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**High Input Analog / STI Input Terminal Assembly**

**\$695.00**

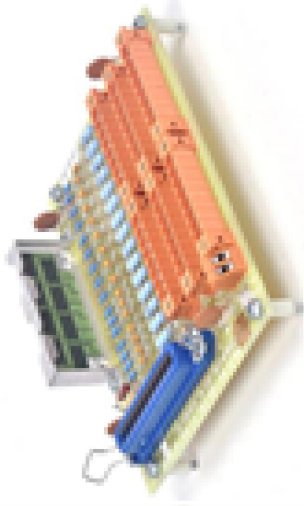
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# **High-Performance Process Manager Planning**

**HP02-500**

## Section 2 – HPM Description

### 2.1 Overview

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**Section contents**      The topics covered in this section are:

	<b>Topic</b>	<b>See Page</b>
2.1	Overview.....	3
2.2	Card Files.....	5
2.2.1	HPMM Card Files .....	6
2.2.2	Input/Output Processor (IOP) Card Files.....	13
2.3	Input/Output Processor (IOP) Cards.....	17
2.3.1	IOP Redundancy.....	18
2.4	I/O Link Extender (Fiber Optic Link).....	20
2.5	Field Termination Assemblies (FTAs) .....	25
2.6	Power Systems .....	36
2.7	Cabinet Configurations .....	41

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**HPM major assemblies**      The High-Performance Process Manager subsystem (HPM) consists of major assemblies described in the following subsections. The major High-Performance Process Manager assemblies are

- High-Performance Process Manager Module (HPMM) card file
- Input/Output Processor (IOP) card file
- Input/Output Processor (IOP) card
- I/O Link Extender
- Field Termination Assembly (FTA)
- Power System

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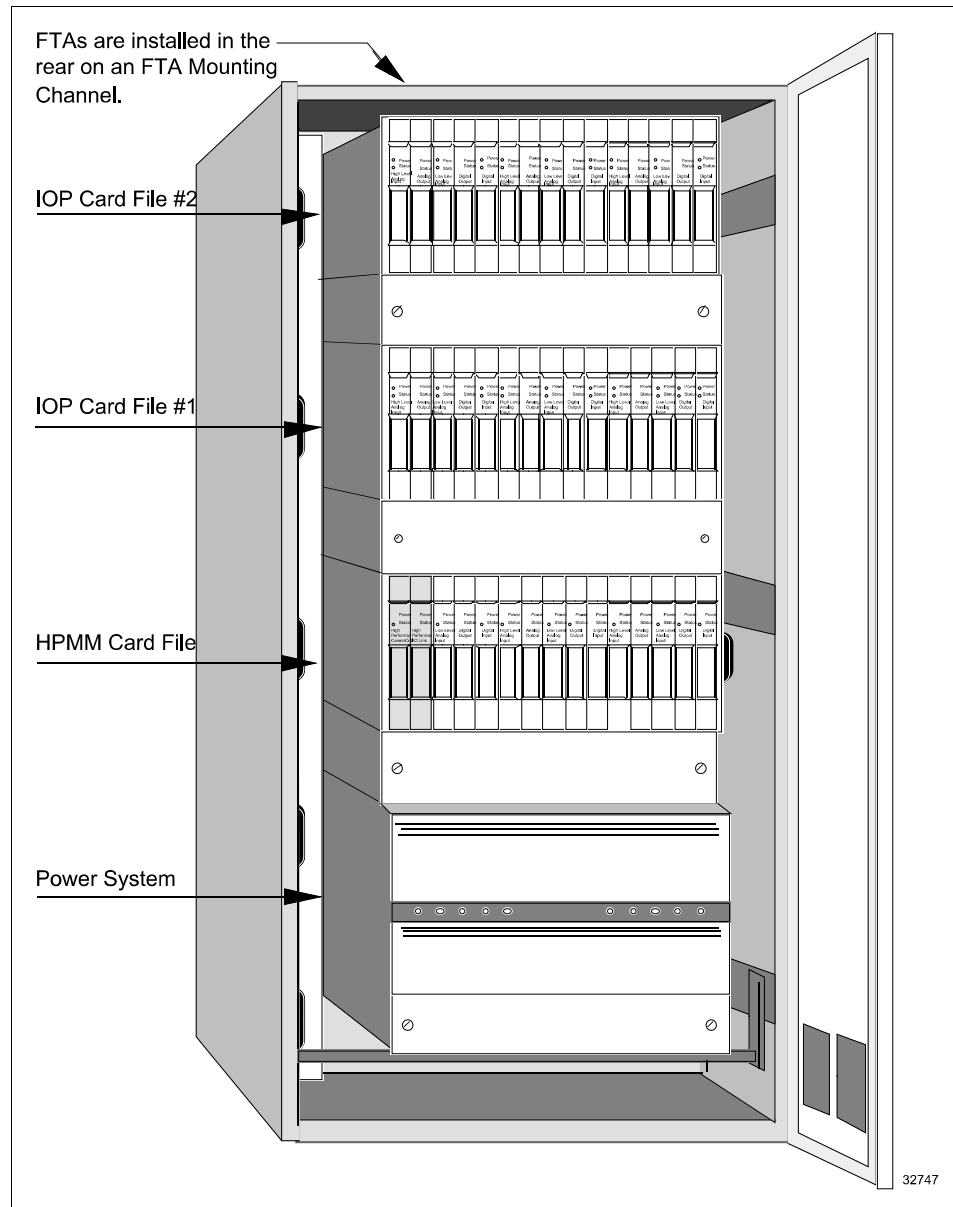
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## 2.1 Overview, Continued

### Nonredundant HPM cabinet layout

Figure 2-1 is an illustration of a single High-Performance Process Manager cabinet containing a nonredundant High-Performance Process Manager Module (HPMM) with supporting assemblies. The HPMM cards (2) and the IOPs cards are installed in 15-Slot HPMM card files. IOP cards occupy the IOP card files.

Figure 2-1 Nonredundant HPMM Cabinet Layout



## 2.2 Card Files

### Introduction

There are nine card file models. Three models are not CE Compliant and six models are CE Compliant. Table 2-1 lists the nine card file models. All models are also available with conformal coating (a model number with a prefix of MC, rather than MU).

Table 2-1 Card File Models

Card File Description	CE Compliant	Non-CE Compliant
Left 7-Slot HPMM or IOP	N/A	MU-HPFH01
Right 7-Slot HPMM or IOP	N/A	MU-HPFH11
15-Slot HPMM or IOP	N/A	MU-HPFX02
Left 7-Slot HPMM	MU-HPFH03	N/A
Right 7-Slot HPMM	MU-HPFH13	N/A
15-Slot HPMM	MU-HPFX03	N/A
Left 7-Slot IOP	MU-HPFI03	N/A
Right 7-Slot IOP	MU-HPFI13	N/A
15-Slot IOP	MU-HPFI23	N/A

### Non-CE Compliant card file models

The non-CE Compliant card file models can be designated as an HPMM card file or an IOP card file by either installing an HPMM card set in the two left-most card slots or installing IOP cards.

### CE Compliant card file models

Unlike the non-CE Compliant card file models, the CE Compliant card file models are designated either an HPMM card file or an IOP card file because even though there is no electrical difference in the backpanel, they differ mechanically. The addition of a ground plate and filtered IOP connectors in the two left-most slots prohibits the installation of an HPMM card set.

The card file is designated an IOP card file when the ground plate and filtered connectors are present.

The card file is designated an HPMM card file when the ground plate and filtered connectors are absent.

### Conversion kit

A CE Compliant HPMM card file can be converted to an IOP card file with a model MU-ZPFI03 upgrade kit. The kit adds 2 filtered IOP adapter connectors to the two left-most card slots and a ground plate extension.

## 2.2.1 HPMM Card Files

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### Three types of HPM card files

There are three types of HPMM card files. The two left-most slots of each type are populated by the three assemblies that comprise the HPMM. The remaining slots accommodate IOPs.

If the card file is a non-CE Compliant card file, the two left-most slots of each type can also accommodate IOPs with no alterations. The card file is then designated an IOP card file.

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### HPMM description

The High-Performance Process Manager Module (HPMM) is composed of two card assemblies that install in the two left-most slots in a 7-Slot or 15-Slot card file, and a UCN interface module that mounts and connects to the 50-pin connector that is directly below the left-most card.

The three HPMM assemblies are identified as follows:

- High-Performance Communications/Control (High-Performance Comm/Control) card
- High-Performance I/O Link Interface (High-Performance I/O Link) card
- High-Performance UCN Interface (HPM UCN Interface) module

The HPM UCN Interface module connects to the 50-pin connector below the High-Performance Comm/Control card.

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### Left 7-Slot HPMM card file description

The Left 7-Slot card file accepts the two HPMM cards and the HPM UCN Interface module that comprise the HPMM, and accommodates up to five IOP cards. The card slots are numbered 1 through 7, starting at the left-most position.

The High-Performance Comm/Control and High-Performance I/O Link cards occupy slots 1 and 2, while the HPM UCN Interface module mounts below slot 1 and connects to its 50-pin connector.

Slots 3 through 7 can accommodate IOP cards. The IOP card slots assume numerical I/O Link Interface addresses of 3 through 7 and binary I/O Link Interface addresses of 2 through 6.

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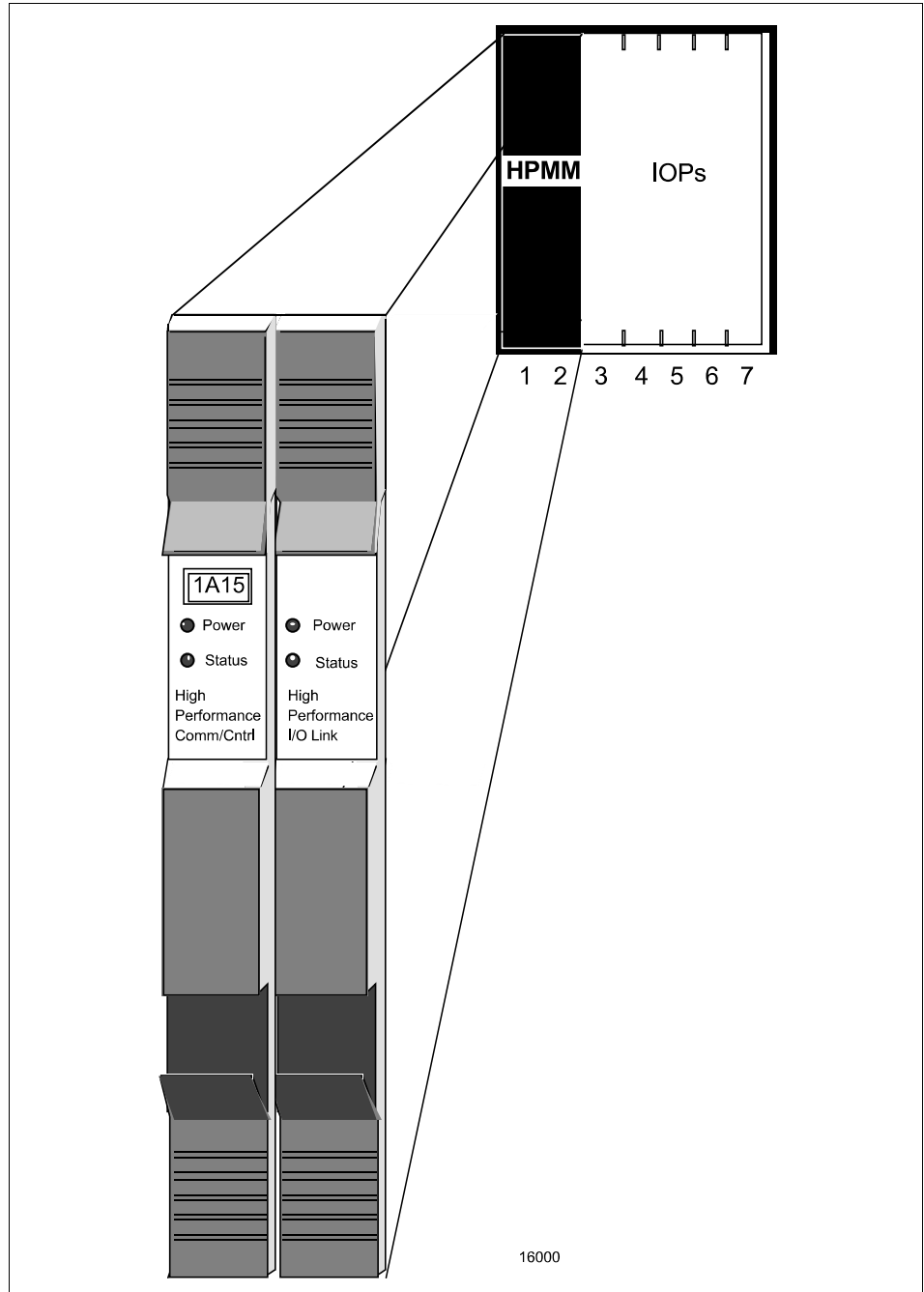
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## 2.2.1 HPMM Card Files, Continued

### Left 7-Slot HPMM card file illustration

Figure 2-2 is an illustration of a Left 7-Slot HPMM card file and the two HPMM cards that occupy slots 1 and 2.

Figure 2-2 Left 7-Slot HPMM Card File



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### 3.4.1 Typical 24 Vdc Power Draw Calculations, Continued

**Assembly 24 Vdc  
power usage,  
continued**

Table 3-1 HPM Assembly 24 Vdc Power Usage, Continued

Description	Model Number	Channels	Assembly Current (Milliamps)
AO FTA	MU-TAOX02	8	160
AO FTA	MU-TAOX12/52	8	171
AO FTA	MU-TAOY22/52	16	324
AO FTA	MU-TAOY23/53	16	324
24 Vdc DI FTA	MU-TDID12/52	32	408
24 Vdc DI FTA	MU-TDID72	32	410
24 Vdc Power Distribution Assembly	MU-TDPR02	12	200
24 Vdc DI FTA	MU-TDIY22/62	32	196
120 Vdc DI FTA	MU-TDIA12/52	32	192
120 Vdc DI FTA	MU-TDIA72	32	200
240 Vdc DI FTA	MU-TDIA22/62	32	192
24 Vdc Nonisolated DO FTA	MU-TDON12/52	16	0
24 Vdc Isolated DO FTA	MU-TDOY22/62	32	004
3-30 Vdc Solid-State DO FTA	MU-TDOD12/52	16	160
3-30 Vdc Solid-State DO FTA	MU-TDOD13/53	16	160
3-30 Vdc Solid-State DO FTA	MU-TDOD14/54	16	160
31-200 Vdc Solid-State DO FTA	MU-TDOD22/62	16	160
5-200 Vdc Solid-State DO FTA	MU-TDOD23/63	16	160
24-240 Vac Solid-State DO FTA	MU-TDOA12/52	16	160
120/240 Vac Solid-State DO FTA	MU-TDOA13/53	16	160
120 Vac/125 Vdc Relay DO FTA	MU-TDOR12/52	16	470
240 Vac/125 Vac Relay DO FTA	MU-TDOR22/62	16	470
240 Vac/125 Vac Relay DO FTA	MU-TDOY23/63	16	228
PI FTA	MU-TPIX12/52	8	136

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## 4.2 FTA Selection, Continued

### Standard FTAs, continued

Table 4-1 Standard FTAs and Associated Assemblies, Continued

Model Number	Description	Terminal Type	Channels	Mounting Size
MU-TDOD12	3-30 Vdc Solid-State Digital Output	C	16	B
MU-TDOD13	3-30 Vdc Solid-State Digital Output	C	16	B
MU-TDOD14	3-30 Vdc Solid-State Digital Output	C	16	B
MU-TDOD52	3-30 Vdc Solid-State Digital Output	S	16	B
MU-TDOD53	3-30 Vdc Solid-State Digital Output	S	16	B
MU-TDOD54	3-30 Vdc Solid-State Digital Output	S	16	B
MU-TDOD22	31-200 Vdc Solid-State Digital Output	C	16	B
MU-TDOD23	31-200 Vdc Solid-State Digital Output	C	16	B
MU-TDOD62	31-200 Vdc Solid-State Digital Output	S	16	B
MU-TDOD63	31-200 Vdc Solid-State Digital Output	S	16	B
MU-TDOA12	120/240 Vac Solid-State Digital Output	C	16	B
MU-TDOA13	120/240 Vac Solid-State Digital Output	C	16	B
MU-TDOA52	120/240 Vac Solid-State Digital Output	S	16	B
MU-TDOA53	120/240 Vac Solid-State Digital Output	S	16	B
MU-TDOR12	120 Vac/125 Vdc Relay Digital Output	C	16	B
MU-TDOR52	120 Vac/125 Vdc Relay Digital Output	S	16	B
MU-TDOY23	120 Vac/125 Vdc Relay Digital Output	C	16	B
MU-TDOY63	120 Vac/125 Vdc Relay Digital Output	S	16	B
MU-TDOR22	240 Vac/125 Vdc Relay Digital Output	C	16	B
MU-TDOR62	240 Vac/125 Vdc Relay Digital Output	S	16	B
MU-TPIX12	Pulse Input	C	8	B
MU-TPIX52	Pulse Input	S	8	B
MU-TSDT02	Serial Device Interface—Toledo Weigh Cell	DB-25	1	A
MU-TSDM02	Serial Device Interface—Manual/Auto Station	C	1	A
MU-TSDU02	Serial Device Interface—UDC 6000 Modbus	C	1	A
MU-TSIA12	Serial Interface—Allen-Bradley	DB-25	1	A

*Continued on next page*

## 7.5 FTAs, Continued

### Nonconformally coated FTAs, continued

Table 7-4 Field Termination Assemblies—Nonconformally Coated, Continued

FTA Type	Model Number	Non-CE Compliant Part Number	CE Compliant Part Number
24 Vdc Isolated DO	MU-TDOY62	80364013-100	80364013-125
3-30 Vdc SS DO	MU-TDOD12	51304423-100	N/A
3-30 Vdc SS DO	MU-TDOD13	51304650-100	N/A
3-30 Vdc SS DO	MU-TDOD14	N/A	51309153-125
3-30 Vdc SS DO	MU-TDOD52	51304423-200	N/A
3-30 Vdc SS DO	MU-TDOD53	51304650-200	N/A
3-30 Vdc SS DO	MU-TDOD54	N/A	51309153-225
31-200 Vac SS DO	MU-TDOD22	51304428-100	N/A
31-200 Vac SS DO	MU-TDOD23	N/A	51309154-125
31-200 Vac SS DO	MU-TDOD62	51304428-200	N/A
31-200 Vac SS DO	MU-TDOD63	N/A	51309154-225
120/240 Vac SS DO	MU-TDOA12	51304408-100	N/A
120/240 Vac SS DO	MU-TDOA13	51304648-100	51304648-125
120/240 Vac SS DO	MU-TDOA52	51304408-200	N/A
120/240 Vac SS DO	MU-TDOA53	51304648-200	51304648-225
120 Vac/125 Vdc Relay DO	MU-TDOR12	51304443-100	51309148-125
120 Vac/125 Vdc Relay DO	MU-TDOR52	51304443-200	51309148-225
240 Vac/125 Vdc Relay DO	MU-TDOR22	51304427-100	51309150-125
240 Vac/125 Vdc Relay DO	MU-TDOR62	51304427-200	51309150-225
240 Vac/125 Vdc Relay DO	MU-TDOY23	80366189-100	80366189-125
240 Vac/125 Vdc Relay DO	MU-TDOY63	80366185-100	80366185-125
PI	MU-TPIX12	51304084-100	51304084-125
PI	MU-TPIX52	51304084-200	51304084-225

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