three straps as shown in the pictures. Make sure not to overheat the pads. The tracks on the PCB are thin and they are easily broken.
7. Verify that all three wires have been mounted between the correct pads.
8. Check that all wire ends are soldered correctly and that there are no short circuits between the wire ends and the adjacent pads. If necessary, remove the bottom lid of the emulator and inspect the bottom side of the board.
9. Mount the top and bottom lid on the emulator.

Figure 1. Overview



Figure 2. Detail Showing Right End of all Three Straps.

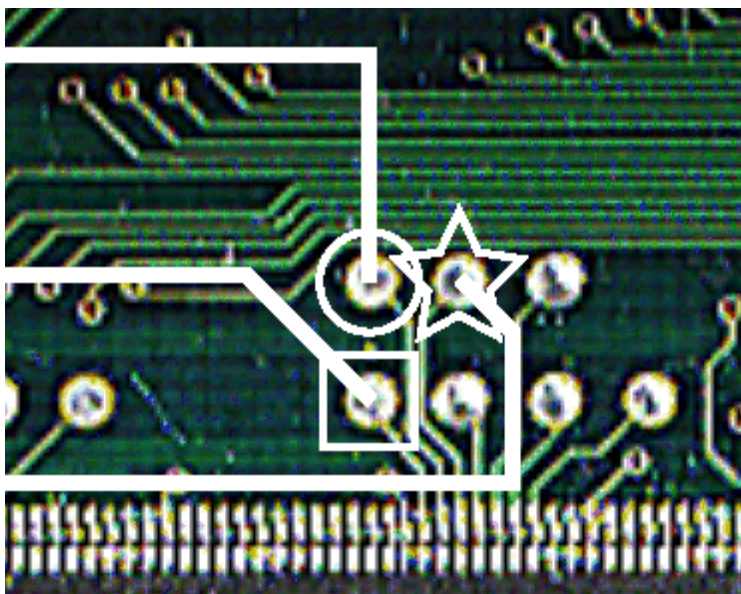


Figure 3. Detail Showing Left End of ○.

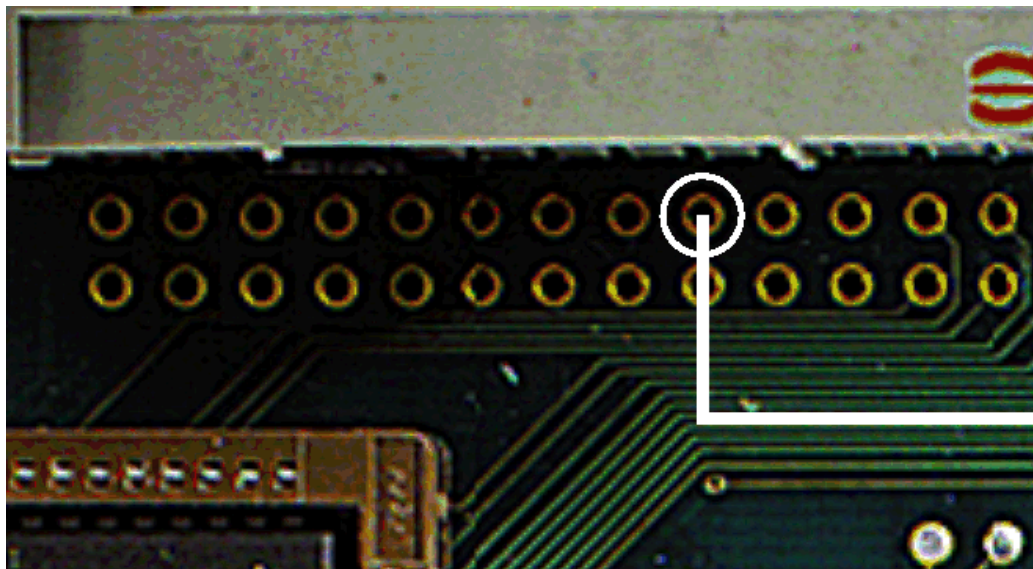


Figure 4. Detail Showing Left End of □.

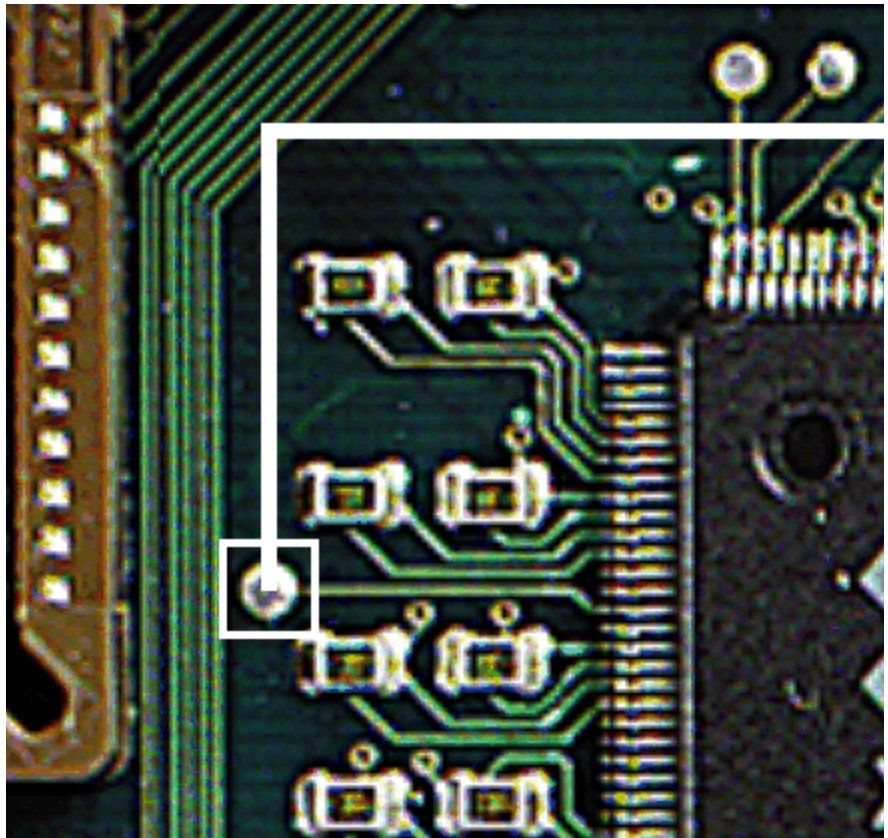
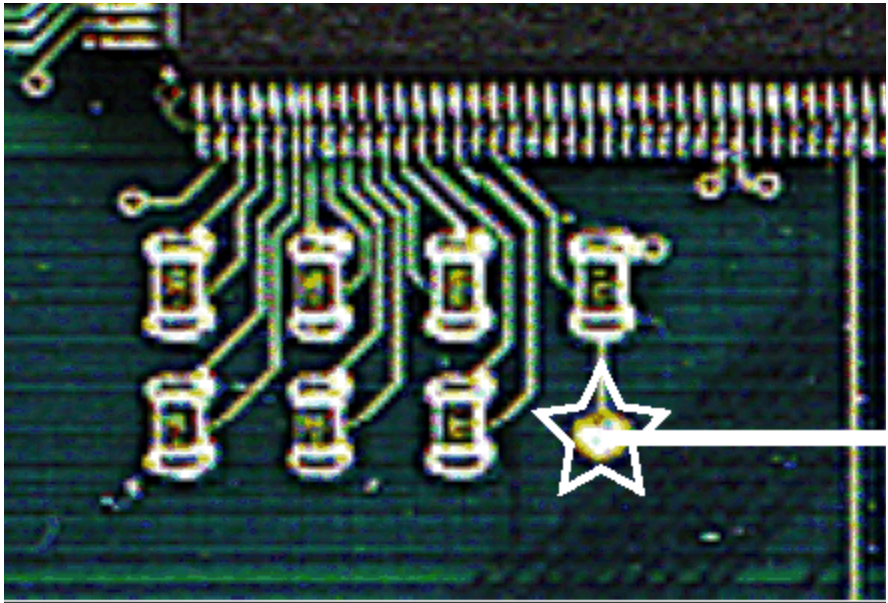


Figure 5. Detail Showing Left End of ☆.





Atmel Headquarters

Corporate Headquarters

2325 Orchard Parkway
San Jose, CA 95131
TEL 1(408) 441-0311
FAX 1(408) 487-2600

Europe

Atmel Sarl
Route des Arsenaux 41
Case Postale 80
CH-1705 Fribourg
Switzerland
TEL (41) 26-426-5555
FAX (41) 26-426-5500

Asia

Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimhatsui
East Kowloon
Hong Kong
TEL (852) 2721-9778
FAX (852) 2722-1369

Japan

9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
TEL (81) 3-3523-3551
FAX (81) 3-3523-7581

Atmel Operations

Memory

2325 Orchard Parkway
San Jose, CA 95131
TEL 1(408) 441-0311
FAX 1(408) 436-4314

Microcontrollers

2325 Orchard Parkway
San Jose, CA 95131
TEL 1(408) 441-0311
FAX 1(408) 436-4314

La Chantryerie
BP 70602
44306 Nantes Cedex 3, France
TEL (33) 2-40-18-18-18
FAX (33) 2-40-18-19-60

ASIC/ASSP/Smart Cards

Zone Industrielle
13106 Rousset Cedex, France
TEL (33) 4-42-53-60-00
FAX (33) 4-42-53-60-01

1150 East Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
TEL 1(719) 576-3300
FAX 1(719) 540-1759

Scottish Enterprise Technology Park
Maxwell Building
East Kilbride G75 0QR, Scotland
TEL (44) 1355-803-000
FAX (44) 1355-242-743

RF/Automotive

Theresienstrasse 2
Postfach 3535
74025 Heilbronn, Germany
TEL (49) 71-31-67-0
FAX (49) 71-31-67-2340

1150 East Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
TEL 1(719) 576-3300
FAX 1(719) 540-1759

Biometrics/Imaging/Hi-Rel MPU/ High Speed Converters/RF Datacom

Avenue de Rochepleine
BP 123
38521 Saint-Egreve Cedex, France
TEL (33) 4-76-58-30-00
FAX (33) 4-76-58-34-80

e-mail

literature@atmel.com

Web Site

<http://www.atmel.com>

© Atmel Corporation 2002.

Atmel Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Atmel's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. No licenses to patents or other intellectual property of Atmel are granted by the Company in connection with the sale of Atmel products, expressly or by implication. Atmel's products are not authorized for use as critical components in life support devices or systems.

ATMEL® and AVR® are the registered trademarks of Atmel.

Other terms and product names may be the trademarks of others.



Printed on recycled paper.