Crestron C2N-IADS30X24
Intercom Audio Distribution System
Operations Guide

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Contents

Intercom Audio Distribution System: C2N-IADS30X24

Introduction

Features and Functions

- 16 RCA inputs combine left and right channels to create eight mono inputs.
- 22 CAT5 line inputs/outputs for door stations and TPS touchpanels (remote audio in/out).
- 4 RCA outputs representing two mono channels by combining the left and right channels of each audio input.
- 1 five-pin miniconnector for CNXTA telephone card interface for dial-up paging and control.
- 1 four-pin miniconnector for Cresnet hookup.
- Built-in 30x24 audio crosspoint switch. Any mono input can be routed to any mono output. Any output can be turned off, providing a high-isolation off state.
- Touch-settable ID (TSID) ready.

The C2N-IADS30X24 Intercom Audio Distribution Switcher (IADS) facilitates the distribution and control of audio intercom signals for up to 22 touchpanels and door stations using inexpensive CAT5E cable. The IADS integrates neatly with Crestron's CNX-PAD8A and CNX-BIPAD8 audio distribution processors, enabling voice paging from any microphone-equipped touchpanel to room loudspeakers throughout the house or office, and allowing audio from central AV sources to be distributed to any touchpanel.

The IADS is built around a fully programmable 30x24 audio crosspoint matrix, providing extensive flexibility for the distribution of intercom and other monaural audio signals. Interfaced through 22 bidirectional CAT5 audio ports, the matrix provides complete freedom to route the microphone signal from any one touchpanel or door station to the speakers in another, with real-time control to permit fluid talk/listen (half-duplex) intercom functionality. Crestron offers several touchpanel models equipped with built-in microphones and speakers designed for use with the IADS. Door stations are easily implemented using the C2N-IIF Intercom Interface (sold separately).

Eight unbalanced inputs are also provided to accept signals from the unbalanced room outputs or loop-thru connectors of a Crestron audio distribution processor, or from any stereo sources. Stereo input signals are internally summed to mono. Any input signal may be freely routed to any number of CAT5 outputs. In addition, there are two unbalanced outputs provided for connection to room inputs on the audio distribution processor, allowing microphone and other signals to be routed to any set of room speakers, easily accommodating the most complex zone-paging scheme.

Additional configurations can be achieved by interfacing CAT5 audio ports on the IADS directly to CAT5 audio ports on the CNX-BIPAD8 and many other Crestron products.

A 5-pin connector, paralleled with the last CAT5 I/O port, permits interfacing to Crestron's CEN-TIA Telephone Interface Module (sold separately), enabling dial-up paging through the client's phone system, and distribution of door chimes and other sounds through the room loudspeakers.

The IADS functions as a slave device to any 2-Series control system communicating via the Cresnet® control network.

Applications

Although the IADS can function alone as an intercom audio distribution controller, it is ideally suited to work in combination with the C2N-IVDS24X24 (IVDS) intercom video distribution system along with other Crestron audio/visual components and TPS touchpanels to provide a variety of A/V functions throughout the facility. (Refer to the simplified system diagram on page 3 and the functional diagram on page 4 for more details.)

Paging

Connect the audio outputs of the IADS to a Crestron CNX-PAD8A (PAD8A) or CNX-BIPAD8 (BIPAD8) audio distribution system to add whole facility paging through the audio distribution system.

Connect a Crestron CNXTA telephone card (requires a control system that accepts expansion cards) to the IADS to allow dial-up paging to specific or to all zones throughout the facility.

A/V Source Monitoring

Connect the output of a PAD8A or BIPAD8 to the IADS to listen to A/V sources through your TPS touchpanels.

Security Camera Monitoring

Connect the IVDS output to the input of a CNX-PVID8X4 or CNX-PVID8X3 (PVID8) video distribution system to view security camera output through any display device, such as a plasma display or a projector, connected to the PVID8 output.

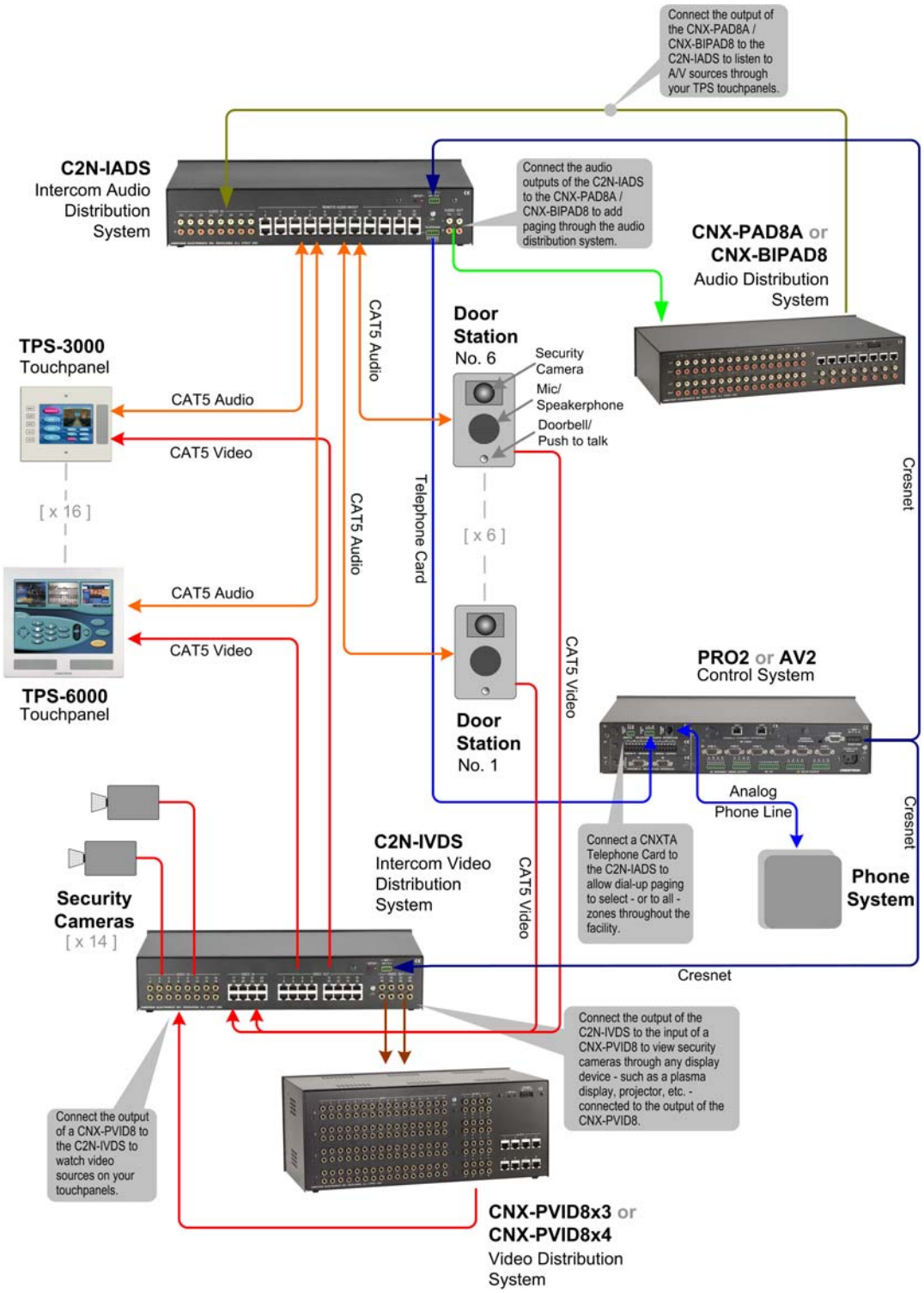
Video Monitoring

Connect the PVID8 output to the IVDS to watch video sources on your touchpanels.

Access Monitoring

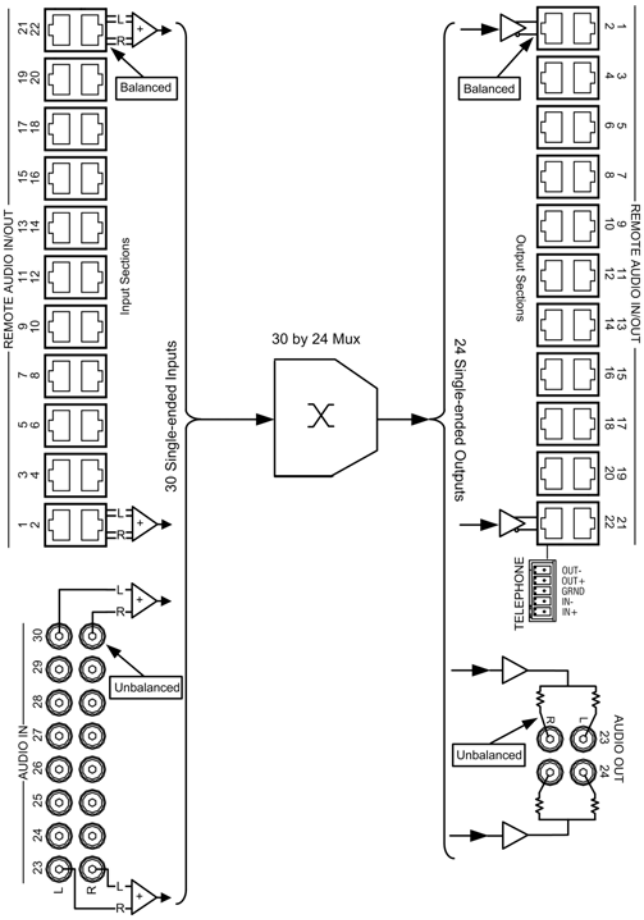
Connect door station security camera, mic/speakerphone, and doorbell inputs and/or outputs to the IADS and IVDS to monitor and control access to the facility from any of your TPS touchpanels.

Simplified System Diagram



NOTE: The device types and quantities shown in the above diagram are for illustrative purposes only. Your actual configuration is limited only by the number of ports available, and could also contain multiple IADS and IVDS devices.

C2N-IADS30X24 Functional Diagram



Specifications

Specifications for the IADS are listed in the following table.

C2N-IADS30X24 Specifications

SPECIFICATION	DETAILS
Balanced line performance	
Audio input (RJ-45 connectors)	Differential line input impedance: 2k-Ohm Maximum differential input level: $4V_{rms}$
Audio output (RJ-45 connectors)	Differential line output impedance: 100 Ohm nominal Maximum differential output level: $4V_{rms}$ nominal Gain: 0 dB
Isolation and bandwidth	Maximum crosstalk: ≤ -80 dB @ 1 KHz Minimum isolation: ≥ 80 dB @1 KHz
	Bandwidth: (-3 dB) 10 KHz nominal
	CMRR: >75 dB @ 20 Hz to 20 KHz

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C2N-IADS30X24 Specifications (Continued)

SPECIFICATION	DETAILS
Unbalanced line performance	
Audio input (RCA connectors)	Input impedance: 10 k-Ohm nominal Maximum input level: $2V_{rms}$
Audio output (RCA connectors)	Line output impedance: 100 Ohm nominal Maximum output level: $2V_{rms}$ Gain: 0dB
Isolation and bandwidth	Maximum crosstalk: ≤ -80 dB @ 1 KHz Minimum isolation: ≥ 80 dB @1 KHz Bandwidth: (-3 dB) 10 KHz nominal
Default Net ID	46
Power Requirements	24 Watts (1.0 Amp max. @ 24 VDC)
C2N-IADS30X24 Firmware	C2N-IADS30X24.v1.10.upg
Control System Update Files [1, 2, 3]	
2-Series Control System MP2/MP2E CNMSX-AV/Pro CNRACKX/-DP	Version 3.061.CUZ or later Version MP2-V3062.CUZ or later Version 5.12.63X.UPZ or later Version 5.12.63W.UPZ or later
Environmental temperature	41° to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Rack space required	2U high, 1U wide
Dimensions	Height: 3.47 in (8.81 cm) without feet Width: 17.10 in (43.43 cm) without ears Depth: 8.68 in (22.05 cm)
Weight	3.4 lb (1.5 kg)

1. The latest software versions can be obtained from the Crestron website. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.
3. CNX update files are required for either CNMSX-AV/Pro or CNXRACKX/-DP. Filenames for CNX update files have a UPZ extension. To avoid program problems, make certain you are using the update file with the correct suffix letter (e.g., W or X).

NOTE: Crestron software and any files on the website are for Authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

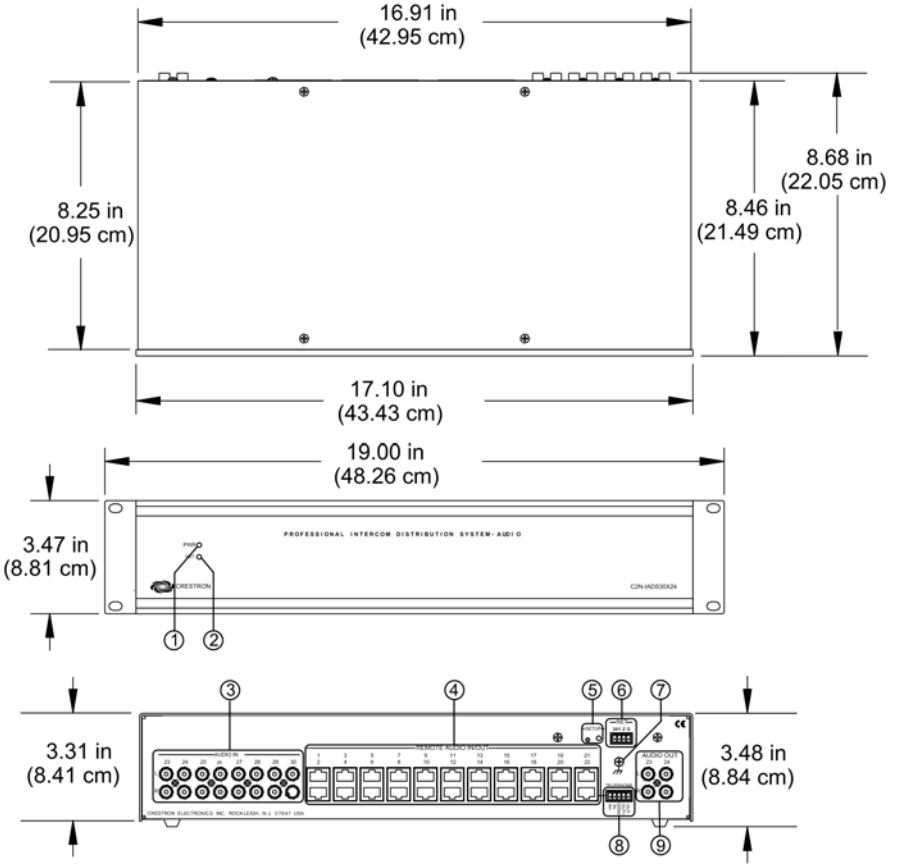
Physical Description

This section provides information on the connections, controls, and indicators available on your C2N-IADS30X24.

C2N-IADS30X24 Physical View (Front)

C2N-IADS30X24 Physical View (Rear)

C2N-IADS30X24 Overall Dimensions

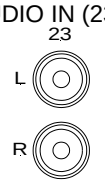
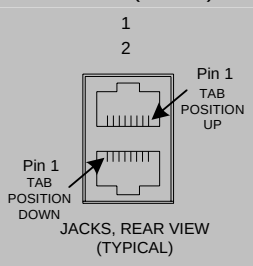
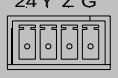
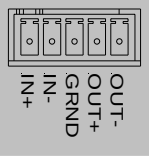
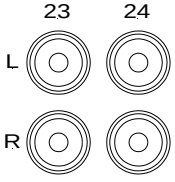


Connectors, Controls, & Indicators

#	CONNECTORS[1], CONTROLS, & INDICATORS	DESCRIPTION
1	PWR LED	This LED illuminates when 24 volts DC is supplied to the IADS.
2	NET LED	This LED illuminates when communication between the control system and the IADS is established (the unit is polled on the network), indicating that the loaded SIMPL Windows program has a network device defined at the same Net ID as the IADS. The LED flashes when communication occurs.

(Continued on following page)

Connectors, Controls, & Indicators (continued)

#	CONNECTORS[1], CONTROLS, & INDICATORS	DESCRIPTION
3	AUDIO IN (23 - 30) 	These eight pairs of RCA jacks combine the left and right channel stereo input to provide single mono inputs to the cross-point switch.
4	REMOTE AUDIO[2, 3, 4] IN/OUT (1 – 22) 	The twenty-two, shielded RJ-45 connectors provide for balanced line audio to/from remote locations in the facility; one CAT5 stereo input and output per connector. Pin 1 Audio In L + Pin 2 Audio In L - Pin 3 Audio In R + Pin 4 Audio Out L + Pin 5 Audio Out L - Pin 6 Audio In R - Pin 7 Audio Out R + Pin 8 Audio Out R -
5	SETUP Pushbutton and LED	The SETUP pushbutton and its associated LED are used for setup of the unit's network ID during the initial configuration of a Cresnet system or when the device is being added or replaced.
6	NET 	Four-position terminal block connector for data and power. Connects to Cresnet control network. Pin 1 (24) Power Pin 2 (Y) Data Pin 3 (Z) Data Pin 4 (G) Ground
7	(Chassis Ground)	Use this chassis screw to connect the audio source(s) common ground(s) to the IADS.
8	TELEPHONE[5] 	This five-pin connector is used to connect the IADS to a CNXTA telephone card mounted in a control system. The connections are in parallel with the REMOTE AUDIO IN/OUT port 22.
9	AUDIO OUT 	The two pairs of RCA jacks provide unbalanced audio from the crosspoint switch, intended to be connected to a PAD8A or BIPAD8 for distribution to multiple locations in the facility.

1. Interface connectors for **NET** and **TELEPHONE** ports are provided with the unit.
2. All stereo inputs are converted to mono inside the unit; all outputs are mono (left = right).
3. When connecting the IADS to a BIPAD8 via CAT5, make sure that the IADS audio out pins are connected to the BIPAD8 audio in pins, and the IADS audio in pins are connected to the BIPAD8 audio out pins.
4. For additional information on audio/video connections over CAT5, refer to the latest version of the Crestron CAT5 Wiring Reference Guide (Doc. 6137) which is available from the Crestron website (www.crestron.com/manuals).
5. If the TELEPHONE connector is used, the REMOTE AUDIO IN/OUT port 22 must *not* be used.

Industry Compliance

As of the date of manufacture, the IADS has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Setup

Network Wiring

When wiring the network, consider the following:

- Use Crestron Certified Wire.
- Use Crestron power supplies for Crestron equipment.
- Provide sufficient power to the system.

  CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (http://www.crestron.com/calculators).

- For larger networks, Use a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality.

For more details, refer to "Check Network Wiring" on page 16.

CAT5 Wiring

In addition to Ethernet applications, Category 5 (CAT5) wiring is used by Crestron for a variety of audio and video applications.

Crestron recommends using CresCAT-IM (or D) wire or other high-quality CAT5 cable for transmitting CAT5 audio signals.

When using a Crestron wiring solution, the CresCAT-IM (or D) wire can carry audio and video signals up to 500 feet (observe distance limitations based upon power consumption for the touchpanel (or other device) in use). For more information, refer to the latest version of the Crestron CAT5 Wiring Reference Guide (Doc. 6137), which is available for download from the Crestron website.

Identity Code

The Net ID of the IADS has been factory set to **46**. The Net IDs of multiple IADS devices in the same system must be unique. Net IDs are changed from a personal computer (PC) via the Crestron Toolbox™.

When setting the Net ID, consider the following:

- The Net ID of each unit must match an ID code specified in the SIMPL Windows program.
- Each network device must have a unique Net ID.

For more details, refer to the Crestron Toolbox help file.

Hardware Hookup

Rack Mounting

The IADS can be mounted in a rack or stacked with other equipment. Two "ears" are provided with the IADS so that the unit can be rack mounted. These ears must be installed prior to mounting. Complete the following procedure to attach the ears to the unit. The only tool required is a #2 Phillips screwdriver.

WARNING: To prevent bodily injury when mounting or servicing this unit in a rack, take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

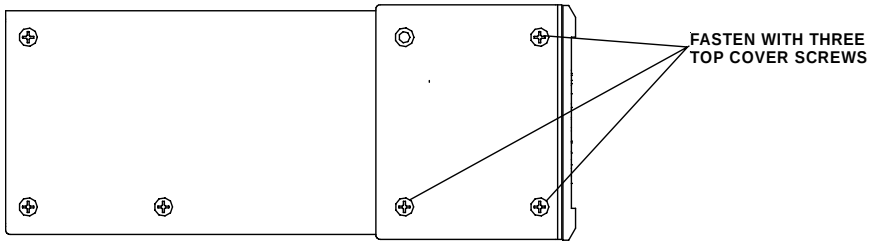
NOTE: If rack mounting is not required, rubber feet are provided for tabletop mounting or stacking. Apply the feet near the corner edges on the underside of the unit. Refer to "Stacking" below for details.

NOTE: Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit. (e.g., use of power strips).

To install the ears:

1. There are screws that secure each side of the IADS top cover. Using a #2 Phillips screwdriver, remove the three screws closest to the front panel from one side of the unit. Refer to the diagram following step 3 for a detailed view.
2. Position a rack ear so that its mounting holes align with the holes vacated by the screws in step 1.
3. Secure the ear to the unit with three screws from step 1, as shown in the following diagram.

Ear Attachment for Rack Mounting (Side View of Unit)

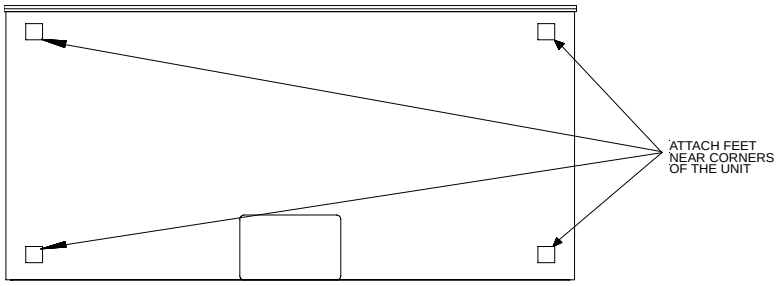


4. Repeat procedure (steps 1 through 3) to attach the remaining ear to the opposite side.

Stacking

Four "feet" are provided with the IADS so that if the unit is not rack mounted, the rubber feet can provide stability when the unit is placed on a flat surface or stacked. These feet should be attached prior to the hookup procedure. Refer to the following illustration for placement of the feet.

Feet Location (Bottom View of Unit)

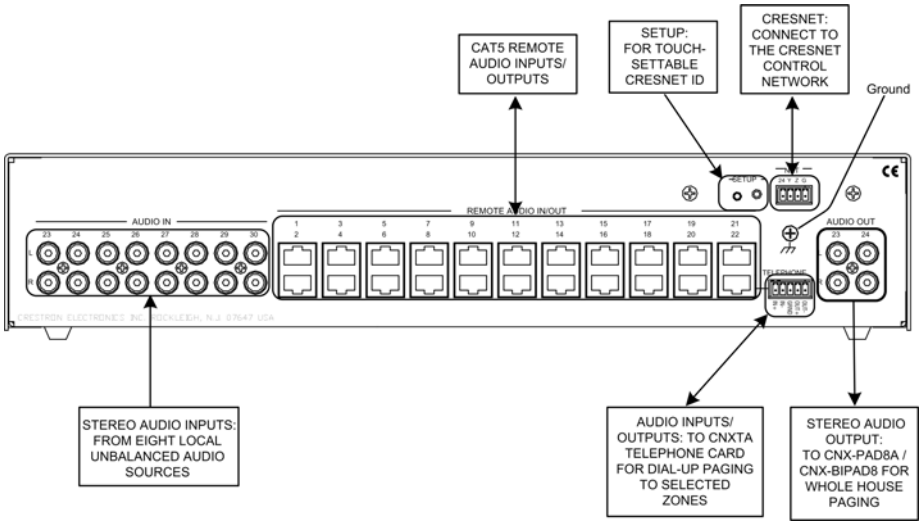


Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Refer to "Network Wiring" on page 9 before attaching the 4-position terminal block connector. Apply power after all connections have been made.

When making connections to the IADS, use Crestron power supplies for Crestron equipment.

Hardware Connections for the C2NIADS30X24



Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron website. To post a question or view questions you have submitted to Crestron's True Blue Support, log in at http://support.crestron.com. First-time users will need to establish a user account.

Earliest Version Software Requirements for the PC

NOTE: Crestron recommends that you use the latest software to take advantage of the most recently released features. The latest software is available from the Crestron website.

Crestron has developed an assortment of Windows®-based software tools to develop a Cresnet system. The following are the minimum recommended software versions for the PC:

Software

TASK	REQUIRED SOFTWARE VERSION
Program control system to operate IADS.	SIMPL Windows version 2.04.14 or later with SIMPL+ Cross Compiler version 1.1. or later; Also requires Crestron Database version 18.1.8 or later.
Upload program and firmware.	Crestron Toolbox 1.01.06 or later.
Program with simple wizards for systems using an IADS (optional but recommended).	Crestron SystemBuilder™ version 1.0 or later. Refer to software release notes or Crestron website for other required Crestron software packages.

Programming with Crestron SystemBuilder

Crestron SystemBuilder is the easiest method of programming, but does not offer as much flexibility as SIMPL Windows. For additional details, download SystemBuilder from the Crestron website and examine the extensive help file.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the IADS, it is recommended to use SystemBuilder for configuring the system.

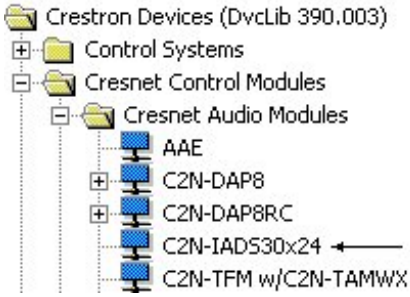
SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate, but equally important "Managers".

Configuration Manager

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

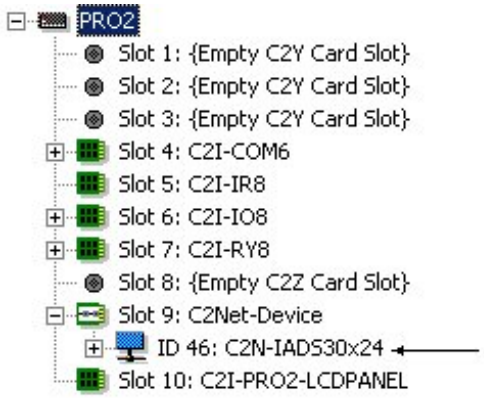
- To incorporate the IADS into the system, drag the C2N-IADS30X24 from the Cresnet Control Modules | Cresnet Audio Modules folder of the *Device Library* and drop it in the *System Views.*

Locating the IADS in the Device Library



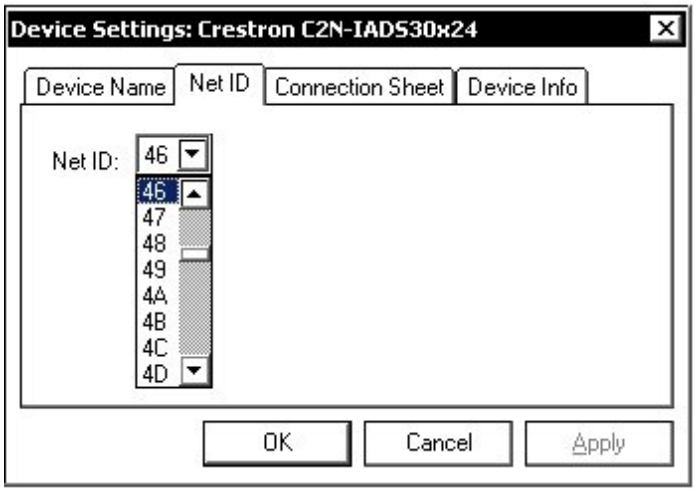
- The system tree of the control system displays the device in the appropriate slot with a default Net ID as shown in the following illustration.

C2Net Device, Slot 9



- Additional IADS devices are assigned different Net ID numbers as they are added.
- If necessary, double click a device to open the "Device Settings" window and change the Net ID, as shown in the following figure.

"C2N-IADS30X24 Device Settings" Window



- The ID code specified in the SIMPL Windows program must match the Net ID of each unit.

Programming Manager

Programming Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols. The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. A description for each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Example Program

An example program for the IADS is available from the Crestron website (http://www.crestron.com/exampleprograms).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade, it is necessary to establish communication.

Establishing Communication

Use Crestron Toolbox for communicating with the IADS; refer to the Crestron Toolbox help file for details. There is a single method of communication: indirect serial communication.

Indirect Serial Communication

- IADS connects to control system via Cresnet.
- Establish communications between the PC and the control system as described in the latest version of the 2-Series Reference Guide (Doc. 6256).

Programs and Firmware

- Display the network device tree (**Tools | Network Device Tree**) to show all network devices connected to the control system. Right-click on the IADS to display actions that can be performed on the IADS:
  - ⇒ Upgrade firmware
  - ⇒ Change Net ID
- Upload the SIMPL Windows file to the control system using SIMPL Windows or Crestron Toolbox.
- Upgrade IADS firmware via Crestron Toolbox.
  - ⇒ Establish serial communications with the IADS and display the "System Info" window.
  - ⇒ Select **Functions | Firmware…** to upgrade the IADS firmware.

For details on uploading and upgrading, refer to the SIMPL Windows help file or the Crestron Toolbox help file.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

C2N-IADS30X24 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Power LED does not Illuminate	IADS is not receiving power.	Verify that cable plugged into networkport is secure. Ensure sufficient network power to support all NET devices.
NET LED does not illuminate	Loose network connection.	Verify that cable plugged into NET port is secure.
	Improper Net ID.	Verify that IADS Net ID matches Net ID in software program. Refer to "Identity Code."
Hum on audio.	Grounding problem.	Either connect or remove chassis ground wire.

Check Network Wiring

Use the Right Wire

In order to ensure optimum performance over the full range of your installation topology, Crestron Certified Wire, and only Crestron Certified Wire, may be used. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (http://www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy-chained on the run, the Cresnet power usage of each network unit to be daisy-chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is a home-run from a Crestron system power supply network port, the Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40{,}000}{R \times P}$$

Where: L = Length of run (or chain) in feet
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 MM^2))
or 1.6 Ohms (Cresnet HP: 12 AWG (4 MM^2))
P = Cresnet power usage of entire run (or chain)

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run using 18 AWG Crestron Certified Wire and drawing 20 watts should not have a length of run more than 333 feet. If Cresnet HP is used for the same run, its length could extend to 1250 feet.

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the +24V conductor and the GND conductor, and the other twisted pair is the Y conductor and the Z conductor.

Strip and Tin Wire

When daisy-chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector, and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

For larger networks (i.e., greater than 28 network devices), it may become necessary to add a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality throughout the network. Also, for networks with lengthy cable runs, it may be necessary to add a Hub/Repeater after only 20 devices.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (http://www.crestron.com/manuals). This link will provide a list of product manuals arranged in alphabetical order by model number.

List of Related Reference Documents

DOCUMENT TITLE
2-Series Control Systems Reference Guide
CAT5 Wiring Reference Guide

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876]. For assistance in your local time zone, refer to the Crestron website (http://www.crestron.com/) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron website to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the IADS, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an “Addendum” in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange, or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number, and return address.
2. Products may be returned for credit, exchange, or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee, plus shipping costs, on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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Operations Guide – DOC. 6170A
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Specifications subject to
change without notice.