

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54

CHRP™ ISA Interrupt Controller Device Binding

to:

IEEE 1275-1994

Standard for Boot

(Initialization, Configuration)

Firmware

Revision: 1.1 Unapproved DRAFT

Date: August 19, 1996

Table of Contents

1		
2		
3		
4		
5		
6		
7		
8		
9	1. Purpose of this Device Binding	3
10	2. Revision History	3
11	3. References.	3
12	4. Definition of Terms.	3
13	5. Device Characteristics (Informative)	3
14	6. Device-specific Configuration Variables	3
15	7. Device Nodes	3
16	7.1 Properties	3
17	7.1.1 Open Firmware-defined Properties for Device Nodes.	4
18	7.1.2 Device-specific Properties for Device Nodes	4
19	7.2 Methods.	4
20	7.2.1 Open Firmware-defined Methods for Device Nodes.	4
21	7.2.1.1 Device Arguments for “Open” Method	4
22	7.2.2 Device-specific Methods for Device Nodes	4
23	8. User Interface Commands.	5
24	8.1 Open Firmware-defined User Interface Commands.	5
25	8.2 Device-specific User Interface Commands	5
26	9. Device State	5
27	9.1 Device State When Client is Started.	5
28	9.2 Device State Required When Client Calls Open Firmware	5
29	10. Other Commentary	5
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		

1. Purpose of this Device Binding

This document specifies the application of Open Firmware to the PowerPC Common Hardware Reference Platform (CHRP™) ISA interrupt controller, including device-specific requirements and practices for initialization, properties, and methods. This device shall be a child of an ISA or EISA Bus Node.

2. Revision History

Revision 1.0 Unapproved DRAFT May 21, 1996 Initial revision. Jordan Brown, Sunsoft and John Kingman, IBM editors

Revision 1.1 Unapproved DRAFT August 19, 1996 Added "reserved-interrupts" property.

3. References

This Open Firmware System binding standard *shall* be used in conjunction with the following publications. When the following standards are superseded by an approved revision, the revision *shall* apply.

[1] *IEEE Std 1275-1994 Standard for Boot (Initialization, Configuration) Firmware, Core Practices and Requirements.*

[2] *Core Errata, IEEE P1275.7/D4.*

[3] *ISA/EISA/ISA-PnP binding to: IEEE Std 1275-1994, Standard for Boot (Initialization, Configuration) Firmware.*

[4] *PowerPC Microprocessor Common Hardware Reference Platform: I/O Device Reference.* This document describes the PowerPC Common Hardware Reference Platform (CHRP™) System Standard I/O Devices; hardware registers, register locations, and hardware attributes.

[5] *Open Firmware Recommended Practice: Interrupt Mapping.*

[6] *Open Firmware Recommended Practice: Generic Names.*

[7] *PowerPC Microprocessor Common Hardware Reference Platform binding to: IEEE Std 1275-1994, Standard for Boot (Initialization, Configuration) Firmware.*

4. Definition of Terms

EISA: Extended Industry Standard Architecture

ISA: Industry Standard Architecture

5. Device Characteristics (Informative)

The ISA interrupt controller is essentially a set of two cascaded 8259 interrupt controllers. Their interrupt lines may be set as edge or level sensitive.

6. Device-specific Configuration Variables

None.

7. Device Nodes

7.1. Properties

As specified in [1], [3] and [7], with the following additions or modifications.

8. User Interface Commands

8.1. Open Firmware-defined User Interface Commands

None.

8.2. Device-specific User Interface Commands

None.

9. Device State

9.1. Device State When Client is Started

For devices not selected as Open Firmware's "console input device" or "console output device" device, most of the initial state is typically undefined. This device shall have all interrupts disabled when the client is started.

Refer to [4] for more information on the state of this device when the client is started.

9.2. Device State Required When Client Calls Open Firmware

For devices not selected as Open Firmware's "console input device" or "console output device" device, there is no requirement. Typically, this device is unsuitable for use as an Open Firmware console input or console output device.

10. Other Commentary