Description

The DIN-AP3 is a Crestron® 3-Series Control System® automation processor that is designed for DIN rail-mounting applications. The device includes built-in control ports, high-speed Ethernet, Cresnet® network support, and BACnet network/IP support. DIN rail mounting allows for configuring complete automation systems using the DIN-AP3 along with additional Crestron and third-party DIN rail-mountable devices.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Installation

CAUTION: This equipment is intended for indoor use only. Mount the DIN-AP3 in a well-ventilated area. The ambient temperature must be 0 ˚C to 40 ˚C (32 ˚F to 104 ˚F). The relative humidity must be 10% to 90% (noncondensing).

CAUTION: To prevent overheating, do not operate the DIN-AP3 in an area that exceeds the environmental temperature range listed above. Consider using forced air ventilation to reduce overheating. Also use caution if installing the control system in a closed or multiunit rack assembly, since the operating ambient temperate of the environment may be greater than the room ambient temperature. Contact with thermal insulating materials on all sides of the unit should be avoided.

NOTES: Observe the following guidelines:

- Install and use the DIN-AP3 in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install the DIN-AP3.
- When installing in an enclosure, group high-voltage devices separately from low-voltage devices.

NOTE: Before using the DIN-AP3, ensure that the device is using the latest firmware. Check for the latest firmware for the DIN-AP3 at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox™ software.

Preparing and Connecting Wires

When making connections, strip the ends of the wires approximately 7/16 in (11 mm). Use care to avoid nicking the conductors. Tighten the connector to 5 in-lb (0.5 to 0.6 Nm). The wire gauge should be 14 to 26 AWG.

Installing the DIN-AP3

Use the DIN-AP3 in a well-ventilated area. The venting holes should not be obstructed under any circumstances. The DIN-AP3 is designed for installation in a DIN rail. Refer to the following diagram when installing.

Installing the DIN-AP3
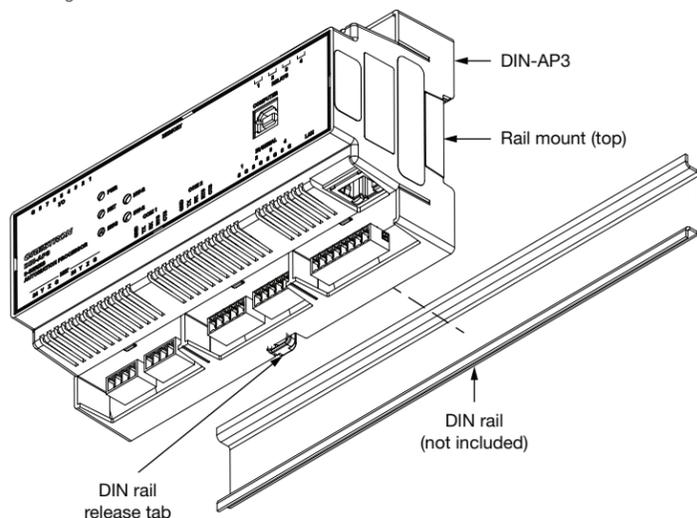
Use the following procedure to install the DIN-AP3:

1. Use a flat object (such as a flat-head screwdriver) to pull the DIN rail release tab downward.
2. Place the top of the DIN-AP3's rail mount over the top of the DIN rail.
3. Tilt the bottom of the DIN-AP3 toward the DIN rail until it snaps into place.

   NOTE: When mounting DIN rail products, use a flat-head screwdriver to pull the DIN rail release tab while snapping the device onto the DIN rail.

To remove the DIN-AP3 from the DIN rail, use a small, flat object (such as a flat-head screwdriver) to pull the DIN rail release, and then tilt the bottom of the DIN-AP3 away from the DIN rail.

NOTE: Certain third-party DIN cabinets provide space for an informational label between each DIN rail row. Crestron's Engraver software (version 4.0 or later) can generate appropriate labels for all Crestron DIN rail products.
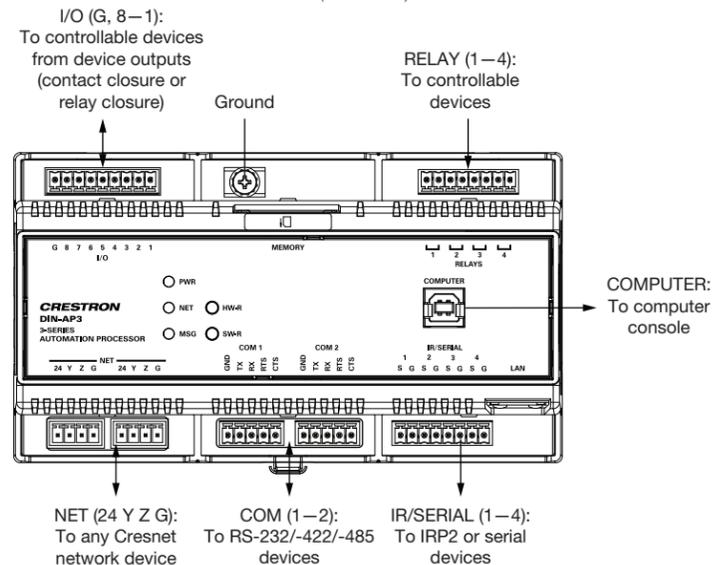
Hardware Hookup

Make any necessary connections to the device, and apply power after all connections have been made.
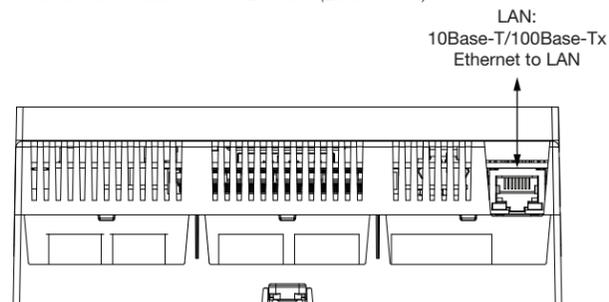
NOTE: When making connections to the DIN-AP3, observe the following points:

- Use Crestron power supplies for Crestron equipment.
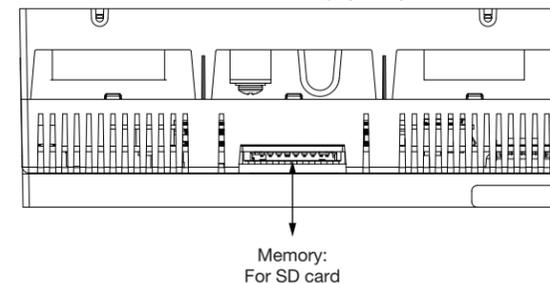- The included cable cannot be extended.

Hardware Connections for the DIN-AP3 (Front View)

Hardware Connections for the DIN-AP3 (Bottom View)

Hardware Connections for the DIN-AP3 (Top View)

Memory:
For SD card

NOTE: Ensure that the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).

NOTE: To prevent overheating, do not operate this product in an area that exceeds the environmental range stated in the "Installation" section.

COM Port Wiring Connections

The DIN-AP3 provides two bidirectional RS-232/-422/-485 ports (COM 1–2). Refer to the following table when making connections to the COM ports.

DIN-AP3 COM Port Pinout

PORT	RS-232	RS-422[1]	RS-485
G	GND	GND	GND[2]
TX	TX (from DIN-AP3)	TX- (from DIN-AP3)	TX-/RX-
RX	RX (to DIN-AP3)	RX+ (to DIN-AP3)	Not Used
RTS	RTS (from DIN-AP3)	TX+ (from DIN-AP3)	TX+/RX+
CTS	CTS (to DIN-AP3)	RX- (to DIN-AP3)	Not Used

1. RS-422 transmit and receive are balanced signals requiring two lines plus a ground in each direction. RXD+ and TXD+ should idle high (going low at the start of data transmission). RXD- and TXD- should idle low (going high at the start of data transmission). If necessary, RXD+/RXD- and TXD+/TXD- may be swapped to maintain correct signal levels.

2. A ground terminal connection is recommended but not required.

Configure the Control System

The control system can be configured using Crestron Toolbox or the built-in, web-based setup tool.

Crestron Toolbox

Use Crestron Toolbox to establish communication with and to configure the control system. For details, refer to the embedded Crestron Toolbox help file.

Web-Based Setup Tool

1. Use Crestron Toolbox to set the time and the time zone. For details, refer to the embedded Crestron Toolbox help file.
2. Open the Internet Explorer® web browser and enter the IP address of the DIN-AP3. The control system's splash page is displayed.

   NOTE: The web-based setup tool is accessible only from Internet Explorer.

   NOTE: If a security warning is displayed, click **Install** to continue.

DIN-AP3 Splash Page

3. Click **Setup** to display the DIN-AP3 setup menu. The DIN-AP3 **Setup** menu displays the IP address, hostname, and MAC address of the device. The screen also allows access to various setup and programming screens.

DIN-AP3 Setup Menu

4. From the DIN-AP3's **Setup** menu, click the following options to configure the control system:

   - **Ethernet Setup** configures the DIN-AP3's Ethernet settings and displays DHCP, hostname, IP address, subnet mask, default router, domain, and MAC address settings. In the **Ethernet Setup** menu, there are additional options:
     - Click **Advanced Settings** to specify DNS servers, web server settings, and SSL settings.
     - Click **MyCrestron Dynamic DNS** to configure the myCrestron.com Dynamic DNS service.
     - Click **Ethernet Diagnostics** to test the Ethernet communications.
     - Click **Reboot** to reboot the DIN-AP3.
   - **Application Setup** selects the programs to be loaded on start-up and the controls that programs are running.
   - **Diagnostics** displays information about the connected devices, hardware configuration, and error logs.
   - **About** displays firmware information.

Click the back button ( ) to return to the previous screen.

Troubleshooting

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

DIN-AP3 Troubleshooting Table

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The device does not function.	The device is not communicating with the network.	Use Crestron Toolbox to poll the network. Verify that the network is connected to the device.
	The device is not receiving power from a Crestron power supply.	Use the provided Crestron power supply. Verify that the connections are correct and secure.
	The device is not receiving sufficient power.	Use the Cresnet Power Calculator to help calculate how much power is needed.
The MSG LED illuminates.	There is a hardware or software failure.	Verify that the hardware configuration matches the software configuration. Use Crestron Toolbox to display the error log.
The compilation error RLCMCVT166 or RLCMCVT177 appears.	A poor analog versus signal definition exists in the SIMPL Windows program.	Confirm that the signal definition is properly defined in the program.
The system locks up.	There are various causes.	Hold down the **SW-R** button on the control system front panel to bypass the program and to communicate directly with the processor. Refer to "Troubleshooting Communications" in the 3-Series Control System Reference Guide (Doc. 7150) at www.crestron.com/manuals for more details.
A Cresnet device does not respond.	The device is not wired correctly.	Verify that the Cresnet wiring is correct and secure.
	An improper NET ID was used.	Verify that the device ID matches the NET ID in the program.
There is a loss of functionality due to electrostatic discharge.	The device is improperly grounded.	Check that all ground connections have been properly made.

DIN-AP3 Troubleshooting Table (continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The A/V system device does not respond.	The IRP2 or the serial port is not placed properly.	Verify the placement of the IRP2 (hold the phosphor card under the IRP2 while pressing the button), and tighten the serial cables.
	The wrong IR/serial port was used.	Verify that the proper IR/serial port is defined.
	The serial cable is not wired correctly.	Verify that the serial cable is wired correctly for RS-232/-422/-485.
	The device is not receiving sufficient power.	Use the Cresnet Power Calculator to help calculate how much power is needed.