Intermec®

IP30

Handheld RFID Reader

IP30, IP30C, IP30NI



User Guide

Intermec by Honeywell

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Document Change Record

This page records changes to this document. The document was originally released as Revision 001.

Version Number	Date	Description of Change
009	06/2015	Revised to add information about the IP30C, ability to pair the IP30 with the 70 series mobile computer by scanning a 2D bar code, and other Honeywell information.
008	12/2012	Revised to support the CK3X Mobile Computer.
007	06/2012	Revised to support the 70 Series Mobile Computers.
006	04/2010	Revised to include: • new operating temperature specifications. • new CN4NI and CK61 information.
005	06/2009	Revised specifications for new read and write ranges.
004	02/2009	Revised specifications for new 865 MHz EU standard.
003	08/2008	Revised to support the CK3 Mobile Computer.
002	04/2008	Revised to include correct part numbers for the CK61 power supply.

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Customer Support

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to **www.hsmcontactsupport.com**.

For our latest contact information, see **www.honeywellaidc.com/locations**.

Warranty Information

To understand the warranty for your Honeywell product, visit the Honeywell website at **www.honeywellaidc.com** and click **Resources** > **Warranty**.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To find your service center, go to **www.honeywellaidc.com** and select **Support** > **Contact Support** > **Service and Repair**. Contact your service center to obtain a Return Material Authorization number (RMA #) before you return the product.

To obtain warranty or non-warranty service, return your product to Honeywell (postage paid) with a copy of the dated purchase record.

Send Feedback

Your feedback is crucial to the continual improvement of our documentation. To provide feedback about this manual, please contact the Honeywell Technical Communications department at **ACSHSMTechnicalCommunications@honeywell.com**.

Who Should Read This Manual

This document is for the person who is responsible for installing, configuring, and maintaining the IP30.

This document provides information about the features of the IP30, and how to install, configure, operate, maintain, and troubleshoot it.

Related Documents

Here are some related documents that you might find useful:

- *Basic Reader Interface Programmer's Reference Manual*
- *Intermec Settings Command Reference Manual*

The website at **www.intermec.com** contains our documents (as .pdf files) that you can download for free.

To download documents

1. Visit the website at **www.intermec.com**.
2. Click the **Products** tab.
3. Using the **Products** menu, navigate to your product page. For example, to find the IP30 product page, click **RFID** > **Handheld Readers** > **IP30**.
4. Click the **Manuals** tab.

If your product does not have its own product page, click **Support** > **Manuals**. Use the **Product Category** field, the **Product Family** field, and the **Product** field to help you locate the documentation for your product.

1

Use the IP30

Use this chapter to familiarize yourself with the IP30 Handheld RFID Reader. This chapter covers these topics:

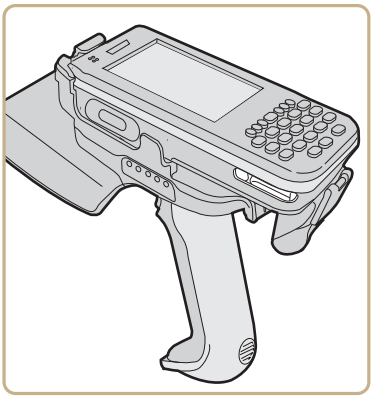
- **About the IP30**
- **Use the Battery**
- **Attach or Remove the IP30**
- **About Pairing the IP30 with the Mobile Computer**

About the IP30

The IP30 Handheld RFID Reader allows you to connect using Bluetooth™ or USB. Together, the IP30 and your mobile computer provide a high-performance mobile RFID solution that allows you to bring the read/write device to the tagged product rather than moving tagged products past a fixed reader.

The IP30 supports the following mobile computers:

- CN3B and CN3F Mobile Computers. CN3 WAN configurations are not supported with the IP30.
- CN4 Series Mobile Computer
- CK3 Series Mobile Computer
- CK61 and CK61ex Series Mobile Computers
- 70 Series Mobile Computers



Bluetooth Version of the IP30 Attached to the CN3

Unpack the IP30

These items are included with the IP30:

- IP30
- Product documentation
- Mounting plates (for CK3 Series, CK61 Series, and 70 Series only)

What You Need

To use the IP30, you need these items:

- Battery (Model AB3 or AB19)
- Battery charger or dock with power supply
- CN3B, CN3F, CN4 Series, CK3 Series, CK61 Series, or 70 Series
- A custom application to read and write tags. For help, see **"RFID Applications and the IP30" on page 28**.

You may also need to upgrade your Windows operating system and SmartSystems™ Platform Bundle (SSPB) before you can connect the IP30 to your mobile computer. To download the latest operating system and SSPB, visit the downloads page for your mobile computer at **www.intermec.com** > **Products** > **Computers** > **Handheld Computers** > ***Your Mobile Computers*** > **Downloads** tab.

Microsoft Windows Operating System and SSPB Versions Needed

Mobile Computer	Required Windows Operating System Version	SmartSystems Platform Bundle Version
CK3X	Windows Embedded Handheld 6.5 version 1.44.16 or later	N/A
CK3	Windows Mobile 6.1 or later.	SSPB version 6.20 or later.
CK61	• Windows Mobile 5.0 version 3.21 or later. • Windows CE version 5.0 or later.	SSPB version 5.50 or later.
CN3B, CN3F	• Windows Mobile 5.0 version 3.21 or later. • Windows Mobile 6.1 version 4.41.32 or later.	• SSPB version 5.50 or later for Windows Mobile 5.0. • SSPB version 7.00.36 or later for Windows Mobile 6.1.
CN4	Windows Mobile 6.1 version 4.41.32 or later.	SSPB version 7.00.36 or later.
70 Series	Windows Embedded Handheld 6.5 version 1.44.16 or later.	N/A



Note: If your 70 Series Mobile Computer has WEH 6.5 version 1.44.16 or earlier, you need to download the RFID support from the website.

For more information on how to upgrade your Windows™ operating system and SSPB, see your mobile computer user's manual.

About the LEDs

Use the following table to understand the status LEDs on your IP30.

LED Icon Descriptions

LED Icon	LED Name	Description
	Ready-to- Work™ indicator	Blue LED remains on when an the IP30 is connected to the mobile computer. For more information, see the next section.
	Data Communications	Flashes when there is data communications between the reader and the mobile computer.
	RFID Transmit	Flashes when the IP30 RFID reader is transmitting data.
	Tag ID	Flashes when an RFID tag ID is successfully read or written to.
	Battery	Indicates the battery status: • Green: The battery is fully charged (more than 80% capacity). • Orange: The battery is charged (from 20% to 80% capacity). • Red: The battery is low (less than 20% capacity).

About the Ready-to-Work Indicator

The blue Ready-to-Work™ indicator shows when a connection is established between your mobile computer and IP30. The next table explains the different states of the Ready-to-Work indicator.

Ready-To-Work Indicator Descriptions

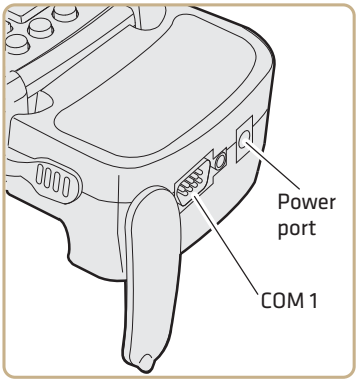
LED	Description
Off	The IP30 is not yet ready for operation, or is in low power mode.
Blinking	The IP30 is not associated with or connected to the mobile computer.
Steady	A connection has been established between the IP30 and the mobile computer.

If there is no host activity after 5 minutes, the IP30 enters low power mode. The IP30 remains Ready-to-Work as long as the mobile computer maintains a communications link. To determine if the IP30 is ready to work, pull the trigger.

About the Ports

The USB version of the IP30 for the CK61 has two ports located on the IP30 adapter. To access these ports, you must remove the port cover.

On the bottom of the IP30 adapter, pull the port cover away from the right side of the IP30.



IP30 USB Adapter Port Descriptions

Port	Description
Power	Connect a power supply to the CK61 to power and charge the CK61. The IP30 does not ship with a power supply. For more information, contact your local sales representative. **Note:** Connecting a power supply to the CK61 does not charge the IP30. To charge the IP30 battery, see the next section.
COM 1	Connect other RS-232 devices, such as printers to the CK61.

Use the Battery

The IP30 uses the Model AB3 or Model AB19 batteries as a main power source.

Warning

You must use the Model AB19 battery with the IP30NI.

Warning

The battery used in this device may present a fire or chemical burn hazard if it is mistreated. Do not disassemble it, heat it, above 100 °C (212 °F), or incinerate it.

Dispose of used batteries promptly. Keep away from children. Contact your local sales representative for replacement batteries.

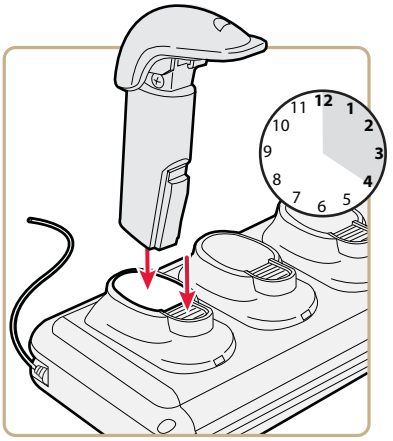
Charge, Install, and Remove the Battery

To charge the IP30 battery you need a power supply, a country specific power cord, and one of the following chargers or accessories:

- AC6 2-Bay Charger
- AC7 4-Bay Charger
- AC20 Quad Charger with IP30 Battery Pack Adapter
- AD20 Single Charger with IP30 Battery Pack Adapter

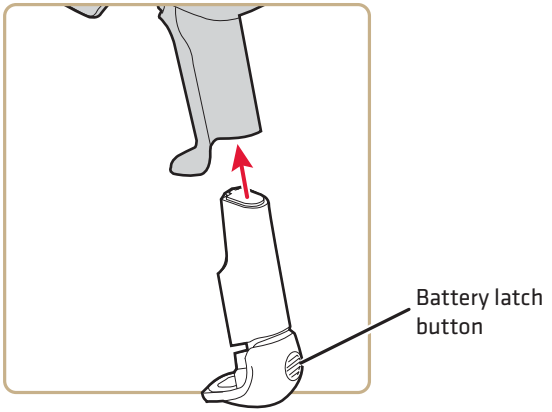
The IP30 does not ship with these accessories. For more information on these accessories, contact your local sales representative.

A fully discharged battery charges to full capacity in approximately 4 hours. To charge the battery, insert the battery into the battery charger.



After you charge the battery, you can use the battery with your IP30.

1 Insert the battery into the IP30.



2 Push the battery latch button and slide the battery in until the battery is secure.

To remove the battery from the IP30, push the battery latch button on the bottom of the IP30.

Note: Charging the IP30 battery does not charge the mobile computer that it is connected to. For charging options, see your mobile computer user manual.

Attach or Remove the IP30

You can connect the IP30 using a Bluetooth connection, a USB connection, or a USB connection connected to a common access card reader. The IP30 can attach to the following mobile computers:

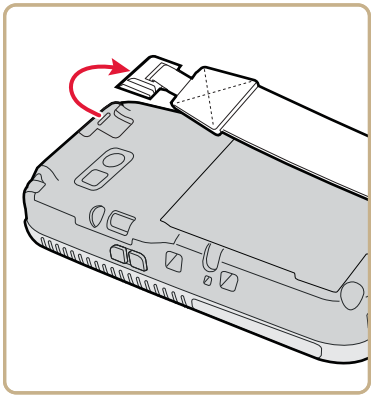
- 70 Series Mobile Computers
- CN3B, and CN3F Mobile Computers
- CN4 Series Mobile Computers
- CK3 Series Mobile Computers
- CK61 Series Mobile Computers

Attach or Remove the IP30 from the CN70 or CN70e Mobile Computers

This section explains how to connect the Bluetooth version of the IP30 to your CN70 or CN70e. It might be difficult to remove the mobile computer from the locking bracket. For help, see **"To remove the CN70 or CN70e" on page 10**.

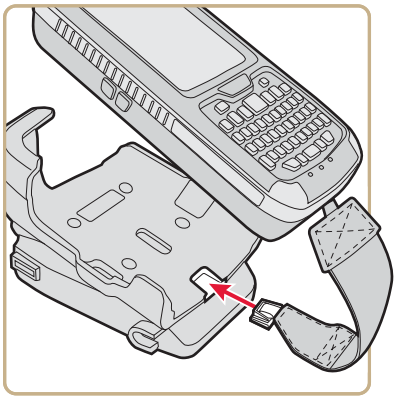
To attach the IP30

1 Remove the mobile computer handstrap.

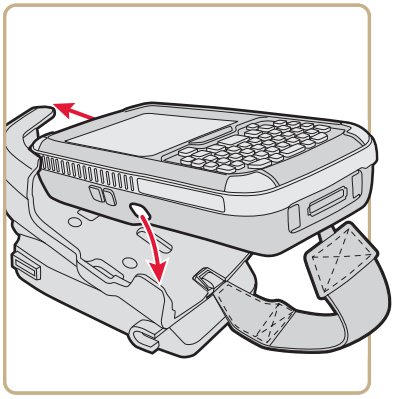


CN70 Shown

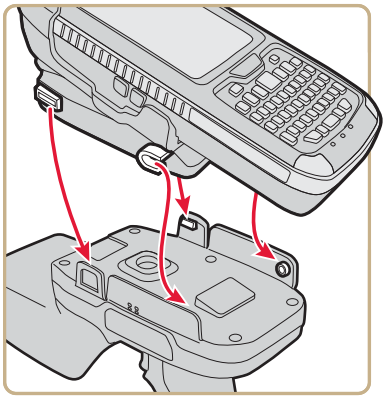
2 Insert the handstrap into the mounting bracket.



3 Lock the computer into place by lowering it into the computer mounting bracket.



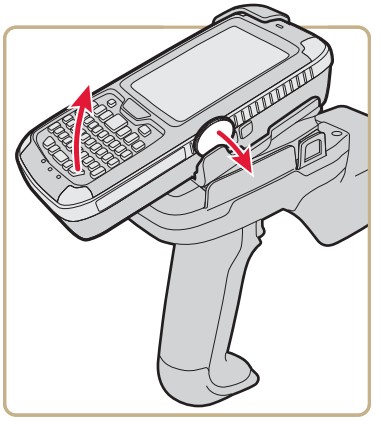
4 Lock the computer into place by angling it into the IP30 locking bracket.



5 Establish a Bluetooth connection. For help, see **"About Pairing the IP30 with the Mobile Computer" on page 25**.

To remove the CN70 or CN70e

1 Insert a coin or similar tool into the locking bracket and carefully leverage the computer out of the bracket.



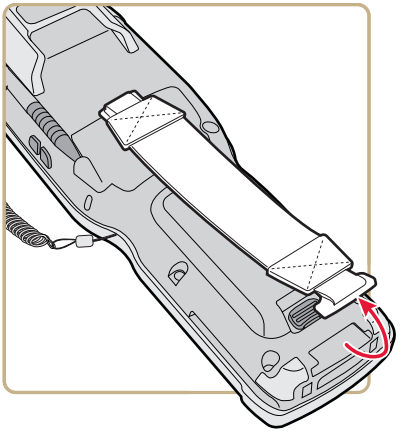
2 Remove the mobile computer handstrap from the locking bracket.

Attach the IP30 to the CK70 or CK71 Mobile Computers

This section explains how to connect the Bluetooth version of the IP30 to your CK70 or CK71.

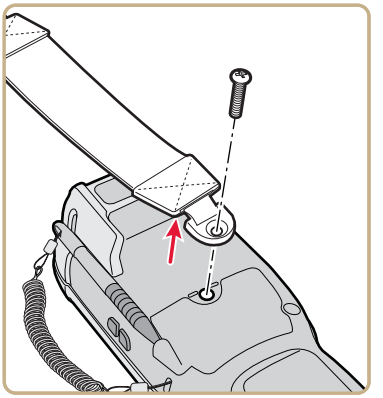
1 Remove the mobile computer handstrap.

a Detach the handstrap.

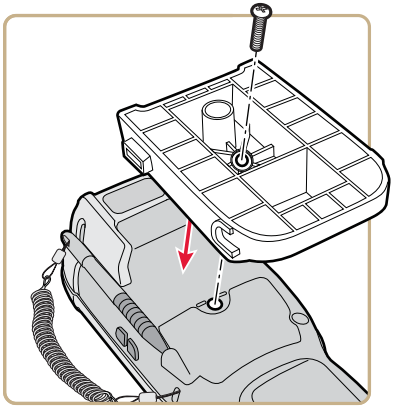


CK70 Shown

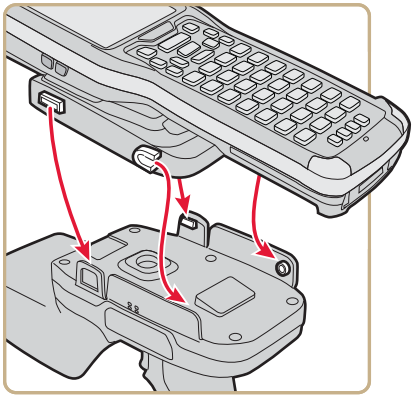
b Remove the Phillips head screw.



2 Attach the mounting plate onto the mobile computer using the provided screw.



3 Lock the computer into place by angling the mounting plate into the IP30 locking bracket.



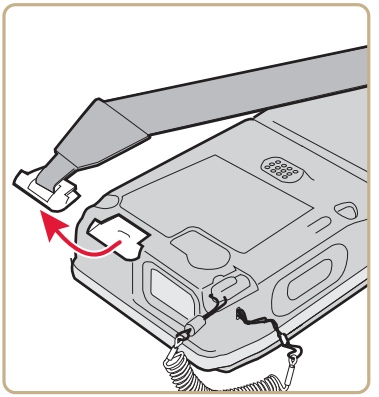
4 Establish a Bluetooth connection. For help, see the next section **"About Pairing the IP30 with the Mobile Computer."**

Note: To remove the mounting plate and CK70 or CK71, point the reader away from you and carefully push down on the bottom of the computer.

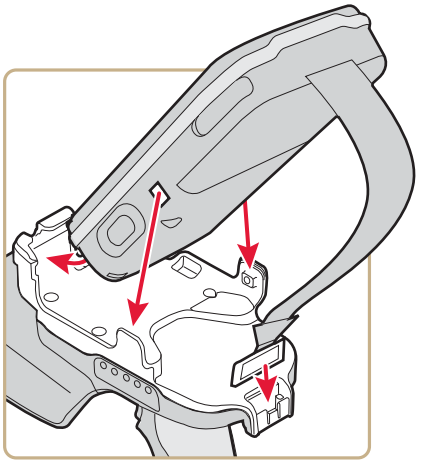
Attach the IP30 to the CN3B or CN3F Mobile Computers

This section explains how to connect the IP30 to the CN3 using a Bluetooth connection, a USB connection, or a USB connection connected to the Model AR6 Common Access Card Reader.

1 Remove the CN3 handstrap and insert the handstrap into the IP30 handle.



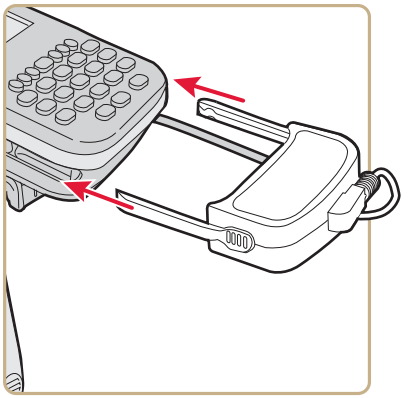
2 Insert the CN3 into the IP30.



3 Lock the CN3 into place by lowering it into the IP30 locking bracket.

4 If you are using the Bluetooth version of the IP30, go to **"About Pairing the IP30 with the Mobile Computer" on page 25**.

If you are using the USB version of the IP30, insert the IP30 USB adapter into the docking connector until it snaps into place.

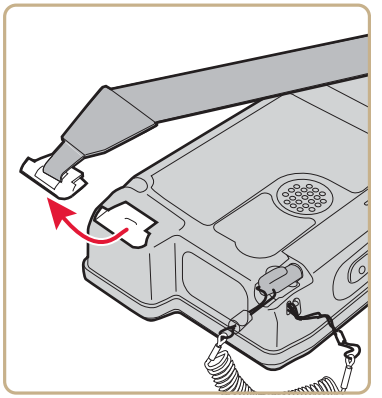


5 Configure the IP30. For help, see **"Configure RFID Settings" on page 29**.

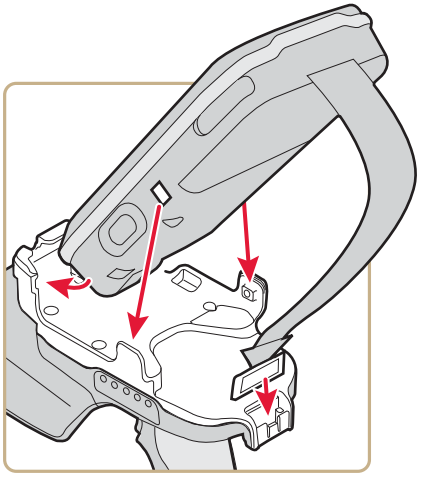
Attach the IP30 to the CN4 Series Mobile Computer

This section explains how to connect the IP30 to the CN4 using a Bluetooth connection, a USB connection, or a USB connection connected to the Model AR6 Common Access Card Reader.

1 Remove the CN4 handstrap and insert the handstrap into the IP30 handle.



2 Insert the CN4 into the IP30.

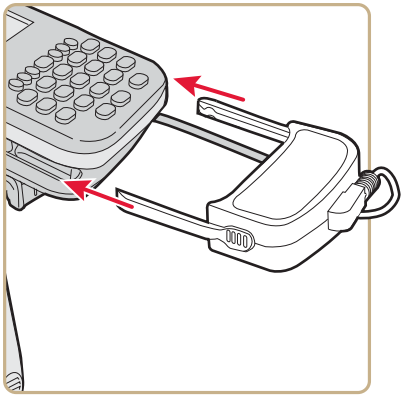


3 Lock the CN4 into place by lowering it into the IP30 locking bracket.

4 If you are using the Bluetooth version of the IP30, go to **"About Pairing the IP30 with the Mobile Computer" on page 25**.

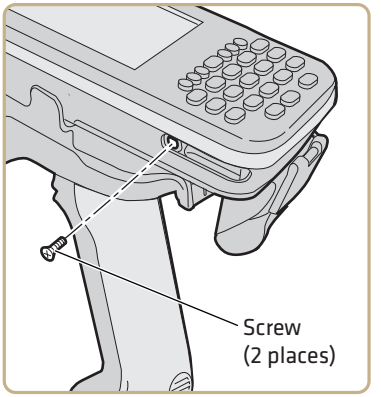
5 Connect the USB adapter or the Model AR6 Common Access Card Reader to the IP30.

If you are using the USB version of the IP30, insert the IP30 USB adapter into the docking connector until it snaps into place.

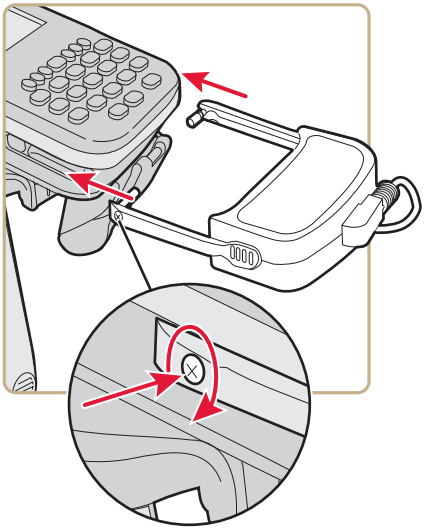


If the USB adapter has captive screws:

a Remove the side fasteners from the CN4 by unscrewing the two screws located on the bottom of the CN4.

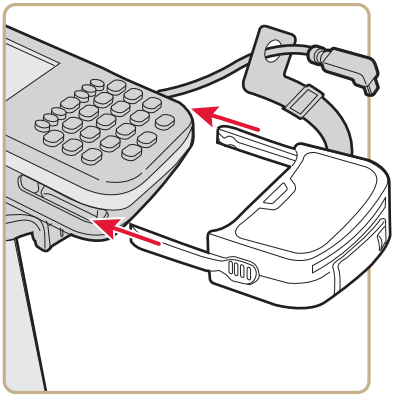


b Insert the USB adapter and secure it by screwing in the two captive screws.

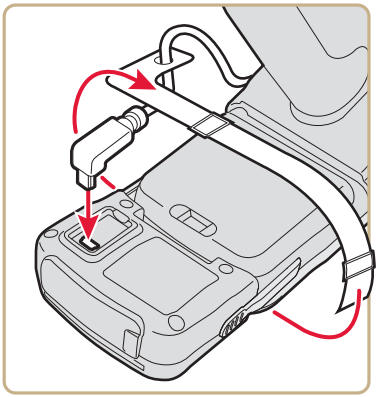


If you are using the AR6 Common Access Card Reader:

a Insert the AR6 into the docking connector until it snaps into place.



b Insert the right-angle USB cable into the USB port on the bottom of the AR6.



c Wrap the Velcro™ strap around the AR6 to secure the USB cable.

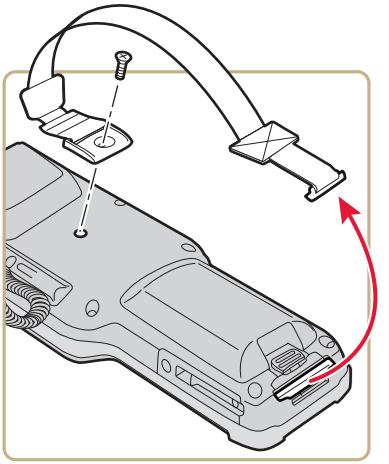
6 Configure the IP30. For help, see **"Configure RFID Settings" on page 29.**

Attach the IP30 to the CK3 Series Mobile Computer

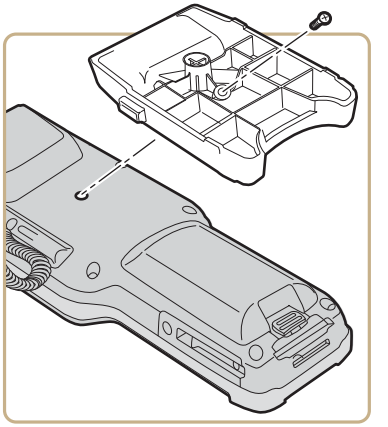
This section explains how to attach the Bluetooth and USB version of the IP30 to your CK3 Series mobile computer.

Note: The CK3X mobile computer only supports the Bluetooth version of the IP30.

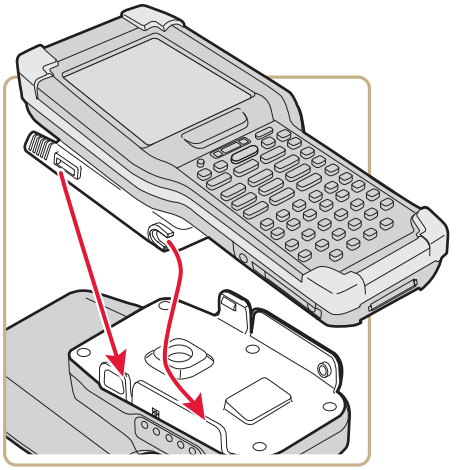
1 Detach the CK3 handstrap by removing the Phillips head screw.



2 Attach the mounting plate onto the CK3 using the Phillips head screw provided with your IP30. Turn the screw clockwise to secure the mounting plate onto the mobile computer.



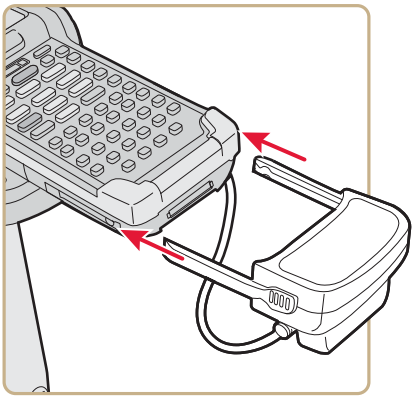
3 Lock the CK3 into place by lowering it into the IP30 locking bracket.



4 If you are using the Bluetooth version of the IP30, go to **"About Pairing the IP30 with the Mobile Computer" on page 25**.

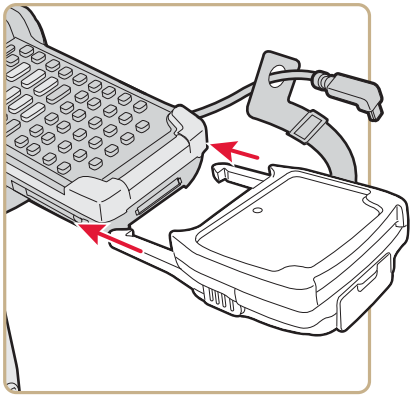
5 Connect the USB adapter or the Model AR6 Common Access Card Reader to the IP30.

If you are using the USB version of the IP30, insert the IP30 USB adapter into the docking connector until it snaps into place.

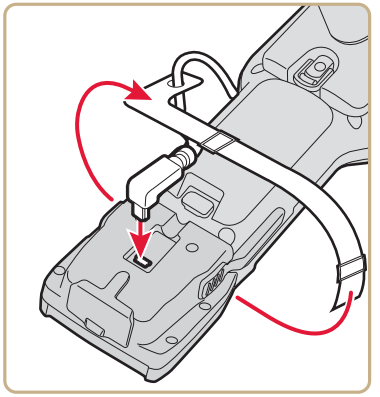


If you are using the AR7 Common Access Card Reader:

a Insert the AR7 into the docking connector until it snaps into place.



b Insert the right-angle USB cable into the USB port on the bottom of the AR7.



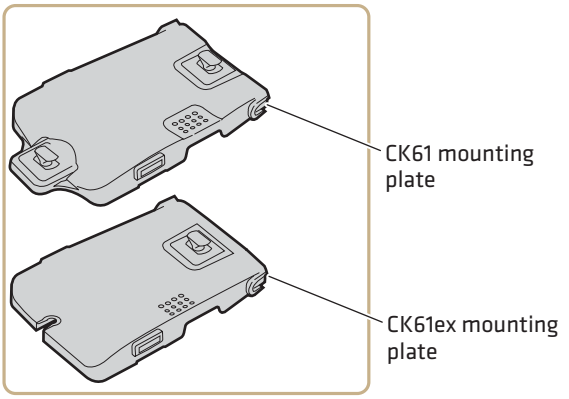
c Wrap the Velcro strap around the AR7 to secure the USB cable.

6 Configure the IP30. For help, see **"Configure RFID Settings" on page 29.**

Attach the IP30 to the CK61 Series Mobile Computer

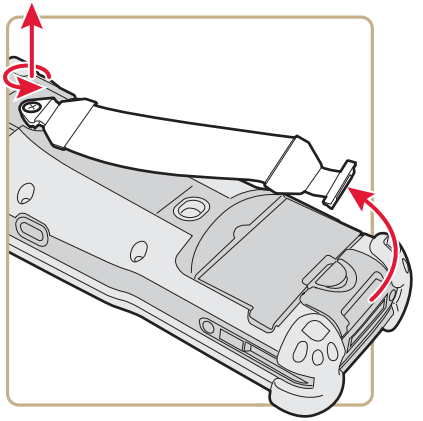
This section explains how to attach the Bluetooth and USB versions of the IP30 to your CK61.

Before you attach the IP30, identify the correct mounting plates.

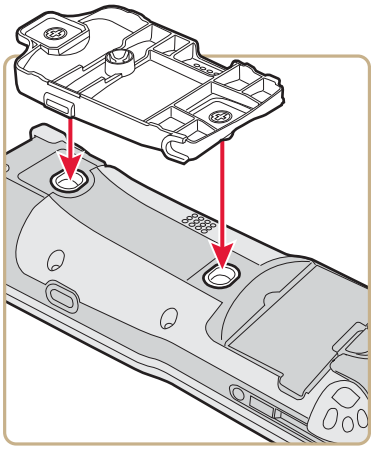


CK61 and CK61ex Mounting Plates

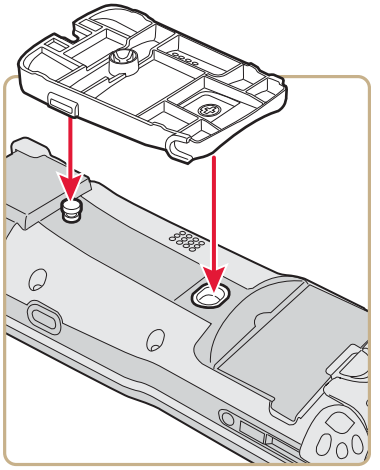
1 Remove the CK61 handstrap by turning the quarter screw counterclockwise.



2 Attach the correct mounting plate onto the CK61 and turn the quarter screw or screws clockwise to secure it onto the mobile computer.

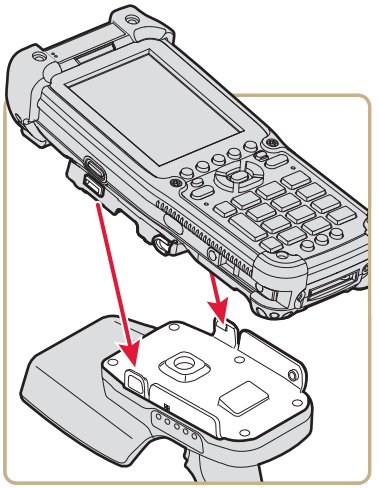


Attach the CK61 Mounting Plate



Attach the CK61ex Mounting Plate

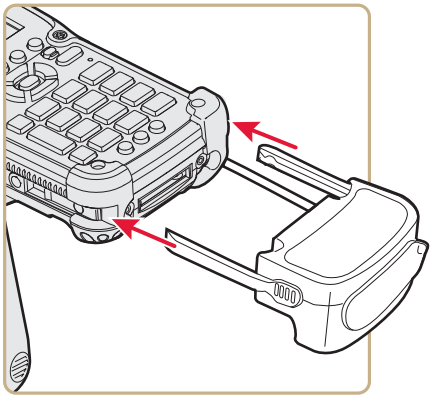
3 Lock the CK61 into place by lowering it into the IP30 locking bracket.



4 If you are using the Bluetooth version of the IP30, establish a connection between your mobile computer and the IP30. For help, see **"About Pairing the IP30 with the Mobile Computer" on page 25**.

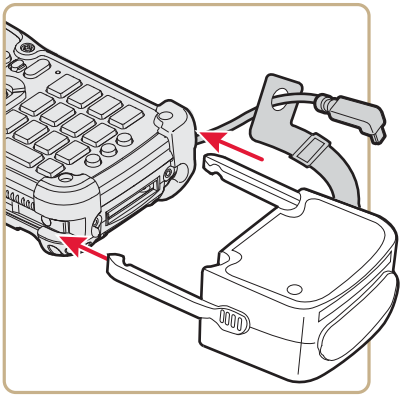
5 Connect the USB adapter or the Model AR5 Common Access Card Reader to the IP30.

If you are using the USB version of the IP30, insert the IP30 USB adapter into the docking connector until it snaps into place.

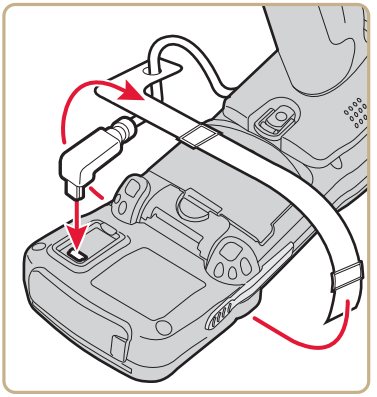


If you are using the Model AR5 Common Access Card Reader:

a Insert the AR5 into the docking connector until it snaps into place.



b Insert the right-angle USB cable into the USB port located on the bottom of the AR5.



c Wrap the Velcro strap around the AR5 to secure the USB cable.

6 Configure the IP30. For help, see **"Configure RFID Settings" on page 29.**

About Pairing the IP30 with the Mobile Computer

Before you can use the Bluetooth version of the IP30, you must establish a connection between the IP30 and mobile computer by scanning a 2D bar code on the IP30 (70 series) or by using the Wireless Reader Wizard.



Note: The USB version of the IP30 establishes a connection with your mobile computer when the IP30 USB adapter is plugged in.

Pair the IP30C by Scanning a Bar Code (70 Series)

The 2D bar code on the IP30C automatically launches the Wireless Reader Wizard, enters the Bluetooth Device address for the IP30, and enters the pass code.

1. Download and install the latest Windows Embedded Handheld operating system and RFID support onto your 70 series mobile computer. For help, see the ***70 Series Mobile Computer User Manual***.
2. Make sure your Bluetooth radio is enabled on your mobile computer. For help, see the ***70 Series Mobile Computer User Manual***.
3. Use the mobile computer to scan the 2D bar code on the IP30.

An initial screen appears letting you know that the IP30 is connecting to the mobile computer and then another screen appears letting you know when the pairing is complete.

Pair the IP30 by Using the Wireless Reader Wizard

1. Make sure your Bluetooth radio is enabled on your mobile computer. For help, see the mobile computer user's manual.
2. For Windows Mobile 5.0, Windows Mobile 6.1, or Windows Embedded Handheld 6.5 select **Start** > **Settings** > **System** and tap the **Wireless Readers** icon. The Wireless Reader Wizard appears.

   For Windows CE, select **Start** > **Programs** > **Windows Explorer**. The Windows Explorer screen appears.

a Select **Program Files** > **Intermec** > **Network**. The Network screen appears.

b Double-tap the **Bluetooth Reader Wizard** icon.

3 Tap **Add Reader**. The wizard advances to the next screen.

4 Select how you would like to find your reader (the default is Search) and then click **Next**. The computer starts discovering readers. The Devices list appears.

5 Select the reader you want to connect to and then tap **Next**.



Note: The Devices list shows all Bluetooth-enabled data collection devices, including RFID readers. To connect to the IP30, verify that the serial number you select matches the serial number on the bottom of the IP30 antenna.

6 When prompted to add the reader to your device list, tap **Yes**.

7 Enter the passcode for your reader. The default passcode for Intermec Bluetooth readers is `0000`.

8 Tap **Next**. The computer connects to the reader and displays the remote device information.

9 Tap **Finish**.

10 Refresh Intermec Settings to see the Bluetooth reader in the RFID menu. You can now configure and modify your device. For help, see **"Configure RFID Settings" on page 29**.

2

Create and Use RFID Applications

This chapter explains how you can use RFID applications for the IP30 and includes these topics:

- **RFID Applications and the IP30**
- **Create Applications for the IP30**
- **Configure RFID Settings**
- **Configure the BRI Server**

RFID Applications and the IP30

The IP30 communicates with the mobile computer through the Basic Reader Interface (BRI) Server, which can be accessed in the Application Connection screen within Intermec Settings. The BRI Server controls the reader by issuing various BRI commands.

- To configure the BRI Server, see **"Configure the BRI Server" on page 29**.
- For more information on the BRI, see the ***Basic Reader Interface Programmer's Reference Manual*** or the ***Intermec Settings Command Reference Manual***.

Use the RFID Resource Kit

The Developer Library RFID Resource Kits includes Java and .NET tools you can use to develop applications that control the reader and data management.

The resource kit is available as part of the Intermec Developer Library (IDL). To learn more about the RFID Resource Kit, go to **www.intermec.com** > **Products** > **Applications and Software** > **Development Tools** > **Developer Resource Kits**.

Create Applications for the IP30

You must create an application for the IP30 before it can read and write tags. Follow this general outline for developing your RFID application:

- Write your application on a development workstation (your desktop PC).
- Install and test the application on your mobile computer.

If you do not have an application but want to verify that your IP30 can read and write tags, you can download the demo application from the Intermec website.

1. Go to **www.intermec.com** > **Products** > **RFID** > **Handheld Readers** > **IP30** > **Downloads** tab. The Download screen appears.

2 Download and install the **RFID Mobile Demo Kit** onto your mobile computer. For information on how to install applications onto your mobile computer, see your mobile computer user's manual.

Configure RFID Settings

This section explains how you use Intermec Settings to change the settings for the RFID module in the IP30. As you install and test applications, you can configure the RFID settings for the best system performance.

1 Go to Intermec Settings on your mobile computer.

2 For Windows Mobile 5.0, Windows CE, or Windows Embedded Handheld 6.5 tap **RFID** > **Reader 1** > **RFID Module**. The RFID Module screen appears.

For Windows Mobile 6.1, tap **RFID** > **Enable RFID Service**, and select the **Enable RFID Service** check box.

3 Change the RFID settings as needed. For help, see the ***Basic Reader Interface Programmer's Reference Manual*** or the ***Intermec Settings Command Reference Manual***.

4 Save your settings.

Configure the BRI Server

The IP30 BRI server handles communications between your application and the RFID module. You can configure many settings for the BRI server.

1 Go to Intermec Settings on your mobile computer.

2 Tap **RFID** > **Application Connection**. The BRI application server settings appear.

3 Change the BRI application server settings as needed. For help, see the ***Basic Reader Interface Programmer's Reference Manual*** or the ***Intermec Settings Command Reference Manual***.

4 Save your settings.

3

Upgrade and Troubleshoot the IP30

This chapter includes information on upgrading the IP30 and includes these topics:

- **Contact Customer Support**
- **Troubleshoot the IP30**
- **Upgrade the IP30 Firmware**

Contact Customer Support

If you cannot find the answer to your problem in the "Troubleshooting" section, you may need to contact customer support.

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to **www.hsmcontactsupport.com**. Before calling Technical Support, be sure you can answer the following questions:

- What were you doing when the error occurred?
- What error message did you see?
- Can you reproduce the problem?
- What is the IP30 serial number?
- What versions of the IP30 and RFID software are you using? For help viewing software versions, refer to your mobile computer user's manual.

For our latest contact information, see **www.honeywellaidc.com/locations**.

Troubleshoot the IP30

This section includes a list of problems and possible solutions.

Problems While Working With RFID

Many problems that you may encounter when working with your RFID system can be solved by carefully checking the RFID settings. For help, see **"Configure RFID Settings" on page 29**.

Use the troubleshooting table to help solve problems with your IP30 RFID.

Troubleshooting RFID Problems

Problem	Solution
The IP30 is unable to read RFID tags, or seems to read tags slowly or inconsistently.	• Make sure you have an active Bluetooth or USB connection between your IP30 and mobile computer. For help, see **"About Pairing the IP30 with the Mobile Computer" on page 25.** • Make sure you choose the correct tag types to maximize IP30 performance. For help, see **"Configure RFID Settings" on page 29.** • Adjust the FIELDSTRENGTH higher. For more information on how to adjust this attribute, see **"Configure RFID Settings" on page 29**. • The IP30 uses a linear antenna. It can only read a tag's antenna which is oriented in the same way as the IP30 antenna. A tag's antenna is oriented the same as the IP30 antenna if the tag element is parallel to the front edge of the IP30 antenna. • Move slightly closer or farther from the tag. Environmental factors can reduce the read range or create deadspots and moving the reader can help pick up more tags or hard-to-read tags. • Make sure there are no metal objects or other objects on the antenna. Large rings or hand jewelry can also affect the performance of the IP30. • Make sure the mobile computer is working properly. The IP30 will not work as well if there are too many applications running in the background. • Make sure your battery is fully inserted into the handle. • Make sure your battery is not low, it may affect the performance of the IP30.

Troubleshooting RFID Problems (continued)

Problem	Solution
The IP30 does not respond to your RFID application.	• Make sure your application is communicating with the IP30, the BRI server on your mobile computer, or both. • You may need to change BRI server settings to communicate with your application. For help, see **"Configure the BRI Server" on page 29**.

Problems With Connectivity

The IP30 connects to your mobile computer via Bluetooth and USB connections. For information on connecting your mobile computer, see **"About Pairing the IP30 with the Mobile Computer" on page 25**. Use the troubleshooting table to help solve problems with your IP30 connectivity.

Troubleshooting Connectivity Problems

Problem	Solution
You cannot connect to the IP30 via Bluetooth.	• Make sure your Bluetooth radio is enabled and that you have established a connection between your IP30 and your mobile computer. • Make sure your IP30 is not connected to different mobile computer . • Make sure that the battery is fully inserted and latched into the handle. For help, see **"Use the Battery" on page 6**. • Set the BTPWROFF attribute in Intermec Settings to its default value of 500. See the ***Intermec Settings Command Reference Manual.*** • Make sure your IP30 battery has power. For help, see **"About the LEDs" on page 4.**
You cannot connect to the IP30 via USB.	• Make sure the USB adapter is secured to your mobile computer. For help, see **"Attach or Remove the IP30" on page 8.** • Make sure that the battery is fully inserted into the handle. For help, see **"Use the Battery" on page 6.** • Make sure your IP30 battery has power. For help, see **"About the LEDs" on page 4.**

Upgrade the IP30 Firmware

This section explains how to upgrade the IP30 firmware using your mobile computer. There are two ways to upgrade your IP30:

- Use a media card.
- Use SmartSystems.

You need to download the latest upgrade files from the Intermec website to your desktop PC.

Upgrade the IP30 Firmware Using a Media Card

To upgrade the IP30 firmware, you need:

- a media card. The CN3 uses a miniSD™ card, the CK61 uses an SD card, and the 70 Series and CK3 use a microSD™ card.
- a media card reader (optional).

You can use any file transfer method (ActiveSync, FTP server, and so on) to copy the upgrade files to your media card. It is recommended that you use a media card reader.

1. Make sure you have an active USB or Bluetooth connection with your mobile computer and IP30. For help, see **"Attach or Remove the IP30" on page 8**.
2. Download the device upgrade (.cab) file from the Intermec website to your desktop PC.
3. Load the upgrade (.cab) file onto the media card.
4. Insert the media card into your mobile computer.
5. The upgrade (.cab) file automatically installs onto the IP30.

Upgrade the IP30 Using SmartSystems

You can use the SmartSystems Console to upgrade the firmware on your IP30. The console is part of SmartSystems Foundation, which is available from the Intermec website.

1. Make sure you have an active USB or Bluetooth connection with your mobile computer and IP30. For help, see **"Attach or Remove the IP30" on page 8**.

2. Make sure that your mobile computer is Discovered in the SmartSystems Console. For help, see the SmartSystems Foundation Online help.
3. Download the device upgrade (.exe) file onto your desktop PC.
4. Double-click the application file to install it. The application file appears in the software vault.
5. From the SmartSystems Console in the software vault, locate the upgrade file, and drag-and-drop it to the mobile computer.

A
Specifications

This appendix includes physical and electrical specifications for the IP30 and information about the port pin assignments.

IP30/IP30NI Specifications

Height	19 cm (7.5 in)
Length	19 cm (7.5 in)
Width	10.1 cm (4 in)
Weight	.43 kg (1.9 lbs) without mobile computer.
Power	Removable lithium-ion battery pack
Electrical rating	⎓ 3.7 V, 2400 mA
Operating temperature	-15 °C to 50 °C (5 °F to 122 °F)
Operating temperature (IP30C)	-20 °C to 60 °C (5 °F to 122 °F)
Storage temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Humidity (non-condensing)	10 to 95%
Antenna type	Linear polarized
Enclosure	IP64 compliant
Drop survival	Withstands 1.3-m (4-ft) drops to concrete, 26 times
Non-incendive (NI) option (IP30 model dependent)	Class I - Div. 2 Groups A, B, C, D; Class II - Div. 2 Groups F, G; Class III - Div 2. T6

IP30A/IP30B RFID Specifications

Protocols supported	EPCglobal Class 1 Gen 2 ISO 18000-6B ISO 18000-6C
Frequency range (region dependent)	U.S.A.: 902-928 MHz* EU: 865.6-867.6 MHz
Output power U.S. FCC: 902-928 MHz* EU ETSI: 865-867 MHz*	Output power up to 30 dBm, depending upon the model and the region where the IP30 is configured to be used.
Read range (typical maximum)	Up to 20 ft or more dependent upon the tag and power output setting.**
Write range (typical maximum)	Typically, about 1/2 the read range, but it is also dependent upon the tag and the power output setting.**

* Maximum output power and operating frequency varies from country to country based on the regulations.
** Read and write range varies based on tag performance, reader antenna gain, reader output power, and environmental conditions.

IP30C RFID Specifications

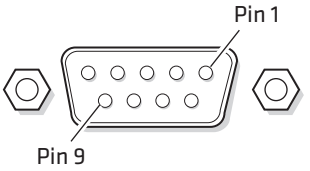
Protocols supported	EPCglobal Class 1 Gen 2 ISO 18000-6B ISO 18000-6C
Frequency range	U.S.A.: 902-928 MHz* EU: 865.6-867.6 MHz*
Output power U.S. FCC: 902-928 MHz* EU ETSI: 865-867 MHz*	Output power up to 30 dBm, depending upon the model and the region where the IP30 is configured to be used.
Read range (typical maximum)	Over 609.6 cm (20 ft) at 30 dBm**
Write range (typical maximum)	Over 182.9 cm (6 ft) at 30 dBm**

* Maximum output power and operating frequency varies from country to country based on the regulations.
** Read and write range varies based on tag performance, reader antenna gain, reader output power, and environmental conditions.

Port Pin Assignments

This section describes the port pin assignments for the USB version of the IP30 for the CK61.

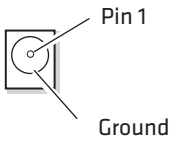
Serial Port (COM1)



Serial Port Pin Assignments

Pin	Description	Active Polarity
1	DCD	
2	Receive data (RXD)	High
3	Transmit data (TXD)	High
4	DTR	
5	Signal ground	
6	DSR	
7	RTS	
8	CTS	
9	5.0 V (up to 500 mA)	

Adapter Port



Adapter Port Pin Assignment

Pin	Description
1	12 V

Intermec
by Honeywell

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www.honeywellaidc.com

IP30 Handheld RFID Reader User Guide

P/N 934-018-009