

---

## AVR462: Reducing the Power Consumption of the AT90EIT1 – AVR Embedded Internet Toolkit.

The Embedded Internet Toolkit circuit board is known to become very hot during extended operation. This is due to heat dissipation into the board from the voltage regulator and the Cirrus Logic ethernet device. By performing this upgrade, power consumption of the ethernet device can be reduced, thereby lowering the operating temperature of the board.

### Required Parts

- No additional parts are required.

### Required Tools

- ESD-safe workstation
- A good soldering iron
- Desolder wick
- Fine pliers

### Work Description

This work must only take place on an ESD-safe workstation. The AT90EIT1 board contains ESD sensitive components that may be damaged if not handled correctly.

Disconnect the power and ethernet cables from the board, and any other IO connections.

Place the board such that the AVR Embedded Web Server text is correctly oriented.

Locate the area inbetween the Crystal LAN CS8900A-CG device and the ATmega103 device.

Identify the two surface mount resistors immediately to the right of the CS8900A-CQ device. These two resistors are oriented along the top-bottom axis of the AT90EIT1 board. (Resistors R41 and R43 on the EIT schematic diagram, connected to pins 33 and 34 of the CS8900A-CQ.) See Figure 1 below for assistance.

Using the soldering iron and desolder wick, remove the solder from the resistors, and carefully remove them from the board.

Check that no solder has been placed on the surrounding devices' pins, which may cause short circuits.



---

**AVR<sup>®</sup>**  
**Embedded**  
**Internet Toolkit**

---

**Application**  
**Note**

Rev. 2511A-AVR-03/02



Figure 1. The Resistors have been Removed from the Position Shown

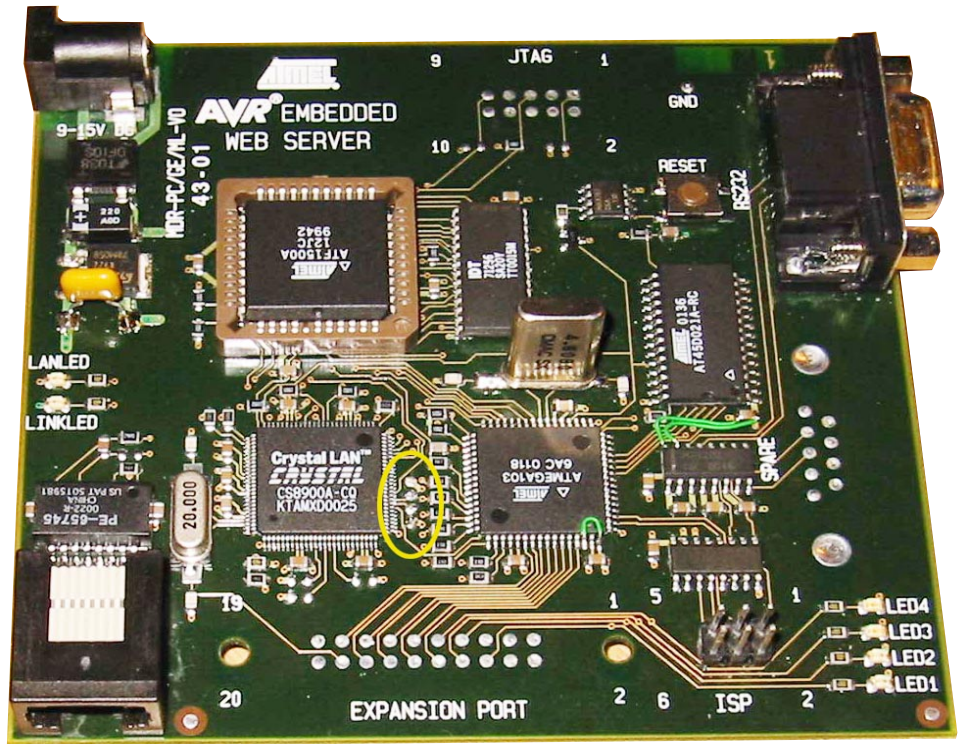
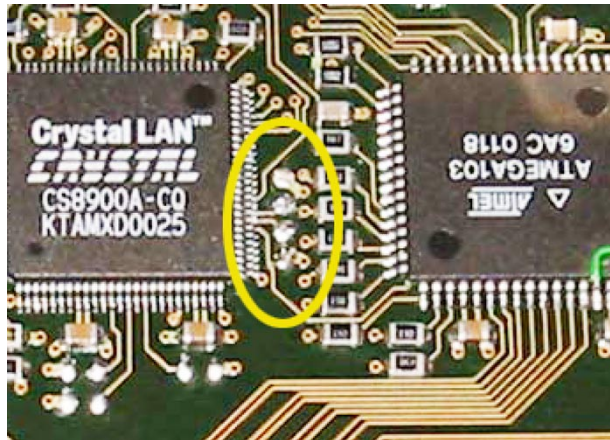


Figure 2. Detail of the Area Concerned



For further assistance, contact [avr@atmel.com](mailto:avr@atmel.com).



## 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  
Casa Postale 80  
CH-1705 Fribourg  
Switzerland  
TEL (41) 26-426-5555  
FAX (41) 26-426-5500

### *Asia*

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

### *Japan*

Atmel Japan K.K.  
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*

Atmel Corporate  
2325 Orchard Parkway  
San Jose, CA 95131  
TEL 1(408) 436-4270  
FAX 1(408) 436-4314

### *Microcontrollers*

Atmel Corporate  
2325 Orchard Parkway  
San Jose, CA 95131  
TEL 1(408) 436-4270  
FAX 1(408) 436-4314

Atmel Nantes  
La Chantrerie  
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*

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

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

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

### *RF/Automotive*

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

Atmel Colorado Springs  
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*

Atmel Grenoble  
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](mailto: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.