

Hardware Information

Installing features and
replacing parts

ESCALA POWER5



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ESCALA POWER5

Hardware Information

Installing features and replacing parts

Hardware

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Table of Contents

Installing features and replacing parts	1
What's new.....	1
New models.....	1
Select instructions by feature or part name.....	1
Select instructions by model or expansion unit.....	2
Servers and workstations.....	2
Expansion units.....	13

Installing features and replacing parts

Locate instructions to install, remove, and replace features and parts.

You can install features or remove and replace parts on your system or expansion unit.

Installing features and replacing parts are customer tasks. You can perform these tasks yourself, or contact a service provider to perform a task for you. You might be charged a fee by the service provider for this service.

This topic collection contains the instructions for installing features or replacing parts. To locate the instructions for a particular feature or part, you can select the model or expansion unit, or you can select the feature or part.

- **What's new**
Learn what is new or changed since this topic collection was last issued.
 - **Select instructions by feature or part name**
Find instructions for installing a feature or replacing a part by name or by feature code. These instructions are available for viewing or printing in both HTML and PDF versions.
 - **Select instructions by model or expansion unit**
Find instructions for installing a feature or replacing a part in a specific model or expansion unit. These instructions are available for viewing or printing in both HTML and PDF versions.
-

What's new

Learn what is new or changed since this topic collection was last issued.

New models

The following machine types and models are now available:

You can install features and replace parts on these new machine types and models. The related instructions can be found in this topic.

Parent topic: [Installing features and replacing parts](#)

Select instructions by feature or part name

Find instructions for installing a feature or replacing a part by name or by feature code. These instructions are available for viewing or printing in both HTML and PDF versions.

Description	Printable PDF
Control panel and signal cable	PDF
Disk drive	PDF
Disk drive backplane and enclosure	PDF
Expansion unit	PDF
Fan	PDF
Fan tray assembly	PDF
Hardware Management Console (HMC)	PDF

InfiniBand (IB) switch	n/a
Media device	PDF
Media device backplane and enclosure	PDF
Memory module	PDF
PCI adapter	PDF
PCI adapter dividers and light pipes	PDF
Power supply	PDF
Rack mounting a system or expansion unit	PDF
Rack installation	PDF
Rack features	PDF
RAID disk controller cache battery pack	PDF
RAID enablement card	PDF
Service processor assembly	PDF
Service processor cable	PDF
SMP processor cable	PDF
System backplane	PDF
System processor assembly	PDF
Time-of-day battery	PDF
Voltage regulator	PDF

Parent topic: [Installing features and replacing parts](#)

Select instructions by model or expansion unit

Find instructions for installing a feature or replacing a part in a specific model or expansion unit. These instructions are available for viewing or printing in both HTML and PDF versions.

Note: For information about setting up an InfiniBand (IB) switch see, [InfiniBand \(IB\) switch](#).

- **[Servers and workstations](#)**
Find instructions for installing a feature or replacing a part in a specific model or expansion unit. These instructions are available for viewing or printing in both HTML and PDF versions.
- **[Expansion units](#)**
Find instructions for installing, removing, and replacing parts by expansion unit.

Parent topic: [Installing features and replacing parts](#)

Servers and workstations

Find instructions for installing a feature or replacing a part in a specific model or expansion unit. These instructions are available for viewing or printing in both HTML and PDF versions.

- **[Model ESCALA PL 245T/R features and parts](#)**
Find instructions for installing a feature or replacing a part. These instructions are available for viewing or printing in both HTML and PDF versions.
- **[Model ESCALA PL 250R-VL or ESCALA PL 450R-XS features and parts](#)**
Find instructions for installing features and replacing parts in the
- **[Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ features and parts](#)**
Find instructions for installing features and replacing parts in the model ESCALA PL 250R-L system

unit.

- [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ features and parts](#)
Find instructions for installing features and replacing parts in the ESCALA PL 250T/R or 9405-520 system unit.
- [Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ features and parts](#)
Find instructions for installing features and replacing parts in the ESCALA PL 450T/R system unit.
- [Model ESCALA PL 1650R-L+ features and parts](#)
- [Model ESCALA PL 850R/PL 1650R/R+ features and parts](#)
Find instructions for installing features and replacing parts in the ESCALA PL 850R/PL 1650R/R+ system unit.
- [Model 185/75 features and parts](#)
Find instructions for installing features and replacing parts in the 9118-575 system unit.
- [Model 9406-595 features and parts](#)
Find instructions for installing features and replacing parts in the ESCALA PL 6450R system unit.
- [Model 111/00 features and parts](#)
The 111/00 provides the hardware for IBM to be used in a partition of server ESCALA PL 850R/PL 1650R/R+, ESCALA PL 3250R, and ESCALA PL 6450R.

Parent topic: [Select instructions by model or expansion unit](#)

Model ESCALA PL 245T/R features and parts

Find instructions for installing a feature or replacing a part. These instructions are available for viewing or printing in both HTML and PDF versions.

You can find instructions for installing features and replacing parts using the following table.

Table 1. Model ESCALA PL 245T/R features and parts

Description	Printable PDF
Control panel and signal cable	PDF
Disk drive	PDF
Fan	PDF
Installing the model 7037-A50 in a rack	PDF
Light path diagnostic card	n/a
Media device	PDF
Memory module	PDF
PCI adapter	PDF
Power supply	PDF
Time-of-day battery	PDF
Voltage regulator	PDF

Parent topic: [Servers and workstations](#)

Model ESCALA PL 250R-VL or ESCALA PL 450R-XS features and parts

Find instructions to install, remove, and replace features and parts.

You can find instructions for installing features and replacing parts using the following table.

Table 1. Model ESCALA PL 250R-VL or ESCALA PL 450R-XS features and parts

Description	Printable PDF
Control panel and signal cable	PDF
Disk drive	PDF
Disk drive backplane	PDF
Fan	PDF
Hardware Management Console (HMC)	PDF
Media device	PDF
Memory module	PDF
PCI adapter	PDF
PCI adapter dividers and light pipes	PDF
Power supply	PDF
Rack mounting a system or expansion unit	PDF
Rack installation	PDF
Rack features	PDF
RAID disk controller cache battery pack	PDF
Time-of-day battery	PDF
Voltage regulator	PDF

Parent topic: [Servers and workstations](#)

Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ features and parts

Find instructions for installing, removing, and replacing features and parts.

You can find instructions for installing features and replacing parts using the following table.

Table 1. Model ESCALA PL 250R-L, PL 250R-L+ or PL 450R-VL+ features and parts

Description	Printable PDF
Control panel and signal cable	PDF
Disk drive	PDF
Fan	PDF

Hardware Management Console (HMC)	PDF
Media device	PDF
Memory module	PDF
PCI adapter	PDF
Power supply	PDF
Rack mounting a system or expansion unit	PDF
Rack installation	PDF
Rack features	PDF
RAID disk controller cache battery pack	PDF
Time-of-day battery	PDF
Voltage regulator	PDF

Parent topic: [Servers and workstations](#)

Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ features and parts

Find instructions for installing, removing, and replacing features and parts.

You can find instructions for installing features and replacing parts using the following table. To see the location of a feature or part, click the letter in the Location column.

Table 1. Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ features and parts

Description	Printable PDF	Location
Control panel and signal cable	PDF	D
Disk drive	PDF	A
Disk drive backplane	PDF	H
Expansion unit	PDF	n/a
Fan	PDF	F
Fan tray assembly	PDF	F
Hardware Management Console (HMC)	PDF	n/a
Media device	PDF	C
Media device enclosure	PDF	B, C
Memory module	PDF	G
PCI adapter	PDF	I
PCI adapter dividers and light pipes	PDF	I
Power supply	PDF	K
Rack mounting a system or expansion unit	PDF	n/a
Rack installation	PDF	n/a
Rack features	PDF	n/a
RAID enablement card	PDF	E

Remote I/O (RIO) cable or high-speed link (HSL)	PDF	n/a
Service processor assembly	PDF	J
RAID disk controller cache battery pack	PDF	I
Time-of-day battery	PDF	J
Voltage regulator	PDF	n/a

- [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ locations](#)

Parent topic: [Servers and workstations](#)

Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ locations

The following figure shows the location of some of the features and parts in the system unit.

Figure 1. Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ feature and part locations

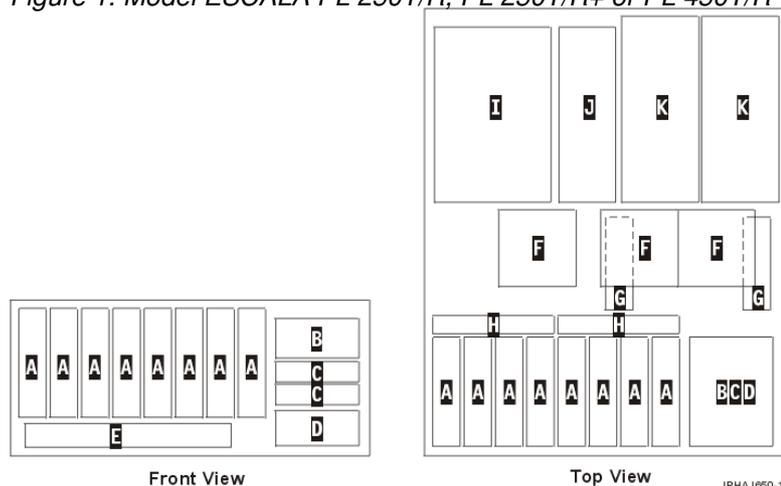


Table 1. Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ features and parts

Description	Location
Control panel and signal cable	D
Disk drive	A
Disk drive backplane	H
Fan	F
Fan tray assembly	F
Media device	B, C
Media device enclosure	C
Memory module	G
PCI adapter	I
PCI adapter dividers and light pipes	I

Power supply	K
RAID enablement card	E
Service processor assembly	J
RAID disk controller cache battery pack	I
Time-of-day battery	J

Parent topic: [Model ESCALA PL 250T/R, PL 250T/R+ or PL 450T/R-L+ features and parts](#)

Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ features and parts

You can find instructions for installing features and replacing parts using the following table. To see the location of a feature or part, click the letter in the Location column.

Table 1. Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ features and parts

Description	Printable PDF	Location
Control panel and signal cable	PDF	D
Disk drive	PDF	A
Disk drive backplane	PDF	H
Expansion unit	PDF	n/a
Fan	PDF	F
Hardware Management Console (HMC)	PDF	n/a
Remote I/O (RIO) cable or high-speed link (HSL)	PDF	n/a
Remote I/O (RIO) card, high-speed link (HSL), or 4x GX InfiniBand (IB) adapter	PDF	I
InfiniBand (IB) switch	n/a	n/a
Media device	PDF	C
Media device enclosure	PDF	B, C
Memory module	PDF	G
PCI adapter	PDF	I
PCI adapter dividers and light pipes	PDF	I
Power supply	PDF	K
Rack mounting a system or expansion unit	PDF	n/a
Rack installation	PDF	n/a
Rack features	PDF	n/a
RAID enablement card	PDF	E
RAID disk controller cache battery pack	PDF	I
System processor assembly	PDF	E
Time-of-day battery	PDF	J
Voltage regulator	PDF	n/a

- [Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ locations](#)

Parent topic: [Servers and workstations](#)

Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ locations

The following figure shows the location of some of the features and parts in the system unit.

Figure 1. Model ESCALA PL 450T/R feature and part locations

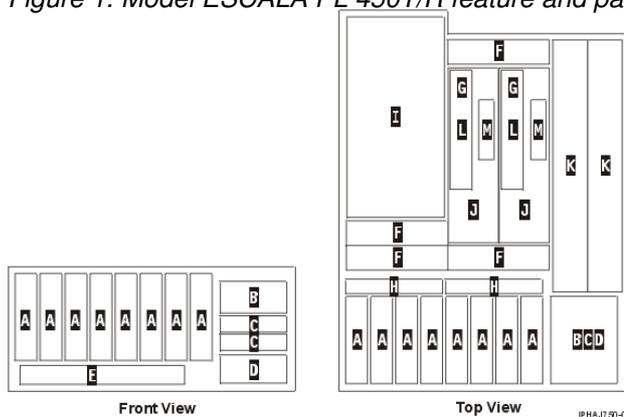


Table 1. Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ features and parts

Description	Location
Control panel and signal cable	D
Disk drive	A
Disk drive backplane	H
Fan	F
Media device	B, C
Media device enclosure	C
Memory module	G
PCI adapter	I
PCI adapter dividers and light pipes	I
Power supply	K
RAID enablement card	E
System processor assembly	J
RAID disk controller cache battery pack	I
Time-of-day battery	J
Voltage regulator	L, M

Parent topic: [Model ESCALA PL 450T/R, PL 450T/R+ or PL 850T/R-L+ features and parts](#)

Model ESCALA PL 1650R-L+ features and parts

You can find instructions for installing features and replacing parts by using the following table. To see the location of a feature or part, click the letter in the Location column.

Table 1. Model ESCALA PL 1650R-L+ features and parts

Description	Printable PDF	Location
Control panel	PDF	C
Disk drive	PDF	A
Disk drive enclosure	PDF	n/a
Expansion unit	PDF	n/a
Fan	PDF	n/a
Hardware Management Console (HMC)	PDF	n/a
Remote I/O (RIO) cable or high-speed link (HSL)	PDF	n/a
Remote I/O (RIO), high-speed link (HSL), or 4x GX InfiniBand (IB) adapter	PDF	I
InfiniBand (IB) switch	n/a	n/a
Media device	PDF	B
Media device enclosure	PDF	B
Memory module	PDF	E
PCI adapter	PDF	H
Power supply	PDF	L
Rack features	PDF	n/a
RAID disk controller cache battery pack	PDF	H
SCSI-IDE converter card	PDF	n/a
SMP processor cable	PDF	n/a
Service processor assembly	PDF	J
Service processor cable	PDF	n/a
System backplane	PDF	F
System processor assembly	PDF	E
Time-of-day battery	PDF	J
Voltage regulator card assembly	PDF	D

Parent topic: [Servers and workstations](#)

Model ESCALA PL 850R/PL 1650R/R+ features and parts

You can find instructions for installing features and replacing parts by using the following table. To see the location of a feature or part, click the letter in the Location column.

Table 1. Model ESCALA PL 850R/PL 1650R/R+ features and parts

Description	Printable PDF	Location
Control panel	PDF	C
Disk drive	PDF	A
Disk drive enclosure	PDF	
Expansion unit	PDF	
Fan	PDF	
Hardware Management Console (HMC)	PDF	
Remote I/O (RIO) cable or high-speed link (HSL)	PDF	
Remote I/O (RIO), high-speed link (HSL), or 4x GX InfiniBand (IB) adapter	PDF	I
InfiniBand (IB) switch		
Media device	PDF	B
Media device enclosure	PDF	B
Memory module	PDF	E
PCI adapter	PDF	H
Power supply	PDF	L
Rack features	PDF	n/a
SCSI-IDE converter card	PDF	n/a
SMP processor cable	PDF	n/a
Service processor assembly	PDF	J
Service processor cable	PDF	n/a
RAID disk controller cache battery pack	PDF	H
System backplane	PDF	F
System processor assembly	PDF	E
Time-of-day battery	PDF	J
Voltage regulator card assembly	PDF	D

- **Model ESCALA PL 850R/PL 1650R/R+ locations**

Parent topic: [Servers and workstations](#)

Model ESCALA PL 850R/PL 1650R/R+ locations

The following figure shows the location of some of the features and parts in the system unit.

Figure 1. Model ESCALA PL 850R/PL 1650R/R+ feature and part locations

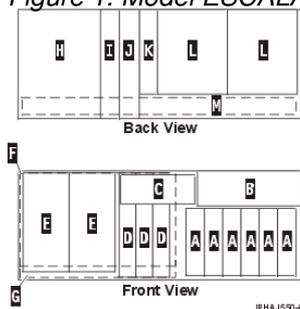


Table 1. Model ESCALA PL 850R/PL 1650R/R+ features and parts

Description	Location
Control panel	C
Disk drive	A
Media device	B
Media device enclosure	B
Memory module	E
PCI adapter	H
Power supply	L
RAID disk controller cache battery pack	H
Remote I/O (RIO) card or high-speed link (HSL)	I
Service processor assembly	J
System backplane	F
System processor assembly	E
Time-of-day battery	J
Voltage regulator card assembly	D

Parent topic: [Model ESCALA PL 850R/PL 1650R/R+ features and parts](#)

Model 185/75 features and parts

You can find instructions for installing features and replacing parts using the following table.

Table 1. Model 185/75 features and parts

Description	Printable PDF
Expansion unit	PDF

Parent topic: [Servers and workstations](#)

Model 9406-595 features and parts

You can find instructions for installing features and replacing parts using the following table. To see the location of a feature or part, click the letter in the Location column.

Table 1. Model 9406-595 features and parts

Description	Printable PDF
Expansion unit	PDF
Media device	PDF
Media device enclosure	PDF
PCI adapter	PDF
PCI adapter dividers and light pipes	PDF

Parent topic: [Servers and workstations](#)

Model 111/00 features and parts

The 111/00 provides the hardware for IBM to be used in a partition of server ESCALA PL 850R/PL 1650R/R+, ESCALA PL 3250R, and ESCALA PL 6450R.

- [50/74 and 50/79 expansion unit features and parts](#)
- [50/88 and 05/88 expansion unit features and parts](#)
- [50/94 and 52/94 expansion unit features and parts](#)
- [05/95 and 50/95 expansion unit features and parts](#)
- [11D/10, 11D/11, and 57/90 expansion unit features and parts](#)

Parent topic: [Servers and workstations](#)

Expansion units

Find instructions for installing, removing, and replacing parts by expansion unit.

- [50/74 and 50/79 expansion unit features and parts](#)
Find instructions for installing features and replacing parts in the 5074 and 5079 expansion units.
- [50/88 and 05/88 expansion unit features and parts](#)
Find instructions for installing features and replacing parts in the 5088 and 0588 expansion units.
- [50/94 and 52/94 expansion unit features and parts](#)
Find instructions for installing features and replacing parts in the 5094, 5294, 9411-100 and 9194 expansion units.

- **05/95 and 50/95 expansion unit features and parts**
Find instructions for installing features and replacing parts in the 5095 and 0595 expansion units.
- **11D/10, 11D/11, and 57/90 expansion unit features and parts**
- **11D/20 expansion unit features and parts**
- **Model 57/86, 57/87, D24, or T24 SCSI disk-drive enclosure features and parts**
Find instructions for installing features and replacing parts in the model 57/86, 57/87, D24, or T24 Small Computer System Interface (SCSI) disk drive enclosure features and parts
- **57/91, 57/94, and 406/1D expansion unit features and parts**

Parent topic: [Select instructions by model or expansion unit](#)

50/74 and 50/79 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 50/74 and 50/79 expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
Media device	PDF
PCI adapter	PDF
RAID disk controller cache battery pack	PDF

Parent topic: [Expansion units](#)

50/88 and 05/88 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 50/88 and 05/88 expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
Media device	PDF
PCI adapter	PDF
Rack-mounted model or expansion unit	PDF
Rack installation	PDF
RAID disk controller cache battery pack	PDF

Parent topic: [Expansion units](#)

50/94 and 52/94 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 50/94 and 52/94 expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
Media device	PDF
PCI adapter	PDF
Power supply	PDF
RAID disk controller cache battery pack	PDF
Remote I/O card (RIO), high-speed link (HSL)	PDF

Parent topic: [Expansion units](#)

05/95 and 50/95 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 05/95 and 50/95 expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
Media device	PDF
PCI adapter	PDF
Power supply	PDF
Rack-mounted model or expansion unit	PDF
Rack installation	PDF
RAID disk controller cache battery pack	PDF
Remote I/O card (RIO), high-speed link (HSL)	PDF

Parent topic: [Expansion units](#)

11D/10, 11D/11, and 57/90 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 11D/10, 11D/11, and 57/90 expansion unit features and parts

Description	Printable PDF
Expansion unit	PDF
PCI adapter	PDF
Rack-mounted model or expansion unit	PDF
Rack installation	PDF
RAID disk controller cache battery pack	PDF

Parent topic: [Expansion units](#)

11D/20 expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 11D/20 expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
PCI adapter	PDF
Power supply	PDF
RAID disk controller cache battery pack	PDF

Parent topic: [Expansion units](#)

Model 57/86, 57/87, D24, or T24 SCSI disk-drive enclosure features and parts

Find instructions for installing features and replacing parts in the model 57/86, 57/87, D24, or T24 Small Computer System Interface (SCSI) disk drive enclosure features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 57/86, 57/87, D24, or T24 SCSI disk-drive enclosure features and parts.

Description	Printable PDF
Disk drive	PDF
Fan	PDF
Rack-mounted model or expansion unit	
Power supply	PDF

Parent topic: [Expansion units](#)

57/91, 57/94, and 406/1D expansion unit features and parts

You can find instructions for installing features and replacing parts by using the following table.

Table 1. 57/91, 57/94, and 406/1D expansion unit features and parts

Description	Printable PDF
Disk drive	PDF
Expansion unit	PDF
Media device	PDF
PCI adapter	PDF
RAID disk controller cache battery pack	PDF

Parent topic: [Expansion units](#)

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