IP Session/Cyberdata IP Endpoints. IP Paging and Access Control
# Contents

**Chapter 1 IPsession / CyberData IP Speaker Integration Manual**

1.1 IPsession Integration With CyberData IP Speakers .................................................................1

1.2 CyberData IP Speaker as a SIP Extension ..................................................................................4

1.3 CyberData IP Speakers Integrated with the CyberData Paging Server ........................................5

1.3.1 Integrate the CyberData Server Paging Group with IPsession Zone Group .......................8

1.4 CyberData IP Speakers as Multicast Enabled IP End Points .....................................................9

1.5 Prerequisites, Configuration and FAQ's ....................................................................................12

1.6 IPcelerate Technical Support ..................................................................................................16
IPsession paging capabilities are extended to the CyberData IP speakers suite. They include VoIP V3 Paging Server, SIP-enabled IP Paging Endpoints (Ceiling Speaker, Paging Amplifier, Loudspeaker Amplifier, Office Ringer), SIP-enabled IP intercoms (Indoor/Outdoor Intercom, Emergency Indoor Intercom, Intercom with Keypad) and SIP-enabled IP Notification Endpoints (SIP Strobe).

**IP Speaker Integration Chapter Summary**

The detail below provides a summary of the page content within this chapter. To access the displayed section directly, select the hyperlink or choose the document left navigation panel:

### 1.1 IPsession Integration With CyberData IP Speakers

This section defines procedures and options when working with the CyberData IP speakers. Displayed content also includes information for contacting CyberData directly, IPcelerate sales contacts and prerequisites for working with the CyberData product. The content provided within this section of the documentation provides a general guideline and is not intended as the only support required to install this module.

**IPsession Integration With CyberData IP Speakers**

Select the toggle(s), below, to view additional content for the displayed information:

**CyberData IP Speaker Module Description:**

CyberData manufactured IP Speakers Module provides the ability to extend IPsession paging to IP speakers. To activate/purchase the CyberData Module, contact CyberData Corporation at their web site at [www.cyberdata.net](http://www.cyberdata.net) or contact IPcelerate sales at [sales@ipcelerate.com](mailto:sales@ipcelerate.com) or call 1-888-918-4192.

CyberData IP Speaker Module supported options include the ability to:

- IP speaker audio messages (paging, tones, warnings, etc)
- Integrates with existing IPsession paging zone options
- Deploys without the need for a IPsession IP Speaker Controller.
- Multicast RTP support (no additional network traffic created)
- Easy initial configuration with the vendor-supplied “VoIP Discovery Utility” and IP Speaker web based configuration option.

**Note** CyberData IP speaker integration requires additional device licenses. Contact IPcelerate sales at [sales@ipcelerate.com](mailto:sales@ipcelerate.com) or call 1-888-918-4192 for pricing and additional details.

**CyberData IP Speaker Models:**

The following are available CyberData Speaker models or click on the CyberData Speaker Models hyperlink to view additional details:
- VoIP V3 Paging Server
- SIP-enabled IP Paging Endpoints (Ceiling Speaker, Paging Amplifier, Loudspeaker Amplifier, Office Ringer)
- SIP-enabled IP Intercoms (Indoor/Outdoor Intercom, Emergency Indoor Intercom, Intercom with Keypad)
- SIP-enabled IP Notification Endpoints (SIP Strobe)
CyberData Speaker Administration

Manage CyberData speakers using the CyberData Discovery Utility program. Browse to the IP Speaker web interface for configuration and administration. For further details on CyberData speaker configuration, refer to the manufacturer’s contact information at the bottom of this page.

This manual provides details of IPsession configuration requirements to integrate with the CyberData IP speakers.

Figure 1. CyberData IP Speaker Home Page
IPsession Integration With CyberData IP Speakers

There are three ways to integrate CyberData IP Speakers with IPsession:

- Integrate CyberData IP Speakers with IPsession via SIP Extensions
- Integrate CyberData IP Speakers with IPsession via the CyberData Paging Server
- Integrate CyberData IP Speakers with IPsession via Multicast Enabled IP End Points

1.2 CyberData IP Speaker as a SIP Extension

CyberData IP Speakers can be integrated into IPsession as an overhead paging extension or SIP extension only mode. In the Cisco Unified Communication Manager, the CyberData IP speaker should be configured as a SIP extension. Once a SIP extension is obtained, add this extension to IPsession.

Use Table 1 to integrate CyberData IP Speakers with IPsession via SIP Extension:

Table 1. Integrate CyberData IP Speakers with IPsession via SIP Extension

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into the IPsession server with administrative rights</td>
</tr>
<tr>
<td>2</td>
<td>Go to i.Cast&gt;View Zones. To edit the zone, select the <code>&lt;Paging Number&gt;</code> hyperlink associated to the paging zone.</td>
</tr>
<tr>
<td>3</td>
<td>Enter the SIP extensions on the overhead fields (multiple extensions are separated by commas), then select the Update button to save changes. <strong>Note</strong>: For details on IPsession zone configuration and overhead paging integration, refer to chapter 6.4 'Paging' from the IPsession Documentation.</td>
</tr>
<tr>
<td>4</td>
<td>You are finished.</td>
</tr>
</tbody>
</table>

Figure 2. IPsession Zone Configuration Page
1.3 CyberData IP Speakers Integrated with the CyberData Paging Server

Use the following table to integrate CyberData IP speakers with the CyberData Paging server:

Table 2. Integrate CyberData IP Speakers with IPsession via SIP Extension

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into the CyberData Paging Server.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>PGROUPs Config</strong> from the left menu.</td>
</tr>
</tbody>
</table>
| 3    | Proceed to configure the paging groups (multicast) by entering data in the following columns:  
• IP Address  
• Port  
• Name  
• TTL  
• Lineout (check box)  
Up to 100 paging groups can be configured in each CyberData Paging Server. Each paging group is referenced by the two digit numbers or DTMF digits displayed on the left on the Paging Group's table. |
| 4    | Configure individual speakers to join multicast groups. For example, when a call (SIP) is placed to this paging server and the DTMF (For example, 00) digits are pressed after the signaling beep, the caller's audio is broadcasted to all the CyberData IP Speakers which have the corresponding multicast address (For example, 234.2.1.1/9000) configured for these groups.  
*Note:* For more information, please view the Cyberdata Paging Server Configuration guide. |
| 5    | Select the **Save** button at the end of the Paging Groups table. |
| 6    | **Reboot** the CyberData Paging Server for changes to take effect |
| 7    | You are finished. |
Figure 3. CyberData v3 Paging Server Paging Groups Configuration
A corresponding multicast configuration is performed on each CyberData IP Speaker to create a group membership of these IP speakers to the paging group defined in CyberData Paging Server.

**Figure 4. CyberData IP Speaker Multicast Configuration**
1.3.1 Integrate the CyberData Server Paging Group with IPsession Zone Group

Use Table 3 to integrate the Cyberdata Paging Server Paging Group to IPsession Zone Group:

### Table 3. Integrate CyberData IP Speakers with IPsession via SIP Extension

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into the IPsession server with administrative rights.</td>
</tr>
</tbody>
</table>
| 2    | Go to i.Cast>View Zones. To edit the zone, select the `<Paging Number>` hyperlink associated to the paging zone and configure the fields as follows:  

For example, if the (SIP) extension of the Paging Server is 5400, while 00 is the (DTMF) number to dial the paging group, enter ‘5400s00’ where ‘x’ or ‘X’ separates the SIP extension to the DTMF digits and each ‘s’ corresponds to one second delay to enter the group DTMF after the call is placed to the paging server.  

The delay is required in order to wait for the ‘beep sound’ coming from the paging server after a call is established to the server. A 2 second (ss) delay is probably the best configuration. The addition of more delays (in seconds) may be required depending on other configuration factors. 00 through 99 is the DTMF range for multicast groups configured on the CyberData Paging Server.  

*Note:* Since one paging server can support one call at a time, IPsession can only page one CyberData Paging Server Group at a time. All other calls to the same CyberData Paging Server will fail while the IPsession server handles the active paging call. |
| 3    | In the IPsession server, select the **Update** button to save changes. |
| 4    | You are finished. |

**Figure 5. IPsession Zone Group configuration with CyberData Paging Server Groups**

![IPsession Zone Group Configuration](image-url)
1.4 CyberData IP Speakers as Multicast Enabled IP End Points

CyberData IP Speakers can also be integrated with IPsession without configuring SIP extension to the speakers. Use the following table to configure CyberData IP Speakers as IP end points:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into the IPsession server with administrative rights.</td>
</tr>
<tr>
<td>2</td>
<td>Go to iCast&gt;View Zones and verify that ALL of IPsession zones are configured and created.</td>
</tr>
</tbody>
</table>
| 3    | Go to Configure>i.Cast>Multicast Zones. Complete the following fields:  
  - Zone Number: Select the Zone group  
  - IP Address: The multicast address  
  - Port Number: Port number should range from 2000 to 65535  
  Select the Add button to add a fixed multicast address for every IPsession zone that would have a CyberData IP speaker as a member. |
| 4    | Once IPsession zones and IPsession Multicast zones are configured, proceed to complete the basic Networking Configuration of each IP Speaker. |
| 5    | Once the network configuration for each speaker is complete, log into the CyberData IP Speaker Web Server (CyberData Intercom) and select the Multicast Config button. Proceed to configure the speaker into multicast groups that matches the multicast IP address and Port Number in IPsession. Do this for EACH CyberData IP speaker.  
  **Note:** The networks should be configured for multicast routing. |
| 6    | Configure only those multicast addresses that the speaker should become a member. Make sure the **Enable Multicast** operation option is checked. Prioritize the multicast address configuration on the CyberData IP Speaker (in a top-to-bottom order) to allow paging to one IPsession zone over another when paging is active on both groups. |
| 7    | Configure up to 10 multicast addresses for the speaker to the corresponding member for each IPsession zone group.  
  Select the **Save** button to save changes.  
  **Reboot** the CyberData IP Speaker Web Server (CyberData Intercom) for changes to take effect. |
| 8    | You are finished. |
Figure 8. CyberData IP Speaker Multicast Configuration

![CyberData IP Speaker Multicast Configuration](image)
1.5 Prerequisites, Configuration and FAQ's

Table 5. CyberData IP Speakers Prerequisites

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Description</th>
<th>Related Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Rights</td>
<td>• Administrator users can configure, edit, delete and create any applications configuration and/or options.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Administrator users can add multicast zones on IPsession to integrate CyberData-manufactured IP speakers to a new/existing paging zones.</td>
<td></td>
</tr>
<tr>
<td>Application Active</td>
<td>Available once purchased from CyberData at <a href="http://www.cyberdata.net">www.cyberdata.net</a>.</td>
<td><a href="http://www.cyberdata.net">www.cyberdata.net</a></td>
</tr>
<tr>
<td></td>
<td>• Only after purchasing and accomplishing the following steps:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Configure CyberData Speaker</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Configure IPsession zones, multicast zones and multicast configuration on the CyberData speaker -or-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Configure SIP extension of the CyberData speakers and add them to IPsession zones as Overhead Numbers.</td>
<td></td>
</tr>
<tr>
<td>Active Features</td>
<td>• IP speaker audio</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The networks should be configured for multicast routing</td>
<td></td>
</tr>
<tr>
<td>CyberData Corporate Web Site</td>
<td><a href="http://www.cyberdata.net">www.cyberdata.net</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Company Name: CyberData Corporation</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. CyberData IP Speakers Multi-server Operations

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
<th>Related Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>How IP Speakers Operates Between Servers</td>
<td>• A CyberData speaker can be configured for multiple IPsession servers. Make sure the multicast configuration for each zone is unique among all IPsession servers.</td>
<td><a href="http://www.cyberdata.net">www.cyberdata.net</a></td>
</tr>
<tr>
<td></td>
<td>• IPsession supports the ability to initiate a page, from inside or outside IPsession and send a page event to a paging zone even when the paging zone is within another IPsession platform</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• CyberData web site: <a href="http://www.cyberdata.net">www.cyberdata.net</a></td>
<td></td>
</tr>
</tbody>
</table>
### Table 7. CyberData IP Speakers Multi-server Operations

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Related Links</th>
</tr>
</thead>
</table>
| 1    | • Before beginning the activation of the CyberData-Manufactured IP Speakers, confirm the following:  
  - IPsession is currently activated and configured  
  - IPsession and CUCM phone display IPsession Phone User Interface (PUI)  
  - IPsession features work correctly through the PUI  
  - The user has purchased the CyberData-manufactured IP speakers software and hardware  
**Note:** CyberData-manufactured IP speakers support IP audio. CyberData-manufactured IP speakers do not require IPsession IP Speaker controller server | |
| 2    | • Customers and IPcelerate partners interested in working with the CyberData IP speaker technology may:  
  - Contact CyberData directly at www.cyberdata.net.  
  - Contact IPcelerate sales at sales@ipcelerate.com or call 1-888-918-4192. | |
| 3    | • As part of the purchase discussions IPcelerate customers and business Partners should:  
  - Identify the number of devices required.  
  - Identify the installation procedures (CyberData provided)  
  - Identify the type of IPsession deployment configuration (one IPsession or multiple IPsession servers) | |
| 4    | • With the equipment purchase and delivery, the IPcelerate business partner working in combination with CyberData accomplishes the following:  
  - Installs and configures the CyberData speaker hardware and software.  
  - Coordinates with IPcelerate Technical Support, if needed, to confirm technical configuration/choices. | |
| 5    | • After the initial installation and configuration, the devices are integrated with existing IPcelerate paging and other features.  
**Note:** IPcelerate business partners and/or the customer assume ongoing operational responsibility. | |
| 6    | • Users add, delete and update IP speakers through the **Devices** menu option. | |
Table 7. CyberData IP Speakers Multi-server Operations (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Related Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>You are finished.</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. CyberData IP Speakers Configuration Overview

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Related Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Content provided within this table is only displayed as a general guideline. CyberData and the customer’s partner are responsible for the installation and configuration of the CyberData IP speakers. If the CyberData speaker will be configured as a SIP extension, then follow the iPsSession iCast configuration and skip over these steps.</td>
<td></td>
</tr>
</tbody>
</table>
| 2    | • Launch the CyberData IP Speaker web interface on the browser and login.  
• Select which configuration method you will use to integrate CyberData IP Speakers with iPsSession:  
  • Via SIP Extensions  
  • Via the CyberData Paging Server  
  • Via Multicast Enabled IP End Points  
See section titled iPsSession Integration With CyberData IP Speakers at the beginning of this chapter. | |
| 3    | • After completing the configuration, save the changes. | |
| 4    | • Reboot the device. | |
| 5    | • You are finished. | |

CyberData Speaker Scenarios

- Include CyberData speakers for Bell schedules.  
- Send live audio message to the speakers.  
- Send pre-recorded audio messages when included in zone groups.

Vendor site: www.cyberdata.net

• **Note:** Customers work directly with the CyberData manufacturer for the initial configuration of the IP speakers.

CyberData FAQ

This Frequently Asked Questions (FAQ) topic discusses options and choices related to the CyberData-manufactured IP Speakers as a Module. Select the toggles below, to view additional details for each question or statement.

What is the difference between the CyberData-manufactured speakers and the standard IP Speaker Module?

- CyberData-manufactured IP speakers support IP-delivered audio to an IP speaker.
• CyberData-manufactured IP speakers also do not require an IPsession IP Speaker controller as part of the deployment.

Are we limited to a maximum number of CyberData IP speakers?
• No, users may deploy as many CyberData-manufactured IP speakers as permitted by the Cisco CUCM and IPsession licensing.

How do we purchase CyberData IP speakers?
• Send an email to IPcelerate sales at sales@ipcelerate.com or call 1-888-918-4192. You may also go to the CyberData web site at www.cyberdata.net.

What is the procedure for activating CyberData IP speakers?
• Users purchase CyberData IP speakers from CyberData Corporation from their web site at www.cyberdata.net. Users also have the option to contact IPcelerate sales at sales@ipcelerate.com or call 1-888-918-4192.

After purchasing the CyberData IP speakers:
• Go to the CyberData web site at URL www.cyberdata.net.
• Locate and download the VoIP Discovery Util software (see a CyberData representative for details) to discover CyberData IP Speakers on the network.
• Configure the CyberData IP speakers with Multicast addresses corresponding to IPsession Multicast zones or SIP extension as Overhead Number.
1.6 IPcelerate Technical Support

**IPcelerate Technical Support Contact**

When working with IPcelerate technical resources, it is recommended that users access the IPcelerate trouble ticketing system, see our web site for details, or send an email to the account defined below.

- IPcelerate Technical Support Email: support@ipcelerate.com
- IPcelerate Technical Support Phone Number: 1-888-918-4192. Select option ‘1’
- IPcelerate Corporate web site: http://www.ipcelerate.com

**IPcelerate Order Tracking and Purchasing**

IPcelerate provides the following contact information. When working with IPcelerate Purchasing and Order Tracking issues or needs, it is recommended that users contact IPcelerate using the email or fax below:

- IPcelerate Purchasing and Order Tracking Email: orders@ipcelerate.com
- IPcelerate Purchasing and Order Tracking Fax Phone Number: 1-866-804-8557
- IPcelerate Corporate web site: http://www.ipcelerate.com