



**e-Watch®**

## **Installation OPT-305 Audio Card**

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The use of the word partner does not imply a partnership relationship between e-Watch and any other company.

e-Watch systems do not prevent crimes from being committed, but are intended to be used to monitor and investigate.

e-Watch components are electronic devices and complex commercial software products. As such, they may fail on occasion. Multiple devices with overlapping zones should be used for redundancy.

e-Watch event notification capabilities must be user programmed and activated prior to use. System reliability is dependent on the underlying network infrastructure and associated communications services that may fail on occasion. The user of the e-Watch system is advised to evaluate risk associated with network failures and operator errors. Routine auditing and preventive maintenance of the system is essential to assure optimum performance.

Event analysis and recreation is subject to system configuration, lighting conditions, environmental conditions, lens and housing cleanliness, distance to subject, operator-invoked control settings, and many other factors.

Read and follow all documentation to assure proper performance.

**C O N T E N T S**

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## **PREFACE**

The preface describes the purpose, audience, organization, and conventions of this guide and provides information on how to obtain related documents.

The preface covers these topics:

- **Purpose**
- **Audience**
- **Organization**
- **Related Documentation**
- **Conventions**
- **Obtaining Documentation**
- **Documentation Feedback**
- **Obtaining Assistance**

## **Purpose**

This document provides instruction for the installation of the OPT-305 audio card. This document includes the procedures for installing the audio card in the camera housing. The Installation Guide for OPT-305 audio card provides a parts list and diagrams for the installation of the completed unit. It also provides illustrations of the connections and construction required. This document acts as an illustrated guide for hardware installation. For software operational instructions refer to document URG-9110-001 “SiteWatch™ Situational Awareness Software Administration Guide”.

## **Audience**

This Installation Guide provides information for hardware construction and is intended for qualified technicians involved in hardware maintenance and repair. This guide requires knowledge of basic electronic hardware installation and tools. Ability to lift five to ten pounds is required for installation of the kit.

## Organization

This guide is organized as shown in the following table

Part	Description
Part 1	‘Installation Guide’  Contains information on installing an OPT-305 audio card. Diagrams and procedures are included.
Part 2	‘Appendix’  Contains illustrations and listings for parts included with the unit as well as parts required by the customer.

## Related Documentation

Refer to the following documents for further information about related e-Watch applications and products:

- **URG-9110-001—SiteWatch™ Situational Awareness System Administration Guide**

## Conventions

This document uses the following conventions:

CONVENTION	DESCRIPTION
<b>Boldface font</b>	Commands and keywords are in <b>boldface</b> .
<i>Italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[ ]	Elements in square brackets are optional.
{x y z}	Alternate keywords are grouped in brackets and separated by vertical bars.
[x y z]	Optional keywords are grouped in brackets and separated by vertical bars.
String	A non-quoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
Screen font	Terminal sessions and information the system displays are in screen font.

<b>Boldface</b> font	screen	Information you must enter is in <b>boldface</b> screen font.
<i>Italic</i> font	screen	Arguments for which you supply values are in <i>italic</i> screen font.
^		The symbol ^ represents the key labeled Control - for example, the key combination of ^D in a screen display means hold down the Control key while you press the D key.
-->		This pointer highlights an important line of text in an example.
<◇		Non-printing characters, such as passwords, are in angle brackets.

## Obtaining Documentation

The following sections provide sources for obtaining documentation from e-Watch Corp.

### World Wide Web

e-Watch documents can be found by going to the e-Watch web site  
[www.e-watch.com](http://www.e-watch.com)

### By Mail

e-Watch Corp.  
 7800 IH 10 West, Suite 720  
 San Antonio, Texas 78230  
 210.349.2000  
[support@e-watch.com](mailto:support@e-watch.com)

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E-mail your comments to [support@e-watch.com](mailto:support@e-watch.com)

To submit comments by mail, write to the following address:

e-Watch Corp.  
 7800 IH 10 West, Suite 720  
 San Antonio, Texas 78230

We appreciate your comments.

## Obtaining Assistance

The following sections provide sources for obtaining assistance from e-Watch Corp.

### Customer Support

For technical assistance please send requests to [support@e-watch.com](mailto:support@e-watch.com) or your local e-Watch reseller. You may also call 210-349-2000 and ask for Customer Support.

### Sales

For assistance with sales or marketing please call 210-349-2000 and ask for Sales or send requests to [sales@e-watch.com](mailto:sales@e-watch.com)

# Introduction

## Key Features and Benefits

OPT-305 Audio Option Card is a two way audio capture card. This card can be used to extend the power of the e-Watch cameras and encoders to that beyond video capabilities. The OPT-305 option card gives the e-Watch cameras the ability to send audio along with the video stream. This option card can also be used to “play” audio. That is, the e-Watch camera can output audio using the audio output jack.

**Note:** Audio playback on the camera is not yet supported in the e-Watch software.

e-Watch is an enterprise wide surveillance and situational awareness system optimized for transmitting MPEG video streams, high resolution JPEG images, detected event data and other sensor and detector data using digital data transmission over both wired and wireless networks (LANs, WLANs).

The comprehensive e-Watch® Situational Awareness System is based on standard networking and Internet technology. Both real-time and archived data may be viewed from any authorized PC on the LAN, WAN or the Internet. The archive application tracks and maintains all situational awareness information and provides high-speed random access for fast location of data relating to specific events

## Components Supplied with Unit

The unit contains the following components:

- **OPT-305 Audio Card** - Add in card for e-Watch cameras and encoders

## Components Supplied by Customer

The unit contains all necessary components to install the card into an e-Watch camera or encoder. Installation, mounting, and connecting power to the camera are covered in the camera’s installation guide.

The customer must supply the external audio equipment such as microphones, amplified speakers, audio cables, etc.

The customer should have access to a Philips screwdriver or T9 torx screwdriver to complete the installation.

## **For More Information**

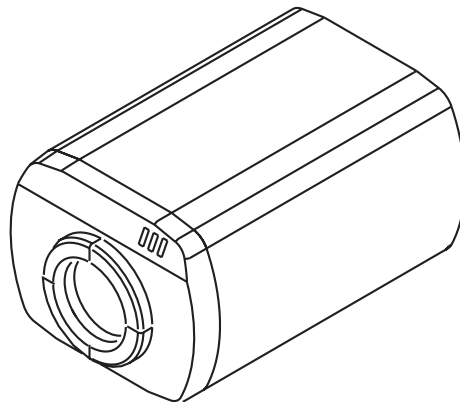
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e-Watch Technical Support at [support@e-watch.com](mailto:support@e-watch.com)

# Audio Card Installation for e-Watch Cameras

## Overview

These instructions use the e-Watch CAM-301 Camera (see figure 2-1) for illustration purposes; however, these instructions will work with any e-Watch 3XX series camera or encoder. The card is to be installed inside the e-Watch camera, which requires opening and modifying the camera hardware. Care should be taken to adequately ground all tools and persons. Electrostatic discharge can destroy components. Make sure that all plugs and connections have been disconnected before working on the camera.



*Figure 2-1 e-Watch Camera*

Parts and tools required:

- **Philips screwdriver or T-9 torx driver**
- **Pan/Tilt card**
- **e-Watch Camera**

## Installing the Card

Although the e-Watch Cam-3XX devices have three expansion slots, the audio option card can only be installed in one (J10, J3) particular slot. The following steps will show the installation procedure.

1. Ensure all cables are disconnected from the camera.
2. Remove the four corner screws from the back of the camera with a Philips screwdriver or T-9 torx driver (figure 2-2).

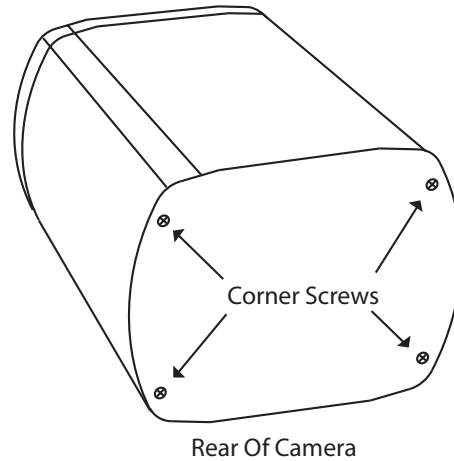


Figure 2-2 Back Cover Plate Screws

3. Remove the two screws holding the third cover plate with a Philips screwdriver or T-9 torx driver (figure 2-3).

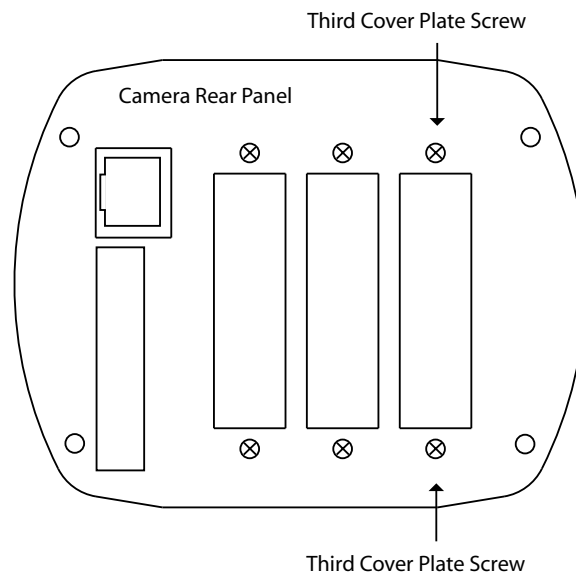


Figure 2-3 Third Cover Plate Screws

4. Place the audio option card in the housing with the connectors toward the camera dual 20-pin (J10, J3) option card connectors. (figure 2-4).

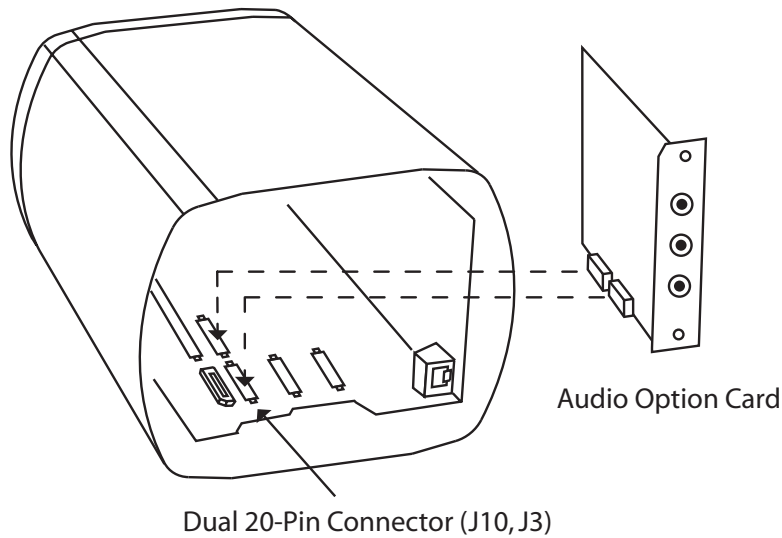


Figure 2-4 Back of Camera with Option Card

5. Place the cover over the back of the camera and center.
6. Attach the option card to the rear panel with the two screws removed from the Third Cover Plate (figure 2-5).

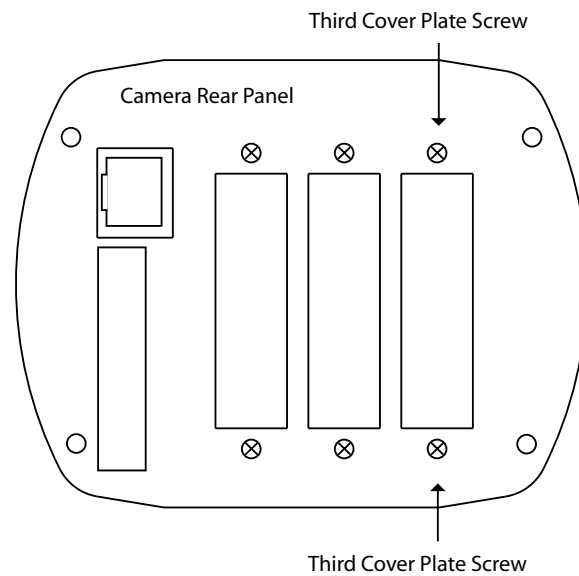
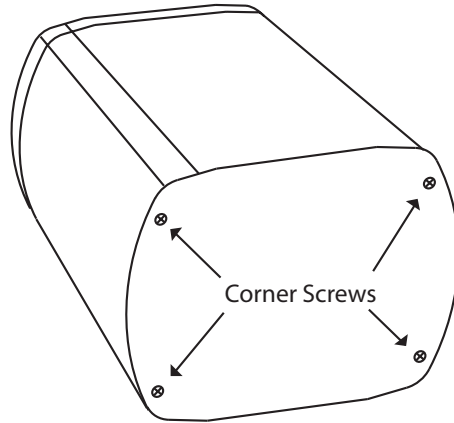


Figure 2-5 Camera Back with Cover Plate Screws

7. Replace the four screws holding the Camera Back (figure 2-6).



Rear Of Camera

*Figure 2-6 Camera Back with Back Cover Screws*

# Audio Card Wiring

## Wiring Overview

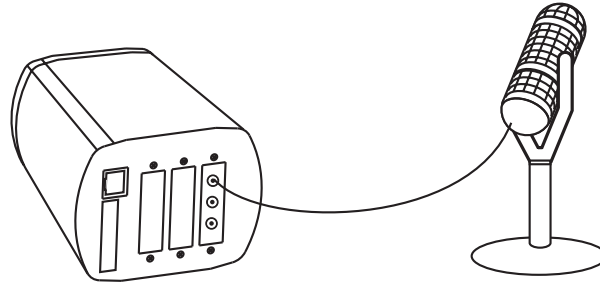
The OPT-305 Audio Option Card has three 3.5mm stereo mini-jack connectors. Each connector is labeled according to its particular function. We will cover each function and show a typical wiring of that function. The customer is responsible for providing the wiring for the OPT-305.



*Figure 3-1 Audio Card Mini-Jack Connectors*

## MIC

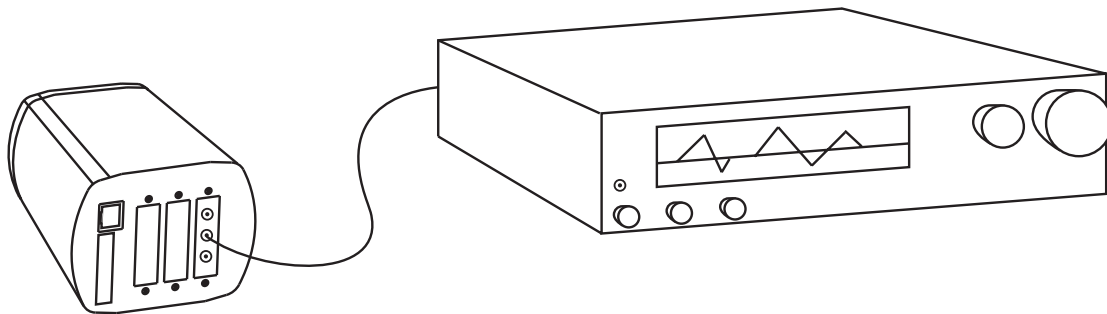
The MIC input is designed to accept a variety of microphones. Electret condenser microphones are preferred. The MIC input connector provides a DC bias of approximately 2.5 VDC for electret condenser microphones.



*Figure 3-2 MIC Connection*

## LINE IN

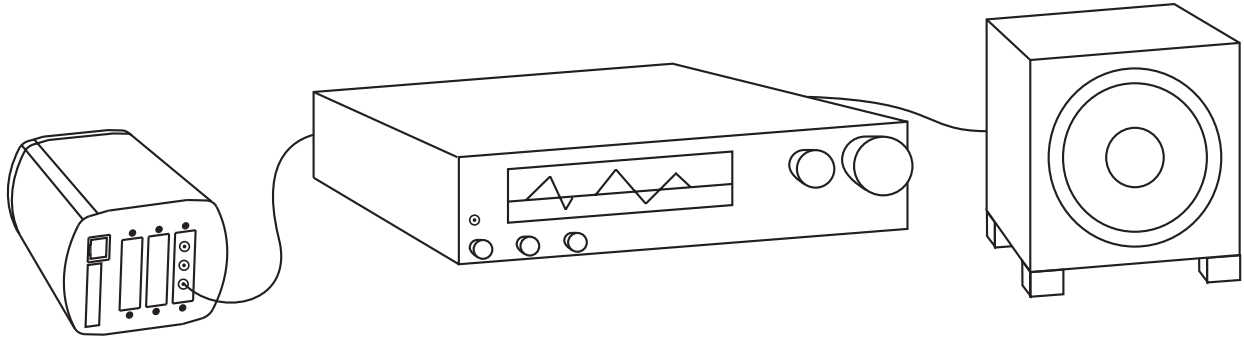
The LINE IN input is a stereo mini-jack connector designed to accept line-level inputs from audio devices. The nominal 0 db level is 1 Volt RMS. Input impedance is approximately 10 K ohms.



*Figure 3-3 LINE IN Connection*

## LINE OUT

The line out connection is designed to output audio sent to the e-Watch camera or encoder. Nominal 0 db output level is 1 Volt RMS. The audio output is not designed to drive a speaker directly, and must be connected to an amplifier or amplified speakers.



*Figure 3-4 LINE OUT Connection*

## Completed System

The OPT-305 Audio Card should appear similar to Figure A-1 below when installed.



*Figure A-1. OPT-305 Audio Card Installed*

## Customer Supplied Equipment

The following equipment and tools are required. The customer is assumed to have already purchased an e-Watch camera. Power supply and mounting brackets are also required from the customer to complete installation.

### 1. Equipment

- a. **e-Watch Camera - CAM-3XX**
- c. **OPT-305 Option Card**

### 2. Tools

- a. **#1 Philips Screwdriver or T-9 Torx Driver**
- b. **10 mm Wrench**