C120-E455-02EN

SPARC® Enterprise Server
UPC Connector Supplement

FUJITSU

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Preface

This manual explains specifications for connecting the Uninterruptible Power Supply (UPS) control interface using the Unit Power Controller (UPC) connector of the SPARC Enterprise M4000/M5000/M8000/M9000 server in the following sections:

SPARC Enterprise Mx000 Servers Documentation

The manuals listed below are provided for reference.

Book Titles	Manual Codes
SPARC Enterprise M4000/M5000 Servers Overview Guide	C120-E346
SPARC Enterprise M8000/M9000 Servers Overview Guide	C120-E324

(a) Manuals on the Web

The latest versions of all the SPARC Enterprise Series manuals are available at the following websites:

Global Site

http://www.fujitsu.com/sparcenterprise/manual/

Japanese Site

http://primeserver.fujitsu.com/sparcenterprise/manual/

Note: Product Notes is available on the website only. Please check for the recent update on your product.

1 Overview

This interface is used to generate a conventional software interrupt, and to save data temporarily when an uninterruptible power supply (UPS) is used to protect against commercial AC power supply failure.

A UPS unit is used to provide a stable supply of power to the system in the event of a power failure or an extensive power interruption.

By connecting the UPC port of the server and a UPS which has a UPC interface via signal cables, you can execute emergency shutdown processing when the commercial AC power supply failure detected.

2 Signal Cables

Use shielded and paired cables. The cables have the following specifications:

- DC resistance (roundtrip/1 pair): 400 Ω/km or less
- Cable length: Up to 10 m (33 ft.)

3 Signal Line Configuration

This section describes signal definitions and electrical specifications.

3.1 Definitions of signals

Figure 1 shows the signal line configuration when connected to a UPS.

Table 1 defines these signal lines.

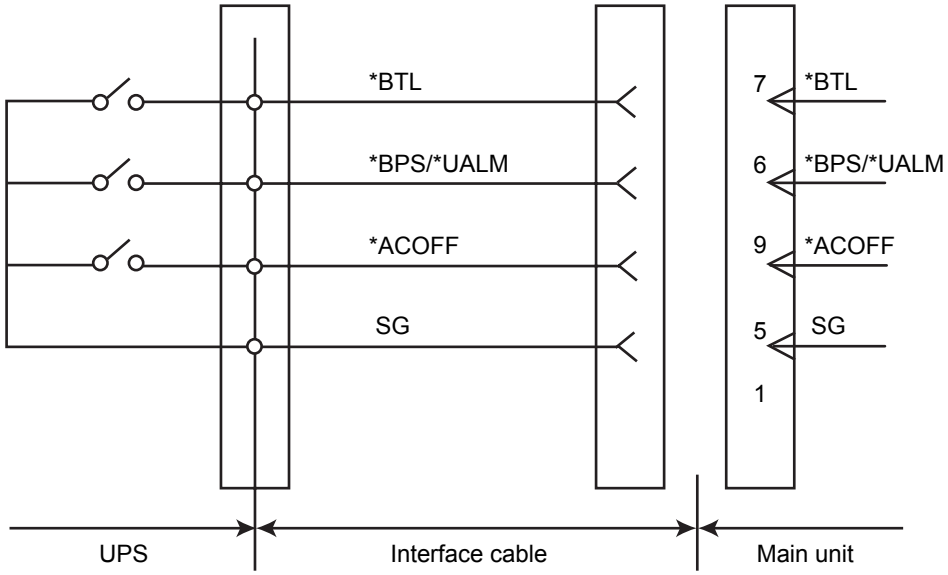


Figure 1 Connection with UPS

Table 1 UPS interface signals

Signal name	Definitions	Pin number	Remarks
*BPS/*UALM	Signal indicates faulty UPS conditions	6	
*BTL	Signal provides a warning of a low battery level and a pending UPS failure.	7	Enabled with ON (Note1)
*ACOFF	Signal indicates power failure at the commercial AC supply connector to the UPS	9	Power failure: ON Normal: OFF (Note2)
SG	Signal ground	5	
ER	Signal indicates the main unit is running (Equipment Ready)	1	(Note3)

ON: Indicates contacts are closed

OFF: Indicates contacts are open

Note1: Use a UPS capable of normal battery power supply operation for at least 10 to 60 seconds after this signal is turned on.

Note2: Use a UPS capable of normal battery power supply output without turning on the *ACOFF in an instantaneous commercial AC power failure lasting two seconds or less.

Note3: Do not connect to ER signal pin.

3.2 Electrical specifications

Table 2 and Table 3 lists the electrical specifications for the UPS interface.

- Input circuit

Table 2 Electrical specifications

Signal name	Input conditions
*BPS/*UALM	• No voltage relay contact • Contact rating DC 12 V, 10 mA or more (maximum 0.5A) • Use of metallic contact, or lead relay is recommended.
*BTL	
*ACOFF	

Remarks: Signal-line chatter must be 1ms or less.

- Output circuit

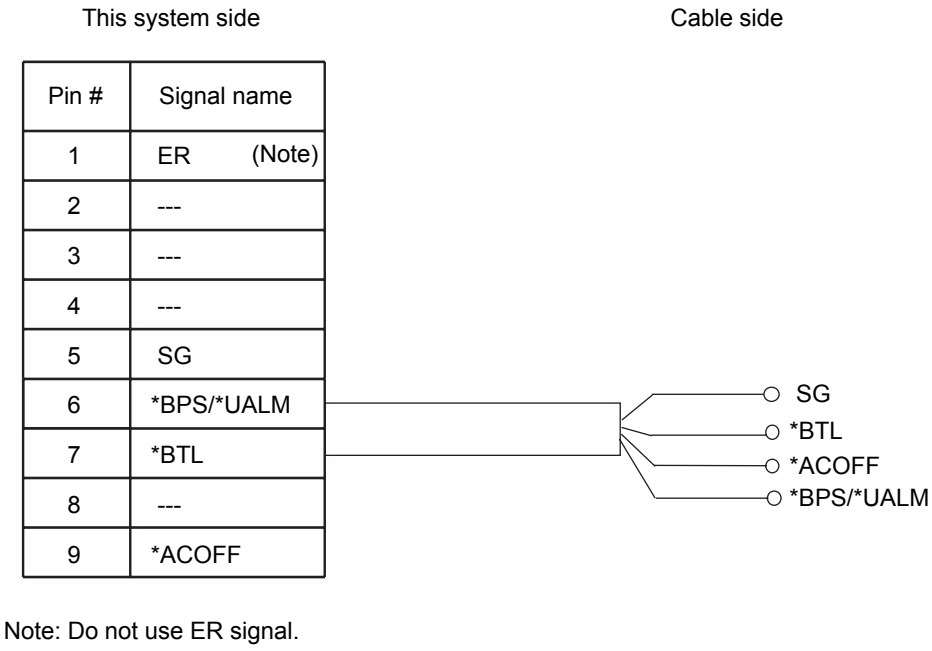
Table 3 Electrical specifications

Signal name	Output conditions		
ER	Output Voltage	VOH	3.76 VDC (min)
		VOL	0 to 0.4 VDC (max)
	Output Current	IOH	- 4 mA (max)
		IOL	4 mA (max)

4 Cable Connector

The interface cable has the following specifications.

- Connector type
  D-SUB9 pin Male (install side: Female)
  DEU-9PF-F0 (from JAE Electronics Engineering Company, or equivalent)
- Terminal array
  Figure 2 identifies pin signals of the UPC connector and the UPS cable.
  Do not use the unused pins (pin number 2, 3, 4 and 8 in the following diagram).
  Cable side shown below.



Note: Do not use ER signal.

Figure 2 Corresponding terminals in UPC connector and the UPS cable

Note: If you need UPC cables, you need to make arrangements separately. For details, contact your sales representatives.

5 UPC Connector

This chapter describes the location of the UPC connector and the UPS connections.

- UPC#0 connects with UPS#0. UPC#1 connects with UPS#1.
- The single power feed uses UPC#0 only.
- The dual power feed option uses UPC#0 and UPC#1.

Figure 3, Figure 4, and Figure 5 show the location of the UPC connector in the main unit.

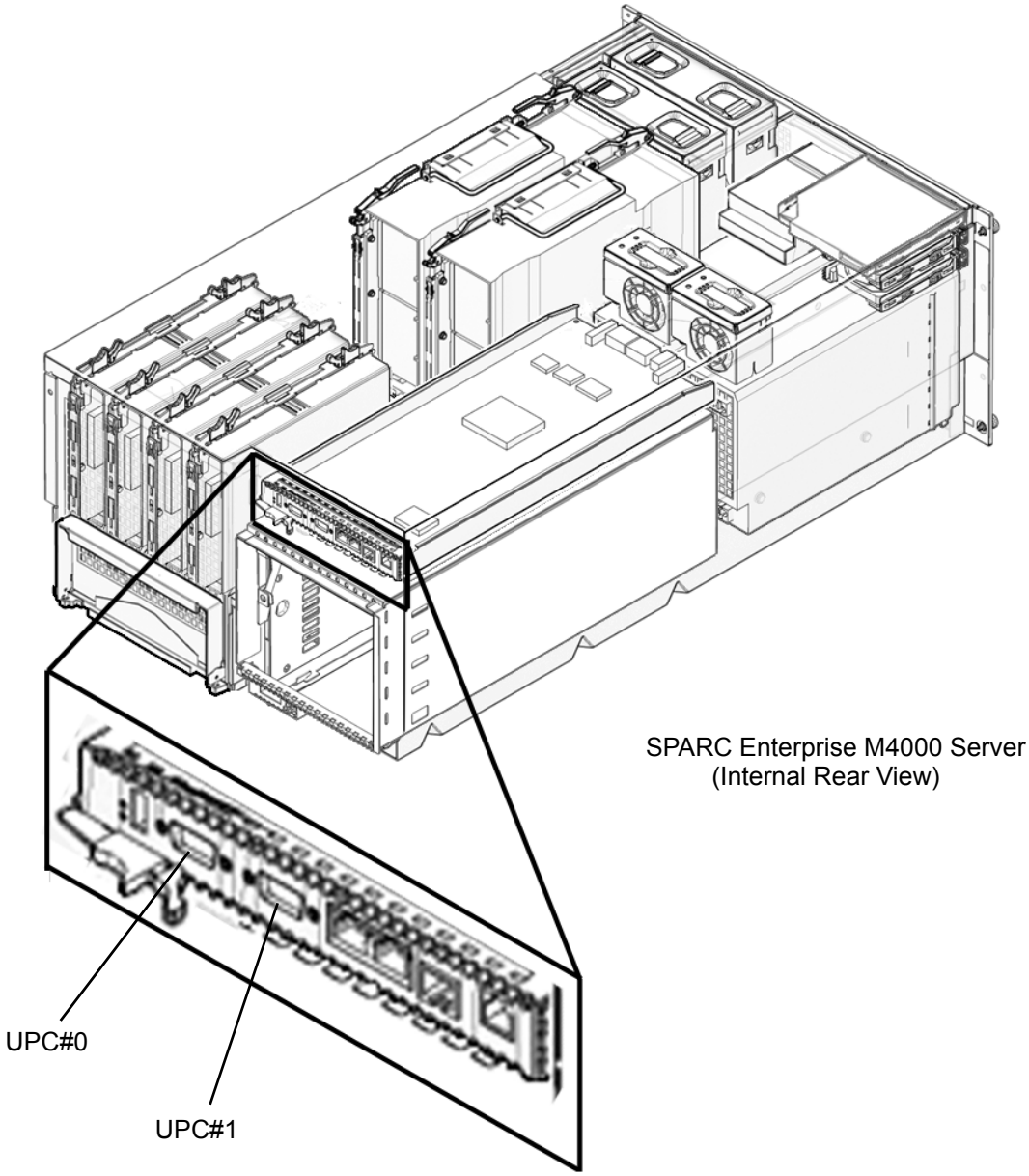


Figure 3 UPC connector of SPARC Enterprise M4000 Server

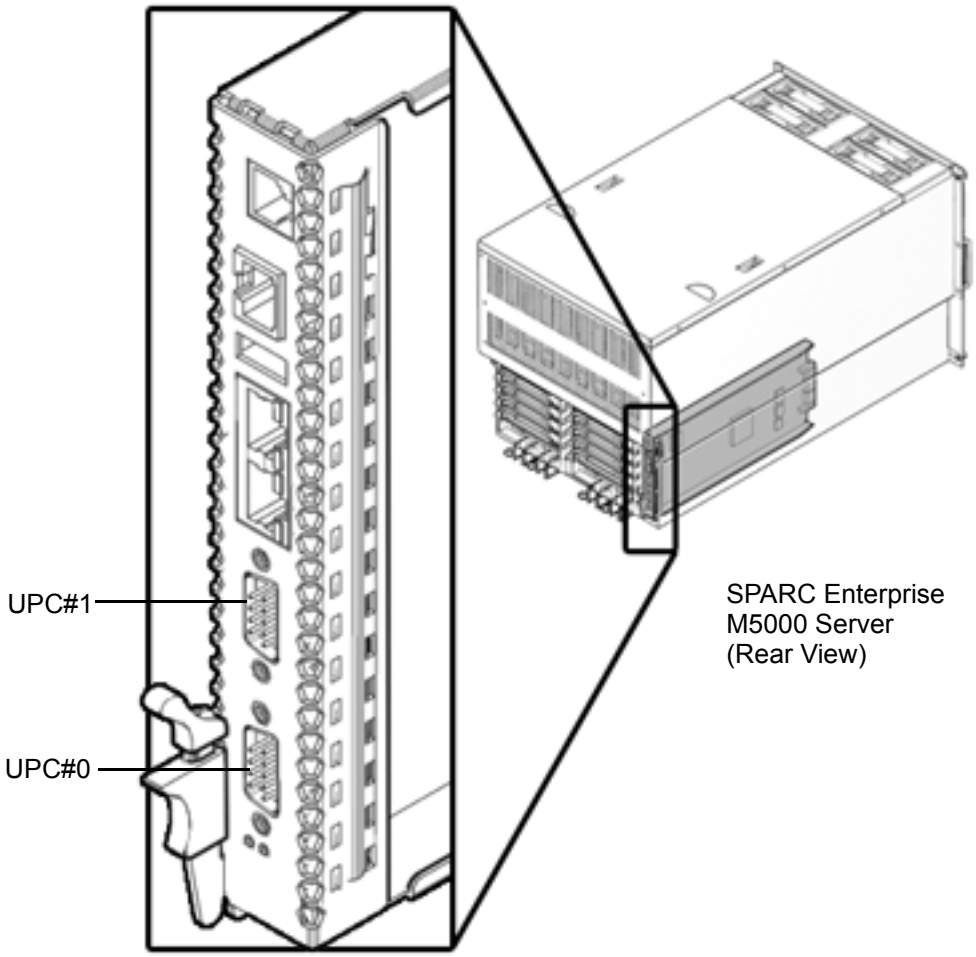


Figure 4 UPC connector of SPARC Enterprise M5000 Server

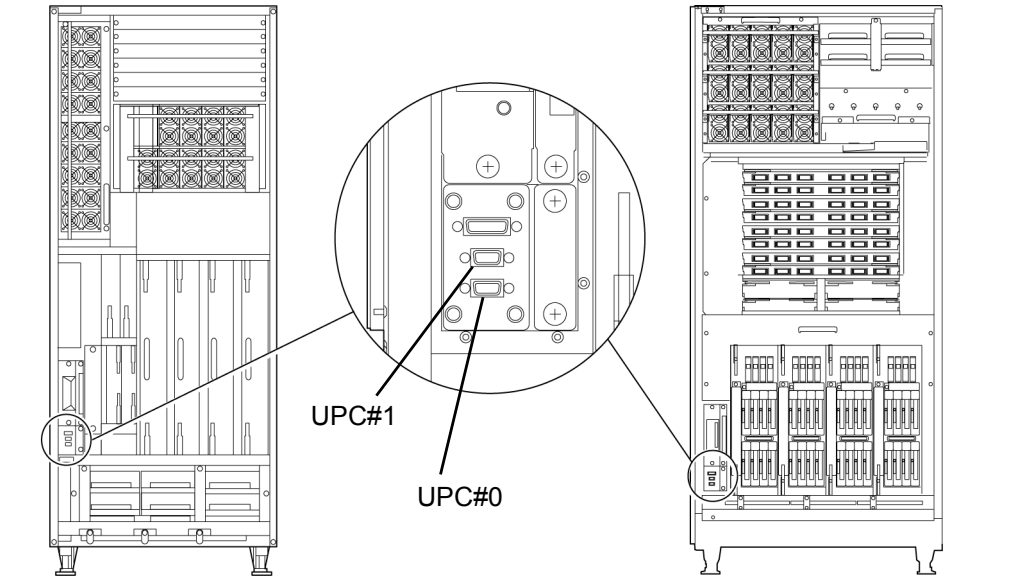
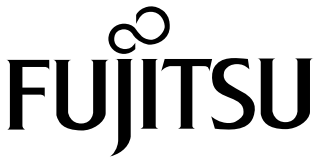


Figure 5 UPC connector of SPARC Enterprise M8000/M9000 Server

Figure 6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