Ethernet over Coax (EoC)
Local Craft Interface (LCI)
Installation and Operation Guide
Notices

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Preface

Overview

About This Guide

This guide provides information on how to install and use the Local Craft Interface (LCI), as well as check the status of local end and terminal network through the LCI. This guide is subject to LCI v0.5.4.

This guide consists of the following chapters:

**Chapter 1 Installation** - This chapter describes system requirements for installation, steps for installing WinPcap, steps for installing LCI and shows the device connection diagram.

**Chapter 2 Operation** - This chapter describes how to launch LCI, how to check device versions, how to upgrade device firmware, EP Settings, performance test, basic test, and noise test.

**Chapter 3 Customer Technical Support Information** - This chapter provides information on technical support.

Additional Documentation

If you have a Product Support Agreement (PSA), you can access/download the most current documentation which provides additional information at the knowledgebase web site at:

http://www.sciatldev.com/TNSDocs/DT/DigiStar(EoC)/digistar_io_cisco.htm

Note: You can download these guides separately, or find them on the CD that comes packaged with the master and end-point devices.

Important Notice

Please read the following notice before performing instructions in this guide.

⚠️  NOTICE:

Although DigiStar EoC Aggregation Point (AP) contains various types of offerings, the DigiStar EoC E220 IP54 can be considered as a typical DigiStar EoC AP. All instructions in this guide are based on the DigiStar EoC E220 IP54 and apply to all types of DigiStar EoC offerings.
Chapter 1
Installation

Overview

Introduction

This chapter describes how to install WinPcap software, and how to install the LCI. It also provides system requirements.

In This Chapter

This chapter consists of the following topics:

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</thead>
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<td>EoC Device Connection Diagram</td>
<td>1-8</td>
</tr>
</tbody>
</table>
## System Requirements

The following table includes minimum system requirements for installing LCI.

<table>
<thead>
<tr>
<th>System Requirements</th>
<th>Operation System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation System</td>
<td>Windows Server 2003/</td>
</tr>
<tr>
<td></td>
<td>Windows XP Service Pack 2/</td>
</tr>
<tr>
<td></td>
<td>Windows 7</td>
</tr>
<tr>
<td></td>
<td>(with Microsoft .NET Framework 2.0 installed)</td>
</tr>
<tr>
<td>Hard Drive Requirement</td>
<td>At least 200 MB hard drive space</td>
</tr>
<tr>
<td>Screen Resolution</td>
<td>Minimum resolution of 1024 x 768, 16-bit color quality</td>
</tr>
</tbody>
</table>
Installing WinPcap

This section describes how to install WinPcap.

Installation

Follow steps below to install WinPcap:

1. Browse for the location of the installation files.
2. Double click **WinPcap 4.1.1 installer** to run the installation.

   **Result:** The following screen appears.

![WinPcap 4.1.1 Installer](image-url)
3. Click the **Next** button.

**Result:** The following screen appears.

![WinPcap Setup Wizard](image)

4. Please read the information carefully, then click the **Next** button.

**Result:** The following screen appears. Please read through the End User License Agreement carefully.

![License Agreement](image)
Installing WinPcap, Continued

5. Click the **I Agree** button.
   
   **Result:** WinPcap begins to install.

6. Click the **Finish** button to complete the installation.
Installing LCI

Installation

Follow the steps below to install LCI:

1. Locate the installation files and double click **LCI Setup Installer**.

   ![Image of LCI Setup Installer]

**Result:** You will enter the LCI software installation start screen. Please read the information carefully.

2. Click the **Next** button

   ![Image of LCI setup wizard]

   **WARNING:** This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Result: The following screen appears.

3. Click the **Browse** button and select the path for installation.

4. Click the **Next** button to begin installation.

Result: After the LCI software installation is completed, the following screen appears.

5. Click Close to exit the installation process.
Device Connection Diagram

This section describes how to connect EoC devices.

Connecting EoC Devices

Connection of related devices is shown in the diagram below.

Note: The IP address of the local network administrator’s PC should be set as the same network segment as that of the EoC local port. See the screenshot below.
Chapter 2
Operation

Overview

Introduction

This chapter describes how to launch the LCI, check device version, upgrade device firmware, EP Setting, and perform tests such as performance test, basic test, and noise test.

In This Chapter

This chapter consists of the following topics:

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<tr>
<th>Topic</th>
<th>Page No.</th>
</tr>
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<tbody>
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<td>Performance Test</td>
<td>2-12</td>
</tr>
<tr>
<td>Basic Test</td>
<td>2-14</td>
</tr>
<tr>
<td>Noise Test</td>
<td>2-16</td>
</tr>
</tbody>
</table>
License Management

Introduction

LCI needs a license to activate the function modules. After installation, LCI has no license installed, and therefore, no function modules are activated.

The license is bonded to the host’s network adapter MAC address. To obtain a license, you should provide the host’s MAC address to the sales representative. Cisco Systems will then provide the correct license file in accordance with your actual requirements.

To Launch LCI

Follow these procedures to launch LCI.
1. Click Start menu, and then point to Programs.
2. Click LCI to start up this program.
3. When you launch LCI for the first time, it notifies you that no valid license file is found.

To Obtain a License

1. To apply for a license, click License Status option from the Help menu.
1. Click **License Status**. The license status dialog box appears.

   ![License Status Dialog Box]

   In the module list, all modules are invalid. Click **Purchase Guide** to get the host’s MAC address.

   ![Purchase Guide Dialog Box]

   Provide all contents in the text box to the sales representative. The representative needs this information to apply for a license from Cisco Systems. In the example shown above, the number “00216A957B90” is the host’s MAC address.

   Continued on next page
License Management, Continued

To Load the License

1. If you received the license file, click **Upgrade** to load the license.
2. Click **Browse**, and then select the valid license file from your computer.
3. Click **Ok** to load the license file. When the file loads successfully, the relevant function modules are activated.

The license will show the maximum number of managed master and end-point devices.
License Management, Continued

To Refresh Devices

1. Right click on the Local icon, and click Refresh Devices on the pop-up menu.

As shown in the screen below: 00:C5:D9:00:00:19 and 00:C5:D9:00:00:40 are local AP devices; 00:C5:D9:00:00:48, 00:C5:D9:00:00:02 and 00:C5:D9:00:00:41 are EP devices.

<table>
<thead>
<tr>
<th>LCI Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure</td>
</tr>
<tr>
<td>Local</td>
</tr>
<tr>
<td>00:c5:d9:00:00:19 (DS 12-44, US 28-44MHz)</td>
</tr>
<tr>
<td>00:c5:d9:00:00:58</td>
</tr>
<tr>
<td>00:c5:d9:00:00:02</td>
</tr>
<tr>
<td>00:c5:d9:00:00:40 (DS 12-44, US 28-44MHz)</td>
</tr>
<tr>
<td>00:c5:d9:00:00:41</td>
</tr>
</tbody>
</table>
Checking Device Versions

This section describes how to check device versions.

1. Click **Check Version** from the Configure menu.
   
   **Result:** The following screen appears.

2. Click **Select All** check box in the screen above, then click **Check** button.

   For the selected devices, the MAC Address, Type, Version, and digital Signature of the devices will be displayed in the Device Version window.
Upgrading Device Firmware

This section describes how to upgrade the device firmware.

Upgrading Device Firmware

1. Click Upgrade Firmware from the Configure menu.

Result: The following screen appears.

2. Select the devices to be upgraded or click the Select All, and the Detailed Procedure boxes if needed. Click the Start button.
Upgrading Device Firmware, Continued

**Result:** After the firmware is upgraded, the following screen is displayed.

![Upgrade Firmware](image)

**Note:** If the PC that runs the LCI is connected to the EP, no Upgrade Firmware operations can be done to the AP.

3. If the EP is E220, select the corresponding Frequency Band shown in the dialog box below. Click **OK**.
EP Settings

This section describes how to set EP settings.

To Enable VLAN Settings

1. Click EP Setting from the Configure menu.

![EP Setting Menu]

Result: The following screen is displayed.

![VLAN Settings Screen]

2. Select the devices to allocate VLAN ID from the device list.
3. Check Enabled in the VLAN Control panel.
4. Set Upstream Limit to the desired value from the Upstream Limit dropdown menu.
5. Set Max Host Connection to the desired value in the Host Limit panel.

Continued on next page
6. Set VLAN ID, Priority and Downstream Limit for Port 1 and Port 2 respectively. See the following screen as an example.

![EP Settings Screen](image)

7. Click **Apply** to apply the setting.  

**Result:** After VLAN ID is configured successfully, the following dialog box appears.

![Notice](image)

8. Click the **OK** button to exit the configuration

9. Click **EP Setting** from the **Configure** menu again to verify the setting.

![EP Settings Screen](image)

Continued on next page
EP Settings, Continued

To Disable VLAN Settings

Follow the steps below to disable VLAN.

1. Select the devices from the device list

2. Leave the **Enabled** checkbox unchecked in the VLAN Control bar

3. Click the **Apply** button.

4. Click **EP Setting** from the **Configure** menu again.

**Result:** The device restores to the status of VLAN disabled, as shown in the screen below.

**Note:** Values in the EP Setting dialog box always keeps the default setting. The current setting is displayed in the device list only.
Performance Test

This section describes how to conduct performance testing.

Performance Test

1. Click Performance Test from the Test menu.

Result: The following screen is displayed.
Performance Test, Continued

2. Select the devices to be tested from the device list, and click the Test button. If you want to test all devices, click Test All. Test indexes include: packet loss ratio, signal to noise ratio, physical layer speed, baud rate/modulating index, and link loss.

Result: After the test is completed, the following screen is displayed.

![Performance Test Interface](image)

Note: When a performance test is running, the operation data transmission of the EoC system will be interrupted. If service interruption is not wanted, the basic test could be adopted instead.
Basic Test

This section describes how to run the basic test.

Basic Test

1. Click Basic Test from the Test menu.

Result: The following screen is displayed.

Continued on next page
2. Click the **Test** button.

**Result:** After the test is completed, the following screen is displayed.

![Basic Test Screen]

**Note:** For the initial startup and reboot of the EP, user data traffic is necessary to perform a Basic Test. Otherwise, the statistics are invalid (“0”). On any other occasion, user data traffic is not needed.
Noise Test

This section describes how to conduct a noise test.

1. Click **Noise Test** from the **Test** menu.

   ![Noise Test Menu](image)

   **Result:** The following dialog box appears, prompting that the operation data transmission will be interrupted when the noise test is running.

   ![Confirm Dialog](image)

2. Click **Yes**. Then select the devices for noise test from the device list, and click the **Start** button.

   ![Noise Test Devices](image)

   **Result:** The selected devices will be tested for noise.
Noise Test, Continued

**Result:** After the test is completed, a graphic displayed result (power spectral density of noise) appears automatically. See the screen below.
Chapter 3
Customer Support Information

Overview

Introduction

This chapter contains information on obtaining technical supports.

Obtaining Product Support

<table>
<thead>
<tr>
<th>IF...</th>
<th>THEN...</th>
</tr>
</thead>
<tbody>
<tr>
<td>you have general questions about this product</td>
<td>contact your distributor or sales agent for product information or refer to product data sheets on <a href="http://www.cisco.com">www.cisco.com</a>.</td>
</tr>
<tr>
<td>you have technical questions about this product</td>
<td>call the nearest Technical Service center.</td>
</tr>
<tr>
<td>you have customer service questions about this product</td>
<td>call the nearest Customer Service Center.</td>
</tr>
</tbody>
</table>

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</thead>
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Support Telephone Numbers

This table lists the Technical Support and Customer Service numbers for your area.

<table>
<thead>
<tr>
<th>Region</th>
<th>Centers</th>
<th>Telephone and Fax Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>Cisco Services</td>
<td>For Technical Support, call:</td>
</tr>
<tr>
<td></td>
<td>Atlanta, Georgia United States</td>
<td>Toll-free: 1-800-722-2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local: 678-277-1120 (Press 2 at the prompt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Customer Service, call:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toll-free: 1-800-722-2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local: 678-277-1000 (Press 3 at the prompt)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 770-236-5477</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:customer-service@cisco.com">customer-service@cisco.com</a></td>
</tr>
<tr>
<td>Europe, Middle East, Africa</td>
<td>Belgium</td>
<td>For Technical Support, call:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 32-56-445-061</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Customer Service, call:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone: 32-56-445-444</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 32-56-445-051</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:service-elc@cisco.com">service-elc@cisco.com</a></td>
</tr>
<tr>
<td>Japan</td>
<td>Japan</td>
<td>Telephone: 81-3-5908-2153 or +81-3-5908-2154</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 81-3-5908-2155</td>
</tr>
<tr>
<td>Korea</td>
<td>Korea</td>
<td>Telephone: 82-2-3429-8800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 82-2-3452-9748</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:songk@cisco.com">songk@cisco.com</a></td>
</tr>
<tr>
<td>China (mainland)</td>
<td>China</td>
<td>Telephone: 86-21-2401-4433</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 86-21-2401-4455</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:eoc-support@cisco.com">eoc-support@cisco.com</a></td>
</tr>
<tr>
<td>All other Asia-Pacific countries &amp; Australia</td>
<td>Hong Kong</td>
<td>Telephone: 852-2588-4746</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 852-2588-3139</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:support.apr@sciatl.com">support.apr@sciatl.com</a></td>
</tr>
<tr>
<td>Brazil</td>
<td>Brazil</td>
<td>Telephone: 11-55-08-9999</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 11-55-08-9998</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:fattinl@cisco.com">fattinl@cisco.com</a> or <a href="mailto:ecavalhe@cisco.com">ecavalhe@cisco.com</a></td>
</tr>
</tbody>
</table>

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## Support Telephone Numbers, Continued

<table>
<thead>
<tr>
<th>Mexico, Central America, Caribbean</th>
<th>Mexico</th>
<th>For Technical Support, call:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>- Telephone: 52-351512599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Fax: 52-351512599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Customer Service, call:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Telephone: 52-55-50-81-8425</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Fax: 52-55-52-6-0893</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>All other Latin America countries</th>
<th>Argentina</th>
<th>For Technical Support, call:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>- Telephone: 54-23-20-403340 ext 109</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Fax: 54-23-20-403340 ext 103</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Customer Service, call:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Telephone: 770-236-5662</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Fax: 770-236-5888</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- E-mail: <a href="mailto:keillov@cisco.com">keillov@cisco.com</a></td>
</tr>
</tbody>
</table>