



## Product Change Notice

**Product Change Notification Number:** IA186XX-C

**Title:** Product Enhancement for the IA186 and IA188 Family of 16-Bit and 8-Bit Microcontrollers

**Date of Notification:** March 27, 2006

### Description of Change:

Innovasic has made enhancements to the IA186 and IA188 family of microcontrollers that will correct most of the errata in versions 00 and 01 and is producing new production versions of the devices. The new part numbers for these versions are:

- IA186EM-PQF100I-03
- IA186EM-PTQ100I-03
- IA186ES-PQF100I-03
- IA186ES-PTQ100I-03
- IA188EM-PQF100I-03
- IA188EM-PTQ100I-03
- IA188ES-PQF100I-03
- IA188ES-PTQ100I-03
- IA186EM-PQF100I-R-03
- IA186EM-PTQ100I-R-03
- IA186ES-PQF100I-R-03
- IA186ES-PTQ100I-R-03
- IA188EM-PQF100I-R-03
- IA188EM-PTQ100I-R-03
- IA188ES-PQF100I-R-03
- IA188ES-PTQ100I-R-03

### Impact of Change:

Innovasic has made enhancements to the IA186 and IA188 family of microcontrollers that will affect versions 00 and 01 and is producing new production versions of the devices. The Errata that have been resolved are the following:

- 1) Problem: MCS chip select signals (MCS0-3) are intermittently suppressed. All other signals in bus cycle appear correct (i.e. address, data, write/read strobes).
- 2) Problem: IA186ES devices do not work in a 188ES socket
- 3) Problem: Noise on TMROUT0 (PIO10) and TMROUT1 (PIO1) when in PIO output mode.
- 4) Problem: An extra DMA cycle occurs after ending DMA transfers via a DMA control register write. In certain applications, this extra DMA cycle occurrence will hang the device because of DREQ/SRDY dependency.
- 5) Problem: In the 186/188ES devices, the TB8 bit of the UART control register (offset x10 or x80) does not automatically reset after transmitting the initial word when using 9-bit formats (modes 2 or 3).
- 6) Problem: In the 186/188ES devices, the Power Save clock speed is not working correctly.
- 7) Problem: The device responds incorrectly to false start bits.
- 8) Problem: The UART is disabled when an external system generates a break condition.
- 9) Problem: The MOV instruction does work when an attempt is made to load the CS register.
- 10) Problem: UART will not respond to break condition if RXD is low when receiver is enabled.



11) Problem: UART transmitter will not start if TX interrupt conditions exist prior to enabling transmitter.

Data sheets are available to download from our website [www.Innovasic.com](http://www.Innovasic.com). We are also available for testing support if you should require assistance. For Technical Assistance, call toll free at 1-888-824-4184 ext. 125, or send an email request to [techsupport@Innovasic.com](mailto:techsupport@Innovasic.com).

**PCN Revision History:**

<u>Revision</u>	<u>Date</u>	<u>Reason for Change</u>
B	5/20/05	Enhancement to make products RoHS-compliant.
C	3/27/06	Production Version change from 00 and 01 to 03.

NOTE: Rev 02 was never released as a production version

**For More Information:**

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**IMPORTANT NOTICE**

IN ORDER TO MINIMIZE RISKS ASSOCIATED WITH THE CUSTOMER'S APPLICATIONS, ADEQUATE DESIGN AND OPERATING SAFEGUARDS MUST BE PROVIDED BY THE CUSTOMER TO MINIMIZE INHERENT OR PROCEDURAL HAZARDS.

CERTAIN APPLICATIONS USING SEMICONDUCTOR PRODUCTS MAY INVOLVE POTENTIAL RISKS OF DEATH, PERSONAL INJURY OR ENVIRONMENTAL DAMAGE. InnovASIC PRODUCTS ARE NOT DESIGNED, WARRANTED OR AUTHORIZED TO BE SUITABLE FOR USE IN LIFE-SUPPORT DEVICES, SYSTEMS OR OTHER CRITICAL APPLICATIONS. INCLUSION OF InnovASIC PRODUCTS IN SUCH APPLICATIONS IS TO BE FULLY AT THE CUSTOMER'S RISK.