Honeywell

EXPERION PKS

RELEASE 515

OEP/IKB Device Adapters Instalaltion Instructions

EP-DPCXX3-en-515A

November 2019

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CHAPTER

1

ABOUT THIS DOCUMENT

This document provides information for installing the adapters listed in Table 1-3. It does not, however, contain any information on system planning or any platform specific details. Refer to your specific console and platform documents for more information on these subjects.

1.1 Revision History

The following list provides notes concerning all revisions of this document.

Revision	Date	Description
A	November 2019	Initial release of the document.

1.2 References

The following list identifies all documents that may be sources of reference for material discussed in this document.

Document Title	Doc ID
Honeywell Icon Series Console Planning, Installation, and Service	HC05
Additional hardware documents associated with your computer.	

1.3 Contacts

World Wide Web

The following Honeywell web sites may be of interest to Industry Solutions customers.

Honeywell Organization	WWW Address (URL)
Corporate	http://www.honeywell.com
Process Solutions	http://www.honeywell.com/ps
International	http://honeywell.com/global

CHAPTER

2 INTRODUCTION

2.1 About this Document

2.1.1 Scope

This document provides information for installing the adapters listed in Table 1-3. It does not, however, contain any information on system planning or any platform specific details. Refer to your specific console and platform documents for more information on these subjects.

2.1.2 How this document is organized

Table 1-1Document Organization

Section	Description
Section 1 Introduction	Provides part numbers for the specifications and overview diagrams of adapter installation.
Section 2 OEP/IKB Adapter	Describes the OEP/IKB Adapter Kit and provides installation instructions.

2.2 Getting Started with Honeywell Peripheral Adapters

2.2.1 Purpose

Honeywell currently has available several peripheral devices that connect to the IKBI2 or HBC cards that mount in an ISA slot. As the ISA slot becomes obsolete on newer computers, it is necessary to provide an alternative method for connecting these peripheral devices to the computer. Honeywell provides adapters that allow you to connect these devices to a serial port.

2.2.2 Serial port availability

The following table lists the serial ports that may be used with the adapters to connect an OEP or an IKB.

Device	COM Port	Serial Port Location	Available on . . .
OEP, or	COM3	Dual Serial PCI Card	WKS2/SVR2 Platforms
IKB	COM3	Dual Serial PCI Card	WKS2/SVR2 Platforms
OEP, or	COM1 (configured as COM3)	Standard serial port	Most computers
IKB	COM1 (configured as COM3)	Standard serial port	Most computers

2.2.3 Honeywell adapter options

These adapters are designed to be used with specific devices on a number of computer platforms. Adapters may be used in both a local or remote computer system. Table 1-3 lists the model numbers for Honeywell's peripheral adapters and describes the devices and system types each adapter can be used with.

Table 1-3OEP/IKB and Touchscreen Adapters

Description	Use with these devices	Computer Platforms
Adapter kit for newer style OEP or an IKB keyboard	HD-9, 12 volt OEP HD-16 Icon OEP HD-15 IKB	Remote or local systems that do not have the IKBI2 board.

2.2.4 Adapter configurations for a local computer

The following diagrams illustrate the basic connections for Honeywell's peripheral adapters used on a local computer.

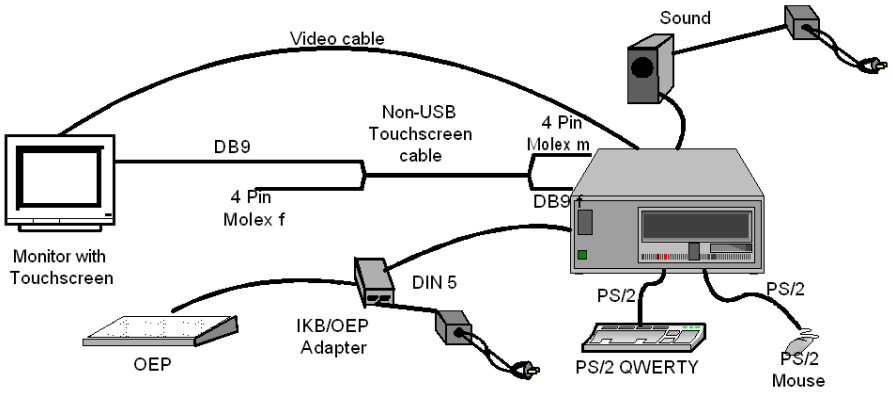


Figure 1-1OEP and Touchscreen on Local System.

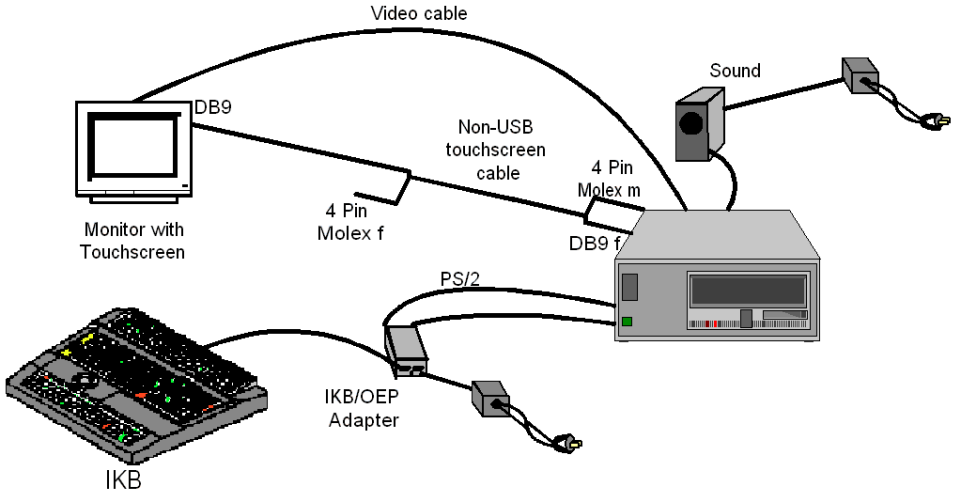


Figure 1-2IKB and Touchscreen on Local System.

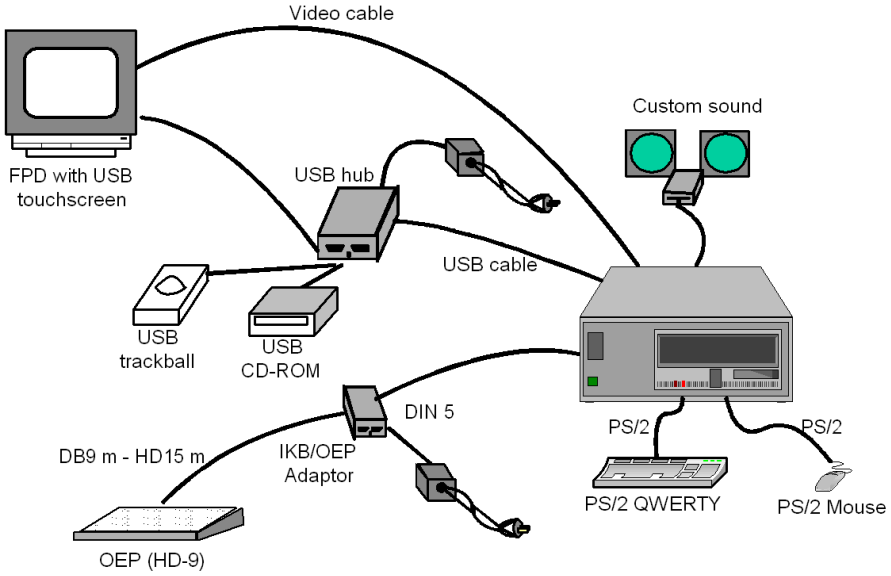


Figure 1-3Icon OEP and USB FPD Touchscreen on Local System.

2.2.5 Adapter configurations for a remote computer

The following diagrams illustrate the basic connections for Honeywell's peripheral adapters used with the short-haul remote electronics system.

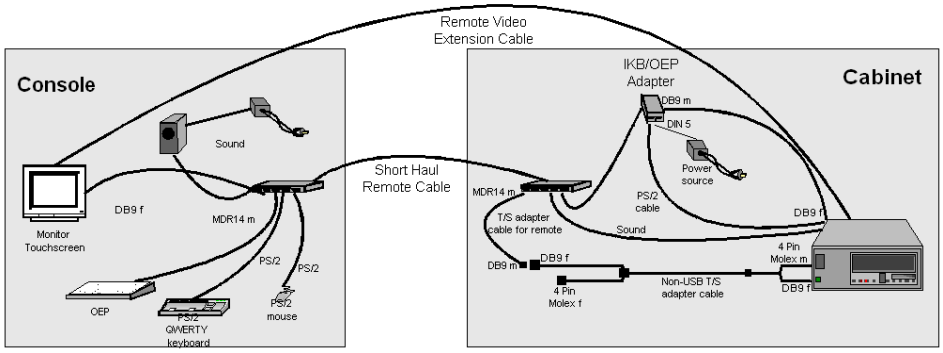


Figure 1-4OEP and Touchscreen on Remote System.

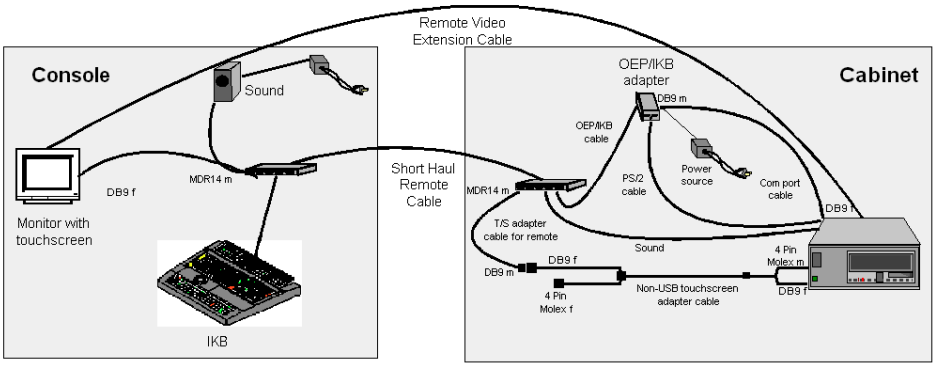


Figure 1-5IKB and Touchscreen on Remote System.

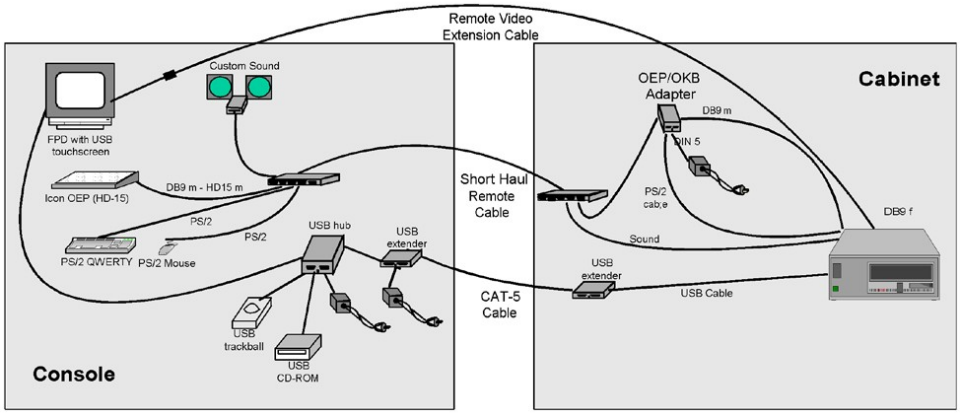


Figure 1-6Icon OEP and USB FPD Touchscreen on Remote System.

2.2.6 DC Power requirements

Table 1-4 lists the DC power requirements for each one of the peripheral adapter kits. Table 1-5 lists the power requirements for the various devices that use the adapter kits.

Table 1-4Adapter Kit Power Requirements

Kit Description	Power requirements
IKB	350 mA at 12 V
Newer style OEP	1 A at 12 V

Table 1-5Peripheral Power Requirements

Kit Description	Power requirements
IKB	350 mA at 12 V
Newer style OEP	1 A at 12 V

Device	Power requirements
IKB	350 mA at 12 V
Newer style OEP	1 A at 12 V

CHAPTER

3

OEP/IKB ADAPTER

3.1 Introduction

3.1.1 Description

Operator Entry Panels (OEP) and Integrated Keyboards (IKB) traditionally connect to the computing platform through the ISA slot to an IKBI2 and/or an HBC card. As the ISA slot becomes obsolete on newer computers, it is necessary to provide an alternative method of connecting these peripheral devices to the station platform. The Honeywell OEP/IKB Adapter allows you to connect an OEP or IKB to an available serial port as provided by the dual serial PCI card.

Upon arrival at the system site:

- Check the packing or parts lists to verify you received all adapter kit components.
- Notify your Honeywell sales representative if you have any questions.

3.1.2 OEP/IKB Adapter Parts

The following figure shows the OEP/IKB adapter components.

Figure 2-1Honeywell OEP/IKB Adapter Kit Components

Parts list for Honeywell OEP/IKB adapter TP-OPADP1

The following table lists the parts and part numbers for this adapter kit.

No.	Part Description		Part Number	Qty.
1	OEP/IKB Module Assembly		51305776-100	1
2	DB9 M/F Comm Port Cable (8 feet)		51196990-500	1
3	AC Power Cord		51305567-100 (120 V) 51305450-600 (120/240 V) 51305489-600 51305557-100 (220 V)	1
4	AC Power Source		51197184-100	1
5	IKBI2 PS/2 Cable (8 feet) Note: This cable is only used if you are connecting an IKB		51305381-500	1
6	Honeywell Device Adapters (OEP/IKB & Carroll Touchscreen) Installation Instructions (this document)		TP-OPADP1 51195195-347	1
7	Velcro Fastener		51199478-100	1
Other items not included with this OEP/IKB adapter kit				
Common Components CD (use to install IKB Services and appropriate drivers)				1

OEP/IKB adapter hardware compatibility

The OEP/IKB Adapter kit is compatible with OEPs being used on GUS, PlantScape or Experion PKS systems. The following table lists the specific parts that are compatible with this kit. These parts should already be available at your site.

Part Description	Part Number
Enhanced Operator Keyboard	51402497-200
OEP Keyboard Cable	51305418-100
Integrated Keyboard	51196694
IKB Cable	51308124
Annunciator Relay Y Cable	51305388

OEP/IKB adapter software release compatibility

The Honeywell OEP/IKB Adapter is to be used on systems with the following software releases:

- PlantScape R500
- Experion PKS R100 or later

3.2 Mounting OEP/IKB Adapters and AC Power Adapters

3.2.1 Purpose

Exact mounting locations for Honeywell adapters and AC power adapters are not provided because of the wide range of equipment configurations that exist at different sites. Use the supplied re-closable fasteners to mount the USB extender box to the computer chassis, cabinet, or another appropriate location, making sure you follow the mounting requirements listed in this section.

3.2.2 Using the re-closable fasteners

The following figures show the OEP/IKB and AC power adapters with the re-closable fasteners. Use the re-closable fasteners to mount the components in a location that meets the requirements listed in this section.

Figure 2-2AC Power Adapter

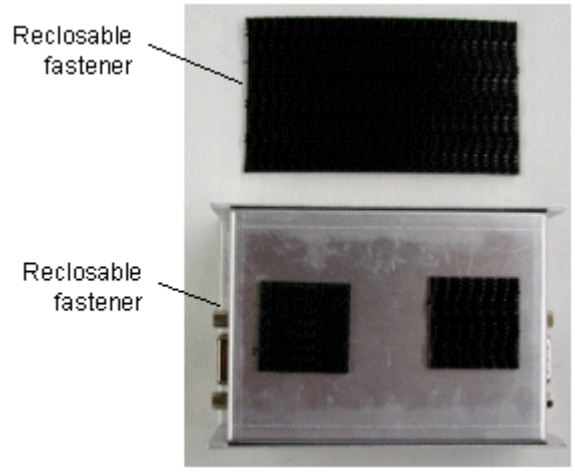


Figure 2-3OEP/IKB Module Assembly

3.2.3 Mounting requirements for USB extender boxes and AC adapter

Mount the OEP/IKB and AC power adapters in a location that:

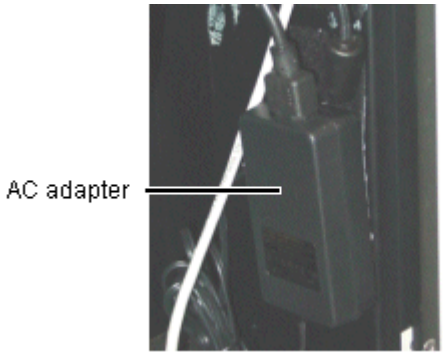
- Allows proper airflow by not blocking any ventilation holes.
- Is not subject to heat.
- Permits access for connecting the cables.
- Allows the cables to be connected without pinching them.
- Allows for proper strain relief of all cables.
- Permits you to secure the extender box to the mounting platform using the re-closable fasteners.

3.2.4 Mounting location examples for AC adapter

The following figures show examples of locations in which to mount the AC power adapter. These are examples only. You may mount the AC power adapter in any convenient and appropriate location as long as you fulfill the requirements listed in this section.

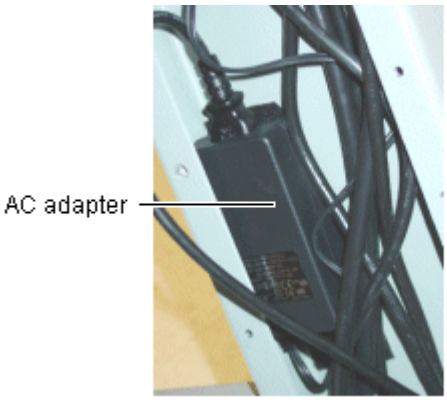
3.2.5 Description Picture

Classic Console



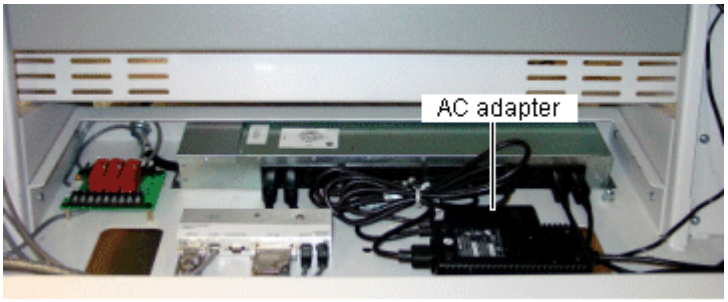
Mount the AC adapter along the wall or on the floor of the inside of the Classic console base.

3.2.6 Z Console



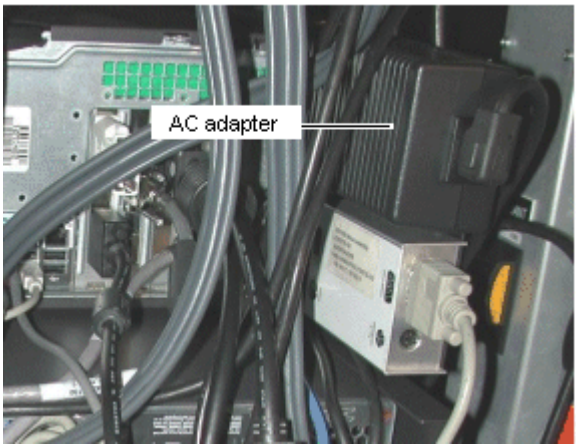
Mount the AC adapter on the inside of the console's peripheral power supply chamber using the re-closable fasteners.

3.2.7 Icon Console



Mount the AC adapter in the Icon Console base using the re-closable fasteners.

3.2.8 Cabinet



Mount the AC adapter to the right component mounting bracket (as seen from the rear of the cabinet) using the re-closable fasteners.

3.3 Before you Begin

Connecting the OEP/IKB adapter kit to an OEP

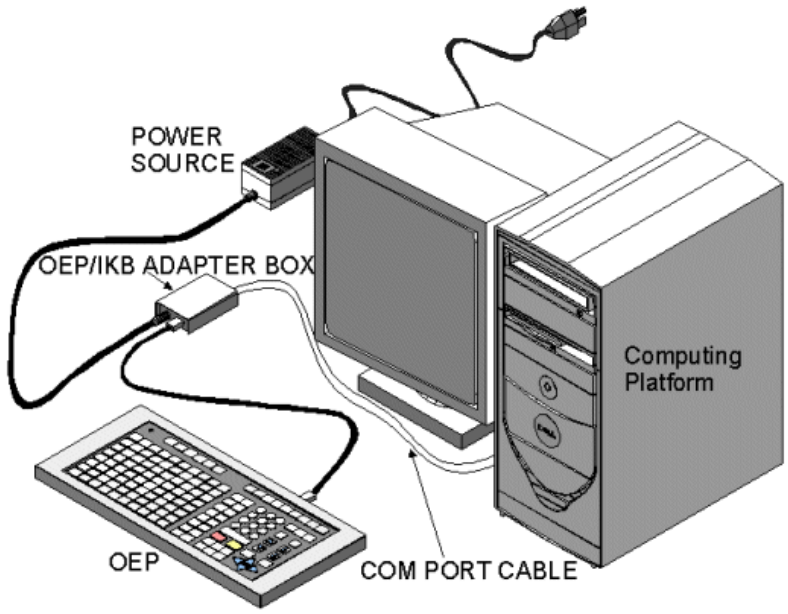


Figure 2-4Connected OEP Connecting the OEP/IKB adapter kit to an IKB.

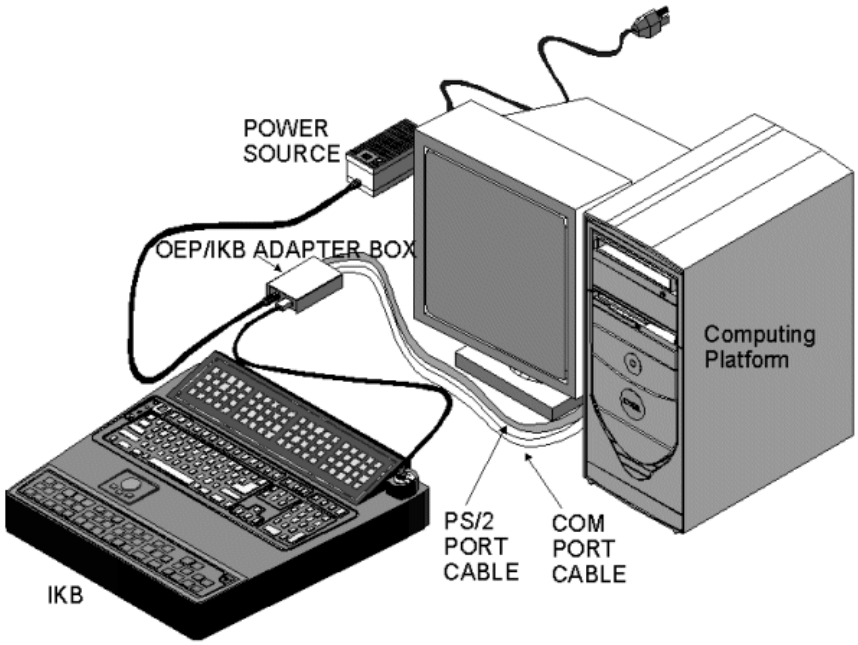


Figure 2-5Connected IKB

3.3.1 OEP/IKB Module Assembly

Figure 2-6 is the top view of the module assembly, which identifies the four cable connections. Figure 2-7 is the bottom view of the module assembly, which shows the re-closable fastener. Use the re-closable fastener to mount the module assembly in a convenient location.

Figure 2-6OEP/IKB Module Assembly (51305776-100) Top View.

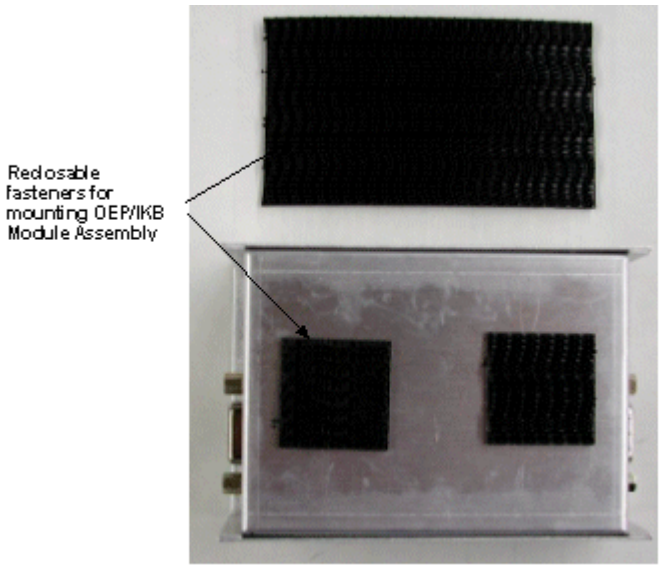
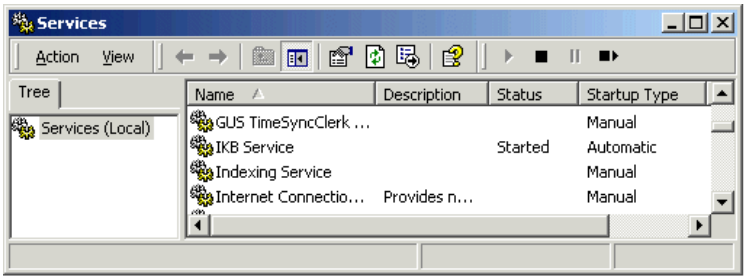


Figure 2-7OEP/IKB Module Assembly (51305776-100) Bottom View.

3.3.2 Verify IKB Services is installed

Use this procedure to verify your computer has the correct IKB Services software installed.

Step	Action
1	Click Start, point to Settings, and then click Control Panel.
2	Double-click Administrative Tools, and then double-click Component Services
3	In the console Tree, select Services.
4	Click the Name column to sort the services.
5	Locate the IKB Service under the Name column. 
6	If IKB Service does not appear in the list of Services, install it using the following "Install the IKB Services Software"

3.3.3 Install the IKB Services Software

Use the following procedure to install the IKB Services. If you select the complete installation of the IKB services, USB drivers will also be installed. You may want to note the location of these drivers for later use.

Step	Action
1	Insert the Common Component disk in the CD device.
To perform a complete installation:	
2	Select PlantScape IKB/OEP Keyboard Drivers from the Common Component CD installation screen.
3	Follow the screen prompts to install the IKB/OEP drivers.
To install only the IKB Service:	
4	Close the installation wizard.
5	Open the ikb_service folder under the Packages folder.
6	Double-click the Honeywell_ikb_service to launch the installation wizard.
7	Click Next from the Welcome screen.
8	Enter Customer Information and click Next.
9	Select Custom from the Setup Type screen and click Next.
10	Expand Program Files to view the options.
11	Select IKB_Server and click Next.
12	Click Install to begin the installation.
13	Click Finish when complete.

3.4 Installing the OEP/IKB Adapter Kit on a Local Computer

3.4.1 Installation tasks

The following table lists the installation tasks for the OEP/IKB adapter kit. The specific tasks you need to perform will vary depending upon your available serial ports.

☑	Task
	Install the IKB Services Software See Section 2.3, "Before you Begin"
	Connect the OEP/IKB adapter to the keyboard
	Connect the OEP/IKB adapter module to the computer
	Configure the COM1 Port as COM3, if necessary

3.4.2 Installation diagrams

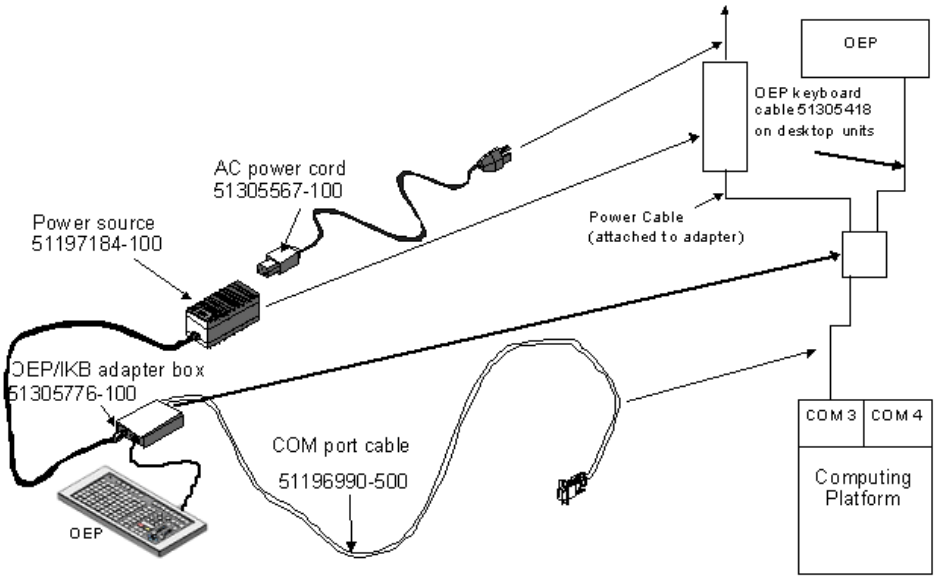


Figure 2-8OEP/IKB Adapter Connected to OEP.

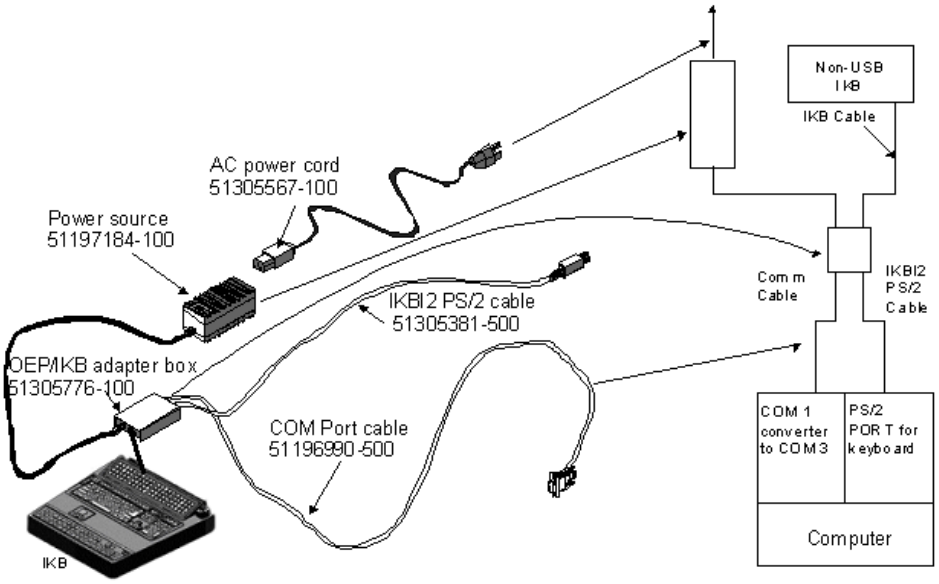


Figure 2-9OEP/IKB Adapter Connected to IKB.

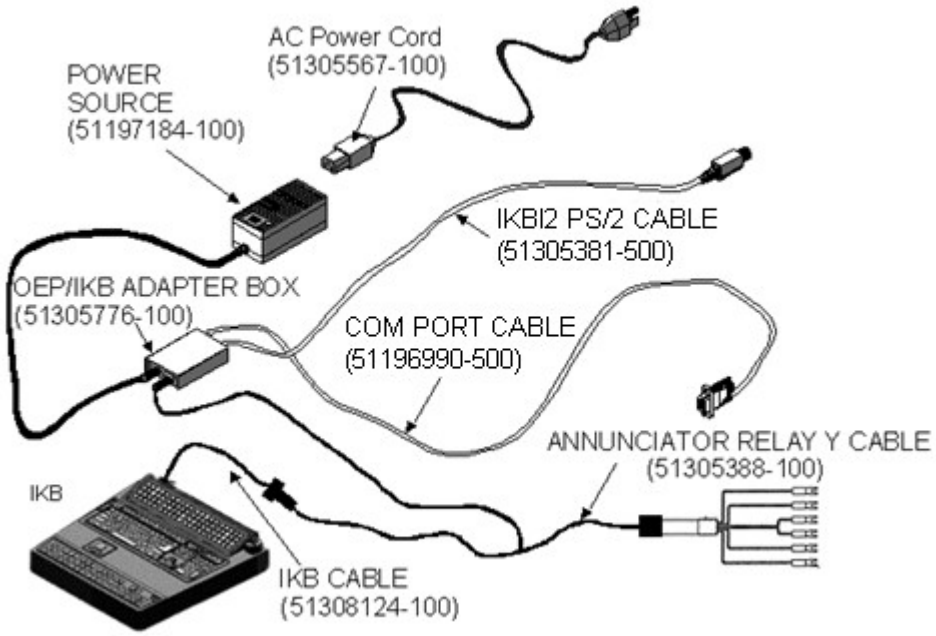
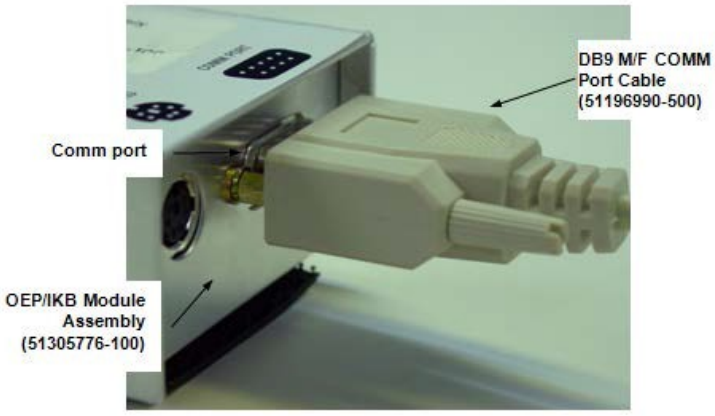
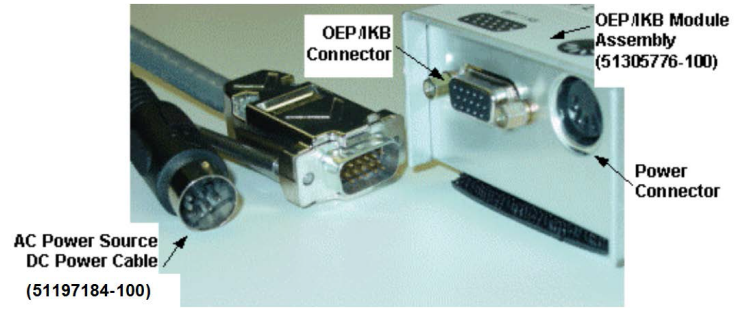


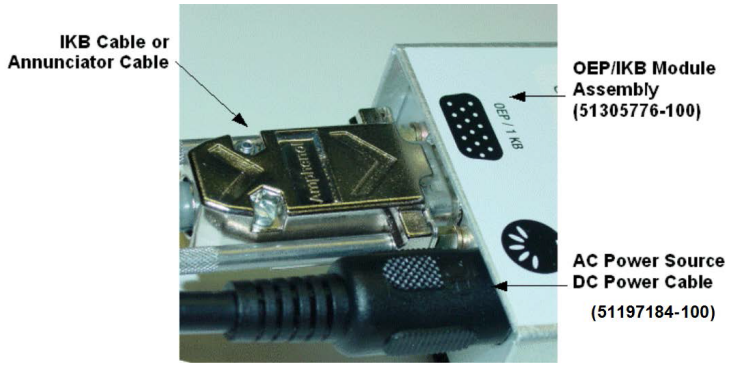
Figure 2-10OEP/IKB Adapter Connected to IKB and Annunciator.

3.4.3 Connect the OEP/IKB adapter module to the keyboard

Use the following procedure to connect an OEP or IKB to the OEP/IKB adapter. Refer to Figure 2-8, Figure 2-9, and Figure 2-10.

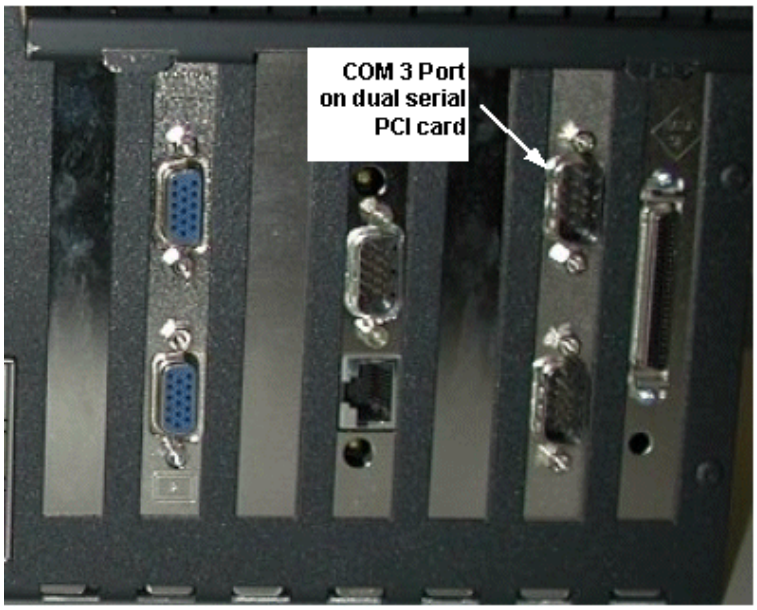
Step	Action
1	Power down the computer and other peripheral devices and disconnect the power cable from the PC. DO NOT connect power to the OEP/IKB Module Assembly until told to do so.
2	Connect the male end of the DB9 M/F Comm Port cable (51196990-500) to the COMM PORT on the OEP/IKB Module Assembly (51305776-100) and tighten the thumbscrews.

Step	Action
	
3	If you are connecting an IKB, insert the round DIN plug of the IKBI2 PS/2 cable (51305381-500) into the PS/2 Connector on the OEP/IKB Module Assembly (51305776-100).  

Step	Action
	
4	Insert the round DIN plug from the AC Power Source DC Power cable (51187184) into the Power Connector on the OEP/IKB Module Assembly (51305776-100).
5	If you have an annunciator, connect the cable from the OEP/IKB Keyboard to the annunciator Y cable,
6	Connect OEP/IKB keyboard cable or the annunciator Y cable to the connector on the OEP/IKB Module Assembly (51305776-100) and tighten the thumbscrews to secure the cable to the module assembly.

3.4.4 Connect the OEP/IKB adapter module to the computer

Step	Action
1	Connect and secure the female end of the DB9 Comm Port cable to one of the following serial ports. ■ COM1 if you do not have the dual serial PCI card ■ COM3 on the dual serial PCI card

Step	Action
	
	ATTENTION If you are using the dual serial PCI card, the OEP/IKB adapter MUST be plugged into the COM 3 Port on the dual serial PCI card as shown in the previous picture.
2	If you are connecting an IKB, connect the other end of the IKBI2 PS/2 cable (51305381-500) to the Keyboard PS/2 Port on the computer.
3	Connect the AC power cord (51305567) to the AC power source (51197184-100).
4	Plug the AC power cord in.
5	Connect the PC power cord in and power up the system.
6	Perform the following "Configure the COM1 Port as COM3" procedure if: ■ Your computer does not have a dual serial PCI card, or ■ You upgraded the computer with the dual serial PCI card

3.4.5 Configure the COM1 Port as COM3

Use this procedure to configure COM1 as COM3. This procedure is necessary if your computer does not have a dual serial PCI card, or you do not have the IKB Services Software installed. See Section 2.3, "Before you Begin".

Step	Action

Step	Action
1	Click Start, point to Settings, and then click Control Panel.
2	Double-click System to display the System Properties dialog box.
3	Select the Hardware tab.
4	Click Device Manager to display the Device Manager console.
5	Expand Ports (COM & LPT).
6	Right-click Communications Port (COM1) and select Properties to display the Communications Port (COM1) Properties dialog box.
7	Select the Port Settings tab and click Advanced to display the Advanced Settings for COM1 dialog box.
8	Select COM3 from the COM Port Number drop-down list and click OK.
9	Click OK to close the Communications Port dialog box.

3.5 Installing the OEP/IKB Adapter Kit on a Remote Computer

3.5.1 Introduction

This section contains procedures for connecting the OEP/IKB adapters remotely. For further information on Honeywell's remoting options see RE01-100, Remote Peripheral Systems: Installation and Upgrade.

3.5.2 Installation tasks

The following table lists the installation tasks for the OEP/IKB adapter kit. The specific tasks you need to perform will vary depending upon your available serial ports.

☑	Task
	Install the IKB Services Software See Section 2.3, "Before you Begin"
	Connect the OEP or IKB to the remote electronics box.

☑	Task
	See RE05-100, Remote Peripheral Systems Installation and Upgrade for details on remoting options.
	Connect the OEP/IKB adapter to the remote electronics box near the computer.
	Connect the OEP/IKB adapter to the computer.
	Configure the COM1 Port as COM3, if necessary.

3.5.3 Installation diagrams

The following two diagrams illustrate the OEP/IKB adapters using with a remote system.

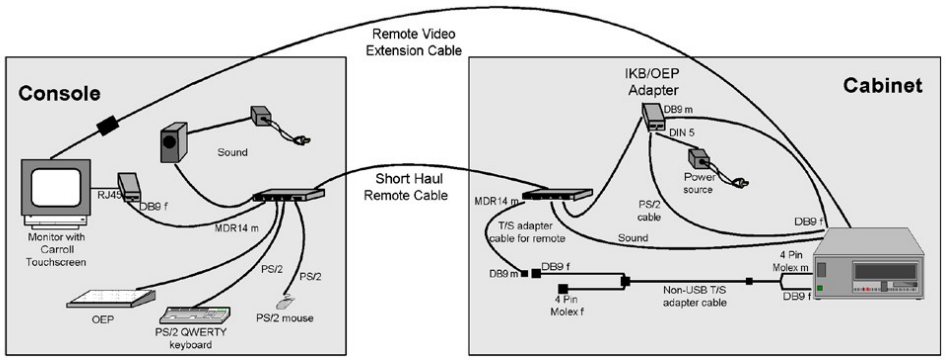
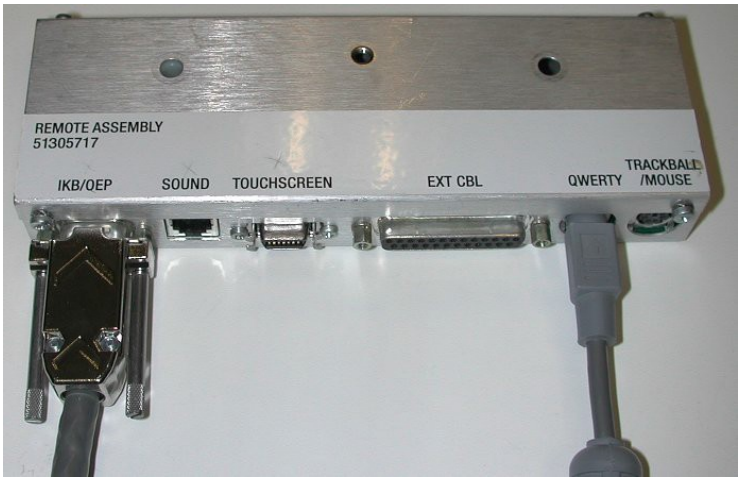


Figure 2-11Adapter Remote Configuration

3.5.4 Connect the OEP or IKB to the remote electronics box

Use this procedure to connect the cables from the console devices to the remote box.

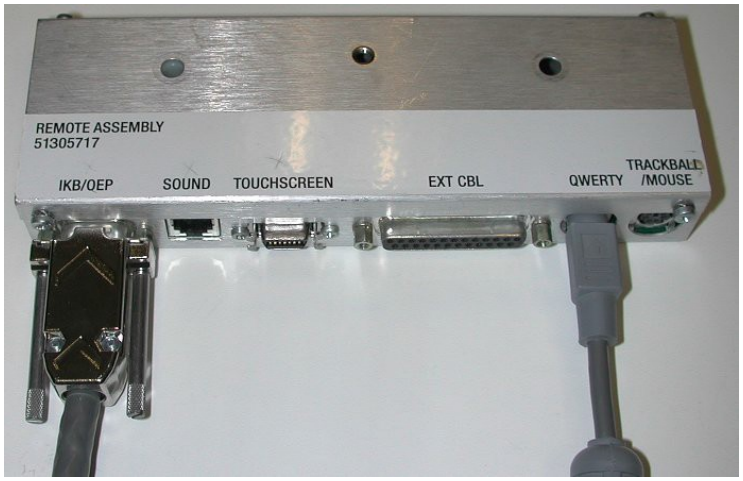
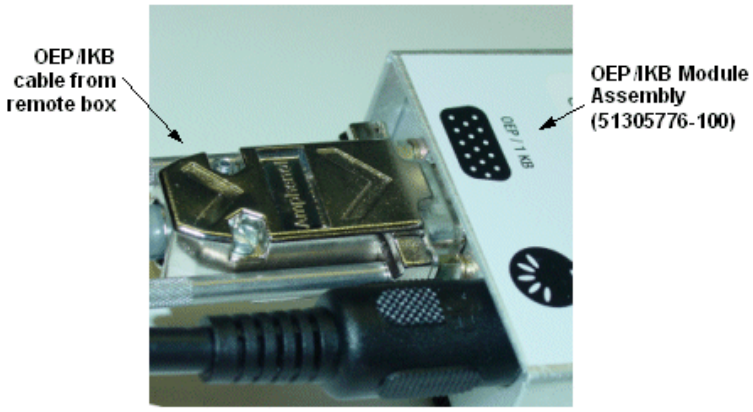
Step	Action
1	For complete remote box installation instructions see RE01-100, Remote Peripheral Systems: Installation and Upgrade
2	Power down the computer and other peripheral devices, and disconnect the power cable from the PC. DO NOT connect power to the OEP/IKB Module Assembly until told to do so.
3	Plug the IKB or OEP cable into IKB/OEP connector on the remote box closest to the OEP or IKB and secure it using the two jackscrews.

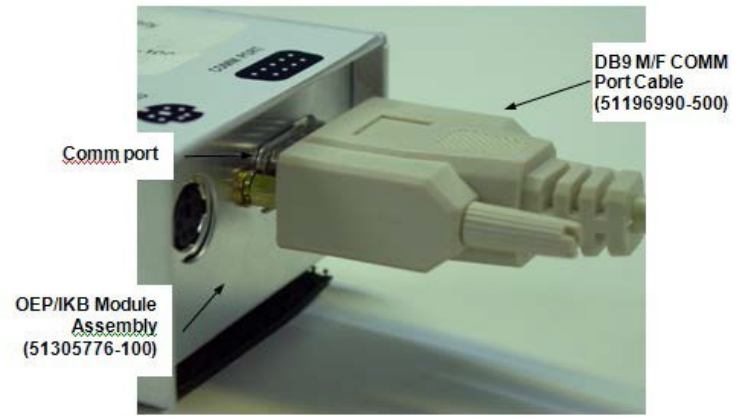
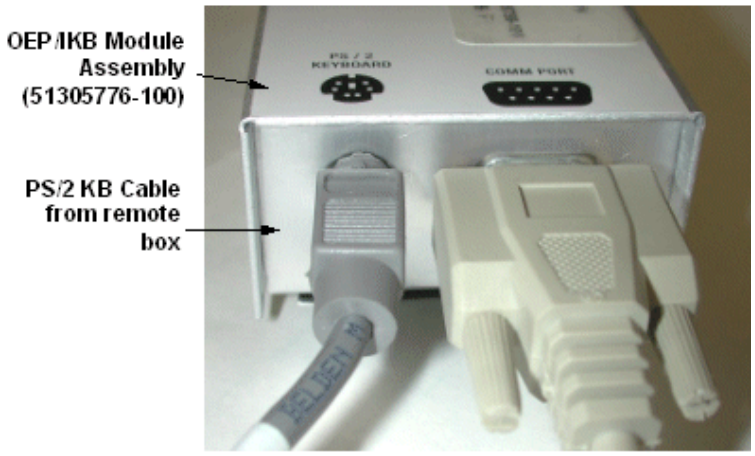
Step	Action
	
4	If you are connecting an IKB, plug the PS/2 cable from the IKB into the QWERTY connector on the remote box.
5	Connect the rest of the remoting system according to the instructions in RE01-100, Remote Peripheral Systems: Installation and Upgrade.

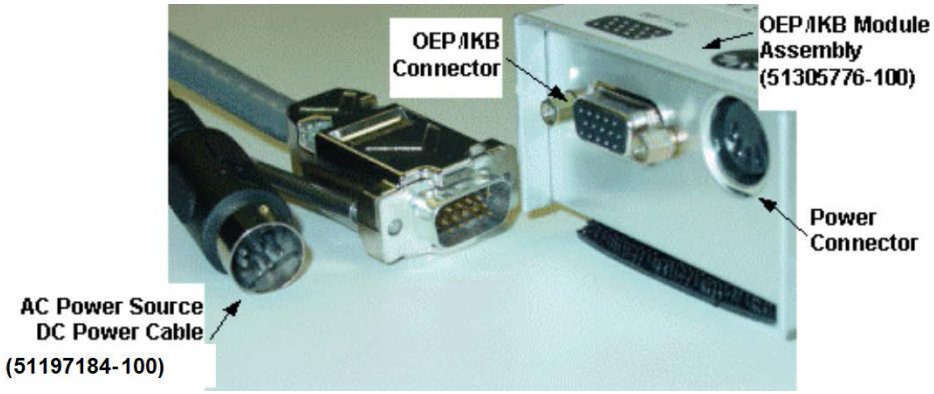
3.5.5 Connect the OEP/IKB module assembly to the computer

Use the following procedure to connect the

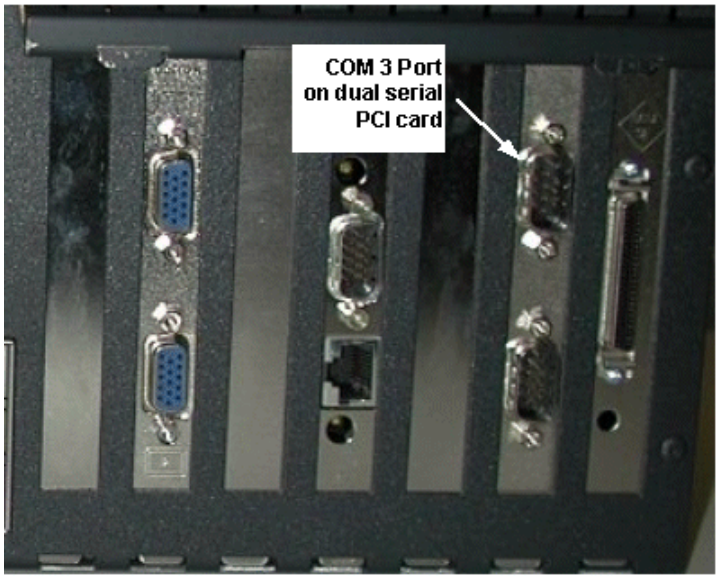
Step	Action
1	Plug the IKB or OEP cable into IKB/OEP connector on the remote box closest to the computer and secure it using the two jackscrews.

Step	Action
	
2	If you are connecting an IKB, plug the PS/2 cable into the QWERTY connector on the remote box.
3	Connect the OEP/IKB cable from the remote box to the OEP/IKB Connector on the OEP/IKB Module Assembly (51305776-100) and tighten the thumbscrews on the OEP/IKB cable to secure it to the module assembly. 
4	Connect the male end of the DB9 M/F Comm Port cable (51196990-500) to the COMM PORT on the OEP/IKB Module Assembly (51305776-100) and tighten the thumbscrews.

Step	Action
	
5	If you are connecting an IKB, insert the round DIN plug of the PS/2 cable from the remote box into the PS/2 Connector on the OEP/IKB Module Assembly (51305776- 100). 
6	Insert the round DIN plug from the AC Power Source DC Power cable (5119184) into the Power Connector on the OEP/IKB Module Assembly (51305776-100).



3.5.6 Connect the OEP/IKB adapter module to the computer

Step	Action
1	Connect and secure the female end of the DB9 Comm Port cable to one of the following serial ports. ■ COM1 if you do not have the dual serial PCI card ■ COM3 on the dual serial PCI card 
	ATTENTION If you are using the dual serial PCI card, the OEP/IKB adapter MUST be plugged into the COM 3 Port on the dual serial PCI card as shown in the previous picture.
2	If you are connecting an IKB, connect the other end of the PS/2 cable to the Keyboard PS/2 Port on the computer.
3	Connect the AC power cord (51305567) to the AC power source (51197184-100).
4	Plug the AC power cord in.
5	Connect the PC power cord and power up the system.

3.5.7 Configure the COM1 Port as COM3

Use this procedure to configure COM1 as COM3. This procedure is necessary if your computer does not have a dual serial PCI card, or you do not have the IKB Services Software installed. See Section 2.3, "Before you Begin".

Step	Action

Step	Action
1	Click Start, point to Settings, and then click Control Panel.
2	Double-click System to display the System Properties dialog box.
3	Select the Hardware tab.
4	Click Device Manager to display the Device Manager console.
5	Expand Ports (COM & LPT).
6	Right-click Communications Port (COM1) and select Properties to display the Communications Port (COM1) Properties dialog box.
7	Select the Port Settings tab and click Advanced to display the Advanced Settings for COM1 dialog box.
8	Select COM3 from the COM Port Number drop-down list and click OK.
9	Click OK to close the Communications Port dialog box.

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