



# Intel<sup>®</sup> StrongARM<sup>®</sup> SA-1111 Development Module

Specification Update

---

*February 2000*

**Notice:** The Intel<sup>®</sup> StrongARM<sup>®</sup> SA-1111 Development Module may contain design defects or errors known as errata. Characterized errata that may cause the board's behavior to deviate from published specifications are documented in this specification update.

Order Number: 278332-002



Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications.

Intel may make changes to specifications and product descriptions at any time, without notice.

Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them.

The Intel® StrongARM® SA-1111 Development Board may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an ordering number and are referenced in this document, or other Intel literature may be obtained by calling 1-800-548-4725 or by visiting Intel's website at <http://www.intel.com>.

Copyright © Intel Corporation, 2000

\*Other brands and names are the property of their respective owners.

ARM and StrongARM are registered trademarks of ARM, Ltd.



# Contents

---

|                                    |    |
|------------------------------------|----|
| Revision History .....             | 5  |
| Preface.....                       | 6  |
| Summary Table of Changes.....      | 8  |
| Identification Information.....    | 10 |
| Errata .....                       | 11 |
| Specification Changes .....        | 12 |
| Specification Clarifications ..... | 13 |
| Documentation Changes .....        | 14 |



# *Revision History*

---

| <b>Date</b> | <b>Version</b> | <b>Description</b>   |
|-------------|----------------|--|
| 2/18/00     | 002            | Added documentation change for compact flash connection warning.   |
| 1/31/00     | 001            | This is the new Specification Update document. It contains all identified errata published prior to this date. |

# Preface

---

As of July, 1996, Intel's Computing Enhancement Group has consolidated available historical device and documentation errata into this new document type called the Specification Update. We have endeavored to include all documented errata in the consolidation process, however, we make no representations or warranties concerning the completeness of the Specification Update.

This document is an update to the specifications contained in the Affected Documents/Related Documents table below. This document is a compilation of device and documentation errata, specification clarifications and changes. It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools.

Information types defined in Nomenclature are consolidated into the specification update and are no longer published in other documents.

This document may also contain information that was not previously published.

## Affected Documents/Related Documents

| Title   | Order      |
|---|------------|
| Intel® StrongARM® SA-1111 Development Module User's Guide           | 278282-003 |
| Intel® StrongARM® SA-1111 Development Module Hardware Release Notes | 278236-002 |

## Nomenclature

**Errata** are design defects or errors. These may cause the published (component, board, system) behavior to deviate from published specifications. Hardware and software designed to be used with any component, board, and system must consider all errata documented.

**Specification Changes** are modifications to the current published specifications. These changes will be incorporated in any new release of the specification.

**Specification Clarifications** describe a specification in greater detail or further highlight a specification's impact to a complex design situation. These clarifications will be incorporated in any new release of the specification.

**Documentation Changes** include typos, errors, or omissions from the current published specifications. These will be incorporated in any new release of the specification.

**Note:** Errata remain in the specification update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the specification update are archived and available upon request. Specification changes, specification clarifications and documentation changes are removed from the specification update when the appropriate changes are made to the appropriate product specification or user documentation (datasheets, manuals, etc.).

# Summary Table of Changes

---

The following table indicates the errata, specification changes, specification clarifications, or documentation changes which apply to the Intel® StrongARM® SA-1111 Microprocessor Development Module (SA-1111 Development Module), order number SA1111DEVMOD. Intel may fix some of the errata in a future revisions of the SA-1111 Development Module, and account for the other outstanding issues through documentation or specification changes as noted. This table uses the following notations:

## Codes Used in Summary Table

### Stepping

- X: Errata exists in the stepping indicated. Specification Change or Clarification that applies to this stepping.
- (No mark)
- or (Blank box): This erratum is fixed in listed stepping or specification change does not apply to listed stepping.

### Page

- (Page): Page location of item in this document.

### Status

- Doc: Document change or update will be implemented.
- Fix: This erratum is intended to be fixed in a future step of the component.
- Fixed: This erratum has been previously fixed.
- NoFix: There are no plans to fix this erratum.
- Eval: Plans to fix this erratum are under evaluation.

### Row

- | Change bar to left of table row indicates this erratum is either new or modified from the previous version of the document.



## Errata

| No. | Board Revision |  |  | Page | Status | ERRATA |
|-----|----------------|--|--|------|--------|--------|
|     |                |  |  |      |        |        |
| 1   |                |  |  | 11   |        | None.  |

## Specification Changes

| No. | Board Revision |  | Page | Status | SPECIFICATION CHANGES |
|-----|----------------|--|------|--------|-----------------------|
|     |                |  |      |        |                       |
| 1   |                |  | 12   |        | None.                 |

## Specification Clarifications

| No. | Board Revision |   |   | Page | Status | SPECIFICATION CLARIFICATIONS                                    |
|-----|----------------|---|---|------|--------|---|
|     | B              | C | # |      |        |   |
| 1   | -              | - |   | 13   |        | Li-Ion battery circuit was not designed to support both modules |

## Documentation Changes

| No. | Document Revision | Page | Status | DOCUMENTATION CHANGES  |
|-----|-------------------|------|--------|--|
| 1   | 278282-003        | 14   | Doc    | Intel® StrongARM® SA-1111 Development Module Software: Section 2.1.1 |
| 2   | 278236-002        | 15   | Doc    | Components - Engineering Change Orders: Section V                    |
| 3   | 278236-004        | 15   | Doc    | Procedural Changes: Compact Flash Connection Changes                 |

# Identification Information

---

## Markings

This document contains errata for the SA-1111 Development Module. The module's revision that is affected by this errata can be identified as order number SA1111DEVMOD. The SA-1111 Development Modules are labeled with a sticker on side 2 indicating module revision. The revision of the module is indicated on the sticker by an *R*: and is followed by a letter *B* or *C*. The B and C revisions are functionally equivalent.

# Errata

---

1. None.

# *Specification Changes*

---

1. None.

# Specification Clarifications

---

**1. Li-Ion battery circuit was not designed to support both modules**

The Li-Ion battery circuit was not designed to simultaneously support the Intel® StrongARM SA-1110 and the SA-1111 Development Module.

# Documentation Changes

---

## 1. Intel® StrongARM® SA-1111 Development Module Software: Section 2.1.1

The text in this section has changed to:

See the *Intel® StrongARM® SA-1110 Development Board User's Guide* for a complete list of the available software, including the diagnostics for the SA-1111 Development Module.

## 2. Register Descriptions: Table 4-3

Two rows have been added to this table. It now appears as follows:

**Table 4-3. Register Descriptions**

| Address   | Name      | Description   |
|-----------|-----------|---|
| 10000024  | IRR       | Interrupt Reason Register<br>CPLD [2:0] (RO)  |
| 1000,00C0 | AUD_CTL   | Audio controls<br>CPLD [1:0] (RW)   |
| 1000,00B0 | MDM_CTL_0 | Modem Control signals<br>CPLD [3:0] (RW)  |
| 100000B4  | MDM_CTL_1 | Modem Control signals<br>CPLD [5:0] (RO)  |
| 1000,00A0 | CR        | Control Register<br>CPLD [7:0] (RW)   |
| 1000,0090 | KP_X_OUT  | Keypad row write<br>CPLD [4:0] (RW)   |
| 1000,0080 | KP_Y_IN   | Keypad column read<br>CPLD [3:0] (RO)   |
| 1000,0020 | SWPK      | Switch pack, 8 switches<br>CPLD [7:0] (RO)  |
| 1000,0000 | WHOAMI    | System ID register<br>CPLD (RO) reads constant 0x11<br>0x11 = SA-1111 ID + SA-1110 ID |

## 3. LED Mapping: Table 4-10

The first three rows of this table have been deleted and the description has changed for last row.

**Table 4-10. LED Mapping**

| Address   | Name | Description                       |
|-----------|------|-----------------------------------|
| 1000,0010 | LEDS | LEDs register (WO)<br>LEDs [31:0] |

**4. Components - Engineering Change Orders: Section V**

Added ECO number 2.0 to this section. This ECO appears as follows:

Lifted pin 13 (signal SA1111\_PWM0) on U40. Added green wire from Pin 1 of J7 to lifted pin on U40 pin 13. (Enables L3 mode on the UDA1341.)

**5. Procedural Changes: Compact Flash Connection Changes**

Added the following caution regarding compact flash:

---Caution: Do not plug a compact flash card into the SA-1110 Development Board CF socket when the SA-1111 Development or graphics module are present or it will crash the system and may damage the transceiver component.

