



## Product Change Notification

**PCN Number: WC134103**

**Notification Date: October 17, 2013**

**Title:** Adding Copper Bonding Wire Capability for Selected Microcontrollers

**Product Identification:**

Part number	Part number	Part number	Part number
ATTINY12-8SU	ATTINY85V-10SH	AT89LP4052-20SU	ATmega169PA-MCH
ATTINY12-8SUR	ATTINY85V-10SHR	AT89S2051-24SU	ATmega169PA-MCHR
ATTINY12L-4SU	ATTINY85V-10SU	AT89S4051-24SU	ATmega164PA-MCH
ATTINY12L-4SUR	ATTINY85V-10SUR	AT89LP3240-20AU	ATmega164PA-MCHR
ATTINY12V-1SU	ATTINY28L-4AU	AT89LP51-20AU	ATmega324A-MCH
ATTINY12V-1SUR	ATTINY28L-4AUR	AT89LP51ED2-20AU	ATmega324A-MCHR
ATTINY13-20SSU	ATTINY28L-4MU	AT89LP51IC2-20AU	ATmega324PA-MCH
ATTINY13-20SSUR	ATTINY28L-4MUR	AT89LP51ID2-20AU	ATmega324PA-MCHR
ATTINY13-20SU	ATTINY28V-1AU	AT89LP51RB2-20AU	ATmega1281-16MU
ATTINY13-20SUR	ATTINY28V-1AUR	AT89LP51RC2-20AU	ATmega1281-16MUR
ATTINY13A-SF	ATTINY28V-1MU	AT89LP51RD2-20AU	ATmega165PV-8AU
ATTINY13A-SFR	ATTINY28V-1MUR	AT89LP52-20AU	ATmega165PV-8AUR
ATTINY13A-SH	ATTINY48-MMH	AT89LP6440-20AU	ATmega165PV-8MU
ATTINY13A-SHR	ATTINY48-MMHR	AT89LS51-16AU	ATmega165PV-8MUR
ATTINY13A-SN	ATmega1284P-PU	AT89LS52-16AU	ATmega168PA-AN
ATTINY13A-SNR	ATmega1284-PU	AT89S51-24AU	ATmega168PA-ANR
ATTINY13A-SS7	ATmega16-16PU	AT89S52-24AU	ATmega168PA-MN
ATTINY13A-SS7R	ATmega162-16PU	AT89S8253-24AU	ATmega168PA-MNR
ATTINY13A-SSH	ATmega162V-8PU	ATxmega128A1U-AU	ATmega169PA-AN
ATTINY13A-SSHR	ATmega164A-PU	ATxmega128A1U-AUR	ATmega169PA-ANR
ATTINY13A-SSU	ATmega164P-20PU	ATxmega128A1U-C7U	ATmega324PA-AN
ATTINY13A-SSUR	ATmega164PA-PU	ATxmega128A1U-C7UR	ATmega324PA-ANR
ATTINY13A-SU	ATmega164PV-10PU	ATxmega128A4U-CU	ATmega325-16AU
ATTINY13A-SUR	ATmega16A-PU	ATxmega128A4U-CUR	ATmega325-16AUR
ATTINY13V-10SSU	ATmega16L-8PU	ATxmega192A3U-MH	ATmega325P-20AU
ATTINY13V-10SSUR	ATmega32-16PU	ATxmega192A3U-MHR	ATmega325P-20AUR
ATTINY13V-10SU	ATmega324A-PU	ATxmega256A3BU-AU	ATmega328-MMH
ATTINY13V-10SUR	ATmega324P-20PU	ATxmega256A3BU-AUR	ATmega328-MMHR
ATTINY25-20SH	ATmega324PA-PU	ATxmega256A3U-AU	ATmega328P-AN
ATTINY25-20SHR	ATmega324PV-10PU	ATxmega256A3U-AUR	ATmega328P-ANR
ATTINY25-20SN	ATmega32A-PU	ATxmega32A4U-CU	ATmega328P-MN
ATTINY25-20SNR	ATmega32L-8PU	ATxmega32A4U-CUR	ATmega328P-MNR
ATTINY25-20SSH	ATmega644-20PU	ATxmega64A1U-AU	ATmega329-16AU
ATTINY25-20SSHR	ATmega644A-PU	ATxmega64A1U-AUR	ATmega329-16AUR
ATTINY25-20SSN	ATmega644P-20PU	ATxmega64A1U-C7U	ATmega329-16MU

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ATTINY25-20SSNR	ATmega644PA-PU	ATxmega64A1U-C7UR	ATmega329-16MUR
ATTINY25-20SSU	ATmega644PV-10PU	ATxmega128B1-CU	ATmega406-1AAU
ATTINY25-20SSUR	ATmega644V-10PU	ATxmega128B1-CUR	ATmega406-1AAUR
ATTINY25-20SU	ATmega8515-16PU	ATxmega128B3-MH	ATmega48PA-AN
ATTINY25-20SUR	ATmega8515L-8PU	ATxmega128B3-MHR	ATmega48PA-ANR
ATTINY25V-10SN	ATmega8535-16PU	ATxmega128D4-AU	ATmega48PA-MMN
ATTINY25V-10SNR	ATmega8535L-8PU	ATxmega128D4-AUR	ATmega48PA-MMNR
ATTINY25V-10SSH	AT89LP3240-20PU	ATxmega128D4-CU	ATmega48PA-MN
ATTINY25V-10SSHR	AT89LP51-20PU	ATxmega128D4-CUR	ATmega48PA-MNR
ATTINY25V-10SSU	AT89LP51ED2-20PU	ATxmega128D4-MH	ATmega48PV-10MMU
ATTINY25V-10SSUR	AT89LP51RB2-20PU	ATxmega128D4-MHR	ATmega48PV-10MMUR
ATTINY25V-10SU	AT89LP51RC2-20PU	ATxmega384C3-AU	ATmega645-16AU
ATTINY25V-10SUR	AT89LP51RD2-20PU	ATxmega384C3-AUR	ATmega645-16AUR
ATTINY45-20SH	AT89LP52-20PU	ATxmega384C3-MH	ATmega645P-MU
ATTINY45-20SHR	AT89LP6440-20PU	ATxmega384C3-MHR	ATmega645P-MUR
ATTINY45-20SU	AT89LS51-16PU	ATxmega384D3-AU	ATmega649A-AU
ATTINY45-20SUR	AT89LS52-16PU	ATxmega384D3-AUR	ATmega649A-AUR
ATTINY45V-10SH	AT89S51-24PU	ATxmega384D3-MH	ATmega649A-MU
ATTINY45V-10SHR	AT89S52-24PU	ATxmega384D3-MHR	ATmega649A-MUR
ATTINY45V-10SU	AT89S8253-24PU	ATxmega64B1-CU	ATmega88PA-MMN
ATTINY45V-10SUR	AT89C2051-12SU	ATxmega64B1-CUR	ATmega88PA-MMNR
ATTINY85-20SH	AT89C2051-24SU	ATxmega64B3-MH	ATmega8A-AN
ATTINY85-20SHR	AT89C4051-12SU	ATxmega64B3-MHR	ATmega8A-ANR
ATTINY85-20SU	AT89C4051-24SU	ATxmega128B3-MCU	ATmega8A-MN
ATTINY85-20SUR	AT89LP2052-20SU	ATxmega128B3-MCUR	ATmega8A-MNR

<b>Reason for Change:</b>	<input checked="" type="checkbox"/> Material / Composition	<input type="checkbox"/> Manufacturing Location
	<input type="checkbox"/> Processing / Manufacturing	<input type="checkbox"/> Quality / Reliability
	<input type="checkbox"/> Design / Firmware	<input type="checkbox"/> Logistics
	<input type="checkbox"/> Datasheet	<input type="checkbox"/> Other:

**Change Description:**

To increase manufacturing flexibility and ensure long-term continuity of supply, Atmel will manufacture devices listed above using both gold (Au) and copper bond (Cu) wires. Atmel reserves the right to ship devices with either gold or copper bond wires. The change does not impact reliability, soldering profiles or electrical characteristics. Qualification data is available upon request.

Copper samples can be ordered through Atmel Sample Centre by logging on to <https://samples.atmel.com/scripts/samplecenter.dll?atmel?cmd=menu>, lead time 4 to 8 weeks.

Specific ordering codes for copper samples only are shown in the table below, and are available for sample orders only until the proposed first shipment date. For all production orders, only standard existing ordering codes will be accepted.

Part number	Cu Sample Ordering Code	Part number	Cu Sample Ordering Code
AT89C2051-12SU	AT89C2051-12SUC	ATmega48PV-10MMUR	ATmega48PV-10MMURC
AT89C2051-24SU	AT89C2051-24SUC	ATmega644-20PU	ATmega644-20PUC
AT89C4051-12SU	AT89C4051-12SUC	ATmega644A-PU	ATmega644A-PUC
AT89C4051-24SU	AT89C4051-24SUC	ATmega644P-20PU	ATmega644P-20PUC
AT89LP2052-20SU	AT89LP2052-20SUC	ATmega644PA-PU	ATmega644PA-PUC
AT89LP3240-20AU	AT89LP3240-20AUC	ATmega644PV-10PU	ATmega644PV-10PUC
AT89LP3240-20PU	AT89LP3240-20PUC	ATmega644V-10PU	ATmega644V-10PUC
AT89LP4052-20SU	AT89LP4052-20SUC	ATmega645-16AUR	ATmega645-16AURC
AT89LP51-20AU	AT89LP51-20AUC	ATmega645P-MUR	ATmega645P-MURC
AT89LP51-20PU	AT89LP51-20PUC	ATmega649A-AUR	ATmega649A-AURC
AT89LP51ED2-20AU	AT89LP51ED2-20AUC	ATmega649A-MUR	ATmega649A-MURC
AT89LP51ED2-20PU	AT89LP51ED2-20PUC	ATmega8515-16PU	ATmega8515-16PUC
AT89LP51IC2-20AU	AT89LP51IC2-20AUC	ATmega8515L-8PU	ATmega8515L-8PUC
AT89LP51ID2-20AU	AT89LP51ID2-20AUC	ATmega8535-16PU	ATmega8535-16PUC
AT89LP51RB2-20AU	AT89LP51RB2-20AUC	ATmega8535L-8PU	ATmega8535L-8PUC
AT89LP51RB2-20PU	AT89LP51RB2-20PUC	ATmega88PA-MMNR	ATmega88PA-MMNRC
AT89LP51RC2-20AU	AT89LP51RC2-20AUC	ATmega8A-ANR	ATmega8A-ANRC
AT89LP51RC2-20PU	AT89LP51RC2-20PUC	ATmega8A-MNR	ATmega8A-MNRC
AT89LP51RD2-20AU	AT89LP51RD2-20AUC	ATTINY12-8SU	ATTINY12-8SUC
AT89LP51RD2-20PU	AT89LP51RD2-20PUC	ATTINY12L-4SUR	ATTINY12L-4SURC
AT89LP52-20AU	AT89LP52-20AUC	ATTINY12V-1SUR	ATTINY12V-1SURC
AT89LP52-20PU	AT89LP52-20PUC	ATTINY13-20SSUR	ATTINY13-20SSURC
AT89LP6440-20AU	AT89LP6440-20AUC	ATTINY13-20SUR	ATTINY13-20SURC
AT89LP6440-20PU	AT89LP6440-20PUC	ATTINY13A-SFR	ATTINY13A-SFRC
AT89LS51-16AU	AT89LS51-16AUC	ATTINY13A-SHR	ATTINY13A-SHRC
AT89LS51-16PU	AT89LS51-16PUC	ATTINY13A-SNR	ATTINY13A-SNRC
AT89LS52-16AU	AT89LS52-16AUC	ATTINY13A-SS7R	ATTINY13A-SS7RC
AT89LS52-16PU	AT89LS52-16PUC	ATTINY13A-SSHR	ATTINY13A-SSHRC
AT89S2051-24SU	AT89S2051-24SUC	ATTINY13A-SSUR	ATTINY13A-SSURC
AT89S4051-24SU	AT89S4051-24SUC	ATTINY13A-SUR	ATTINY13A-SURC

AT89S51-24AU	AT89S51-24AUC	ATTINY13V-10SSUR	ATTINY13V-10SSURC
AT89S51-24PU	AT89S51-24PUC	ATTINY13V-10SUR	ATTINY13V-10SURC
AT89S52-24AU	AT89S52-24AUC	ATTINY25-20SHR	ATTINY25-20SHRC
AT89S52-24PU	AT89S52-24PUC	ATTINY25-20SNR	ATTINY25-20SNRC
AT89S8253-24AU	AT89S8253-24AUC	ATTINY25-20SSHR	ATTINY25-20SSHRC
AT89S8253-24PU	AT89S8253-24PUC	ATTINY25-20SSNR	ATTINY25-20SSNRC
ATmega1281-16MUR	ATmega1281-16MURC	ATTINY25-20SSUR	ATTINY25-20SSURC
ATmega1284P-PU	ATmega1284P-PUC	ATTINY25-20SUR	ATTINY25-20SURC
ATmega1284-PU	ATmega1284-PUC	ATTINY25V-10SNR	ATTINY25V-10SNRC
ATmega16-16PU	ATmega16-16PUC	ATTINY25V-10SSHR	ATTINY25V-10SSHRC
ATmega162-16PU	ATmega162-16PUC	ATTINY25V-10SSUR	ATTINY25V-10SSURC
ATmega162V-8PU	ATmega162V-8PUC	ATTINY25V-10SUR	ATTINY25V-10SURC
ATmega164A-PU	ATmega164A-PUC	ATTINY28L-4AUR	ATTINY28L-4AURC
ATmega164P-20PU	ATmega164P-20PUC	ATTINY28L-4MUR	ATTINY28L-4MURC
ATmega164PA-MCHR	ATmega164PA-MCHRC	ATTINY28V-1AUR	ATTINY28V-1AURC
ATmega164PA-PU	ATmega164PA-PUC	ATTINY28V-1MUR	ATTINY28V-1MURC
ATmega164PV-10PU	ATmega164PV-10PUC	ATTINY45-20SHR	ATTINY45-20SHRC
ATmega165PV-8AUR	ATmega165PV-8AURC	ATTINY45-20SUR	ATTINY45-20SURC
ATmega165PV-8MUR	ATmega165PV-8MURC	ATTINY45V-10SHR	ATTINY45V-10SHRC
ATmega168PA-ANR	ATmega168PA-ANRC	ATTINY45V-10SUR	ATTINY45V-10SURC
ATmega168PA-MNR	ATmega168PA-MNRC	ATTINY48-MMHR	ATTINY48-MMHRC
ATmega169PA-ANR	ATmega169PA-ANRC	ATTINY85-20SHR	ATTINY85-20SHRC
ATmega169PA-MCHR	ATmega169PA-MCHRC	ATTINY85-20SUR	ATTINY85-20SURC
ATmega16A-PU	ATmega16A-PUC	ATTINY85V-10SHR	ATTINY85V-10SHRC
ATmega16L-8PU	ATmega16L-8PUC	ATTINY85V-10SUR	ATTINY85V-10SURC
ATmega32-16PU	ATmega32-16PUC	ATxmega128A1U-AU	ATxmega128A1U-AUC
ATmega324A-MCHR	ATmega324A-MCHRC	ATxmega128A1U-C7U	ATxmega128A1U-C7UC
ATmega324A-PU	ATmega324A-PUC	ATxmega128A4U-CU	ATxmega128A4U-CUC
ATmega324P-20PU	ATmega324P-20PUC	ATxmega128B1-CUR	ATxmega128B1-CURC
ATmega324PA-ANR	ATmega324PA-ANRC	ATxmega128B3-MCUR	ATxmega128B3-MCURC
ATmega324PA-MCHR	ATmega324PA-MCHRC	ATxmega128B3-MHR	ATxmega128B3-MHRC
ATmega324PA-PU	ATmega324PA-PUC	ATxmega128D4-AUR	ATxmega128D4-AURC
ATmega324PV-10PU	ATmega324PV-10PUC	ATxmega128D4-CU	ATxmega128D4-CUC
ATmega325-16AUR	ATmega325-16AURC	ATxmega128D4-MH	ATxmega128D4-MHC
ATmega325P-20AUR	ATmega325P-20AURC	ATxmega192A3U-MH	ATxmega192A3U-MHC
ATmega328-MMHR	ATmega328-MMHRC	ATxmega256A3BU-AU	ATxmega256A3BU-AUC
ATmega328P-ANR	ATmega328P-ANRC	ATxmega256A3U-AU	ATxmega256A3U-AUC
ATmega328P-MNR	ATmega328P-MNRC	ATxmega32A4U-CU	ATxmega32A4U-CUC
ATmega329-16AUR	ATmega329-16AURC	ATxmega384C3-AU	ATxmega384C3-AUC
ATmega32A-PU	ATmega32A-PUC	ATxmega384C3-MH	ATxmega384C3-MHC
ATmega32L-8PU	ATmega32L-8PUC	ATxmega384D3-MHR	ATxmega384D3-MHRC
ATmega329-16MUR	ATmega329-16MURC	ATxmega384D3-AU	ATxmega384D3-AUC

ATmega406-1AAU	ATmega406-1AAUC	ATxmega64A1U-AUR	ATxmega64A1U-AURC
ATmega48PA-ANR	ATmega48PA-ANRC	ATxmega64A1U-C7U	ATxmega64A1U-C7UC
ATmega48PA-MMNR	ATmega48PA-MMNRC	ATxmega64B1-CUR	ATxmega64B1-CURC
ATmega48PA-MNR	ATmega48PA-MNRC	ATxmega64B3-MH	ATxmega64B3-MHC

Note that the **C** in sample ordering codes will not be marked on the package

**Identification Method to Distinguish Change:** N/A

<b>Qualification Data:</b>	<input checked="" type="checkbox"/> Available	<input type="checkbox"/> Will be available (mm/dd/yr):	<input type="checkbox"/> Not Applicable
<b>Samples:</b>	<input type="checkbox"/> Available	<input type="checkbox"/> Will be available (mm/dd/yr):	<input checked="" type="checkbox"/> Not Applicable

**Quantifiable Impact on Quality & Reliability:** N/A

**Proposed First Ship Date\*:** January 10, 2014

*\*The Proposed First Ship Date is the forecasted date that a customer may expect to receive changed product. This is determined by the estimated date of inventory depletion on the PCN issue date. This may be affected by fluctuations in supply and demand. Consequently, although customers should be prepared to receive changed product on this date, Atmel will continue to ship pre-changed product until a time in which inventory has been depleted. This may result in pre-changed product being shipped to customers after this forecasted date.*

**Atmel Contact:** Please contact your Atmel Sales Representative or Distributor for additional information (when replying via e-mail please include the PCN number in subject line).

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**To be completed by customer:**

Approved

Rejected (Please state reason for rejection): \_\_\_\_\_

Company: Name: Title: Date: Email Address: Location: Comments:	
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