

Crestron **INETI-CB**
Cameo[®] Keypads with infiNET[™]

Operations & Installation Guide



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Cameo Keypads with infiNET: INETI-CB

Introduction

Features and Functions

- Stylish and versatile wall mount keypads
- UK/European style electrical box installation
- Refined pushbutton look and feel
- Versatile combination of pushbuttons
- Installer-configurable with choice of three button sizes
- Programmable for up to three functions per button
- Customizable backlit button engraving
- White LED feedback indicators
- Built-in LED blinking and bargraph logic
- Auto-dimmable backlight and LED intensity via ambient light sensor
- Available in textured almond, black or white
- Quick and easy installation
- 230VAC powered
- infiNET™ 2-way RF wireless communications

The Cameo INETI-CB presents a fresh, innovative concept in keypad design featuring an elegant appearance with versatile button configurations and infiNET wireless technology. The INETI-CB easily installs alongside light switches and other in-wall devices to deliver a custom keypad control solution without any need for dedicated control wiring. InfiNET Cameo keypads simply connect to the nearest 230 Volt power line, communicating via the infiNET wireless control network to allow full keypad functionality with true-feedback as part of a complete Crestron® automation system.

Customizable Buttons

Exquisitely simple yet highly customizable, a single Cameo keypad can be configured easily by the installer. Each keypad is furnished with an assortment of engravable button cap strips in two different sizes, allowing the choice of medium or large buttons in each of two columns. Their smoothly rounded shape and refined pushbutton action give each button press a positive feel with subtle surface relief for an excellent tactile response. Through programming, each button can be configured to support up to three separate functions simply by tapping, double-tapping, or holding the button. “Shift key” functionality is even possible, allowing one button to be held while pressing another.

Auto-Dimming Backlight

High-quality backlit laser engraving provides customizable button text that is easy to read under any lighting condition. A built-in light sensor can control the backlight intensity automatically to achieve a crisp, legible appearance in both darkened and fully lit rooms.

Enhanced LED Feedback

Twelve pinhead-sized white LED light pipes provide very elegant and versatile button feedback. Ten different blink patterns are built in, enabling all kinds of blinking LED feedback while simplifying programming and minimizing traffic on the infiNET network. Built-in bar graph logic allows the feedback LEDs to function as two 6-segment bar graph displays to provide a visible level indication when adjusting lighting and audio settings. The overall LED intensity is auto-dimmable, adjusting automatically for optimal visibility under varying lighting conditions.

Ambient Light Sensor

In addition to controlling the INETI-CB's backlight and LED intensity, the built-in light sensor can also be utilized by the control system to support daylight harvesting and other programmable functions. Refer to "Ambient Light Sensor Operation" on page 24 for more details.

infiNET™

Crestron's groundbreaking infiNET wireless technology affords reliable 2-way communications throughout a home or office structure without the need for physical control wiring. Numerous infiNET keypads, dimmers, thermostats, and other devices can be linked to the control system via a single RF gateway. Employing a 2.4 GHz mesh network topology, every infiNET device functions as an RF repeater, increasing effective range and reinforcing the complete network by providing multiple redundant signal paths within the mesh network.

Cameo Euro Mount

The INETI-CB mounts in the UK- or European-style wall box. The textured finish achieves an attractive appearance for every application, available in a choice of white, black, and almond colors.

Available Colors/Textures

COLOR/TEXTURE	MODEL NUMBER SUFFIX
Textured Almond	A-T
Textured Black	B-T
Textured White	W-T

Specifications

Specifications for the INETI-CB keypads are listed in the following table.

INETI-CB Specifications

SPECIFICATION	DETAILS
Wireless RF Transceiver:	2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant
RF Output Power: Range (typical):	100 mW radiated 46 meters (150 feet) indoors, 76 meters (250 feet) outdoors; subject to site-specific conditions; range is increased by adding additional devices or C2NI-MNETRPT repeater; C2N-MNETGW gateway/ transceiver required
Power Requirements	230 Volts AC, 50/60Hz line power
Default MNET ID	01
Minimum 2-Series Control System Update File ^{1, 2}	Version 3.155.CUZ or later
INETI-CB Firmware	1.001.0004.upg or later
Minimum infiNET Gateway Version	Firmware version 2.001.0003 or later
Environmental Temperature Humidity Heat Dissipation	0° to 45°C (32° to 113° F) 10% to 90% RH (non-condensing) 5 Btu/h
Enclosure	Injection-molded plastic, mountable in the UK or European style electrical box
Dimensions Height Width Depth	8.68 cm (3.42 in) ³ 8.68 cm (3.42 in) ³ 4.16 cm (1.64 in)

(Continued on following page)

INETI-CB Specifications (Continued)

SPECIFICATION	DETAILS
Weight	166.4 g (5.9 oz)
Available Accessories	
CBI2-BTN[A,B,W]-T	Strip of large engravable button caps (specify color)
CBI3-BTN[A,B,W]-T	Strip of medium engravable button caps (specify color)
C2N-MNETGW	infiNET™ Gateway
C2NI-MNETRPT	infiNET™ Repeater

1. The latest versions can be obtained from the Crestron website. Refer to NOTE after last footnote.
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. Dimension includes bezel.

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 INETI-CB keypads.

The following illustration shows the INETI-CB with two large button strips.

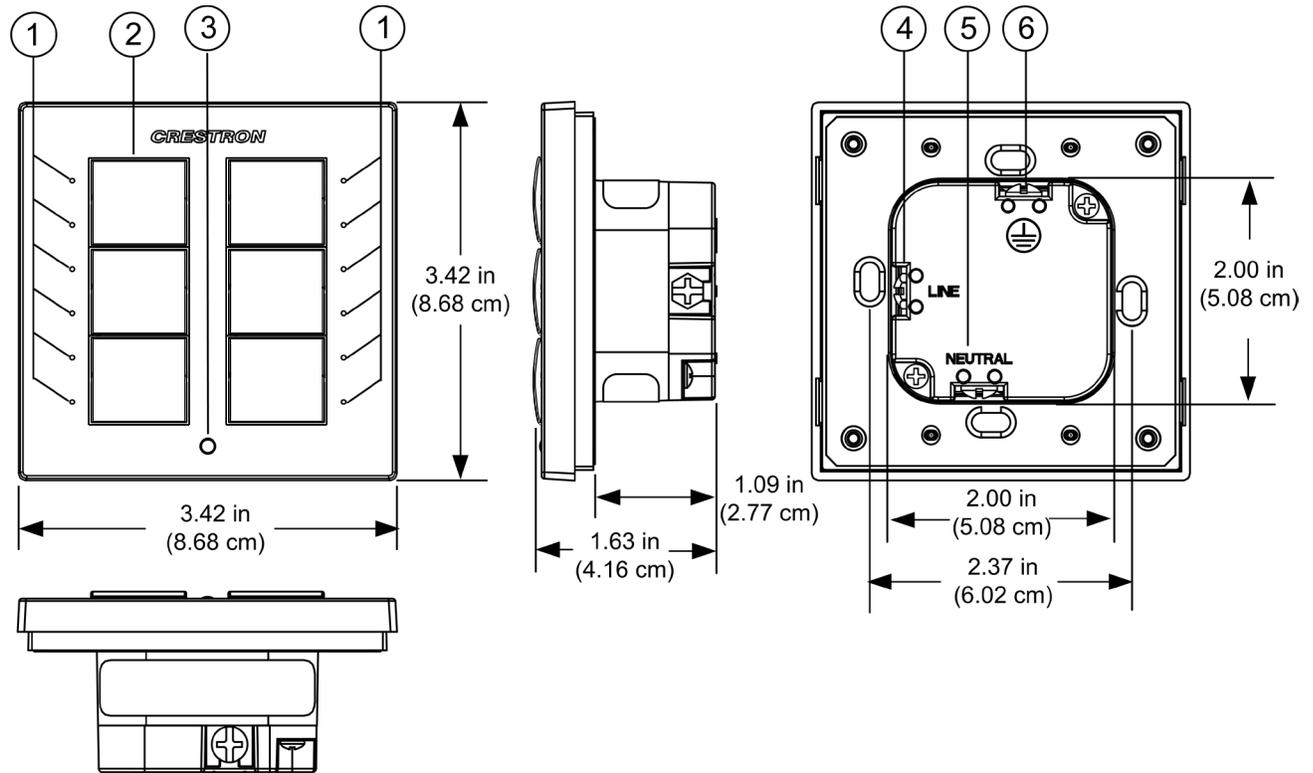
INETI-CB Keypad Physical View



Laser-engravable buttons, designed with the Crestron Engraver software, can be purchased separately. The engraving software provides two lines of characters on double and triple-button caps. The Crestron Engraver software, Version 3.09.00 or later, is available from the Crestron website. (Requires Crestron Database software, Version 19.0.4 or later.)

The following illustration provides overall dimensions of the INETI-CB.

INETI-CB Keypad Overall Dimensions



Connectors, Controls & Indicators

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION
1	LED Indicators	Feedback: (12) white LED light pipes, 6 per side; Programmable, auto-dimmable, adjustable intensity, 10 blinking patterns; Bar graph: (2) independent 6-segment bar graph displays utilizing the 12 feedback LEDs

(Continued on following page)

Connectors, Controls & Indicators (Continued)

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION
2	Buttons Keypad Buttons Button Events Button Caps Engraving	Configurable for an array of single-action pushbuttons; Programmable for normal, tap, double-tap, and hold; Includes medium button cap strips and large button cap strips; Custom backlit engraved button caps available separately
3	Ambient Light Sensor	Photosensor for control of auto-dimming function. Can be configured to report ambient light level to control system.
4	LINE Connector	Captive screw terminal for the 230 Volt AC power line
5	NEUTRAL Connector	Captive screw terminal for the 230 Volt AC neutral line
6	 Connector	Captive screw terminal for the AC ground wire

Industry Compliance

As of the date of manufacture, the INETI-CB keypads have been tested and found to comply with specifications for CE marking.



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

NOTE: 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

Identity Code

The MNET ID of the INETI-CB has been factory set to **01**. After an infiNET device is added to an infiNET network, its MNET ID must be changed to a value that can be addressed by the control system program (03 to 20). The MNET IDs of multiple INETI-CB devices on the same gateway must be unique. MNET IDs are changed from a personal computer (PC) via Crestron Toolbox™ (refer to “Establishing Communication” on page 22).

When setting the MNET ID, consider the following:

- The MNET ID of each unit must match an ID code specified in the SIMPL Windows or D3 Pro®/SystemBuilder™ program.
- Each network device on the same gateway must have a unique MNET ID.

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

Assembly and Installation

Assembly of the keypad consists of placing the button caps in position on the rear housing assembly, based on how the unit is programmed, and attaching the bezel.

Installation consists of attaching the keypad to an electrical box.

The following item is required for installation:

- Phillips screwdriver (not supplied)

The INETI-CB is supplied partially assembled along with several items as listed in the following table.

Supplied Parts/Assemblies

DESCRIPTION	PART NUMBER	QTY
Rear housing with switch circuitry and light masks attached	6502124 (White), 6502121 (Almond), 6501800 (Black)	1

(Continued on following page)

Supplied Parts/Assemblies (Continued)

DESCRIPTION	PART NUMBER	QTY
Bezel Assembly	6500343 (White), 6500344 (Almond), 6500345 (Black)	1
Mounting Plate	2018605	1
Screws, steel, flat Phillips head, 4B x 3/4"	2019088	2
Screws, steel, Phillips, pan head, 04-40 x 1/4"	2007156	4
Large button cap strip	4506043 (White), 4506045 (Almond), 4506044 (Black)	2
Medium button cap strip	4506040 (White), 4506042 (Almond), 4506041 (Black)	2

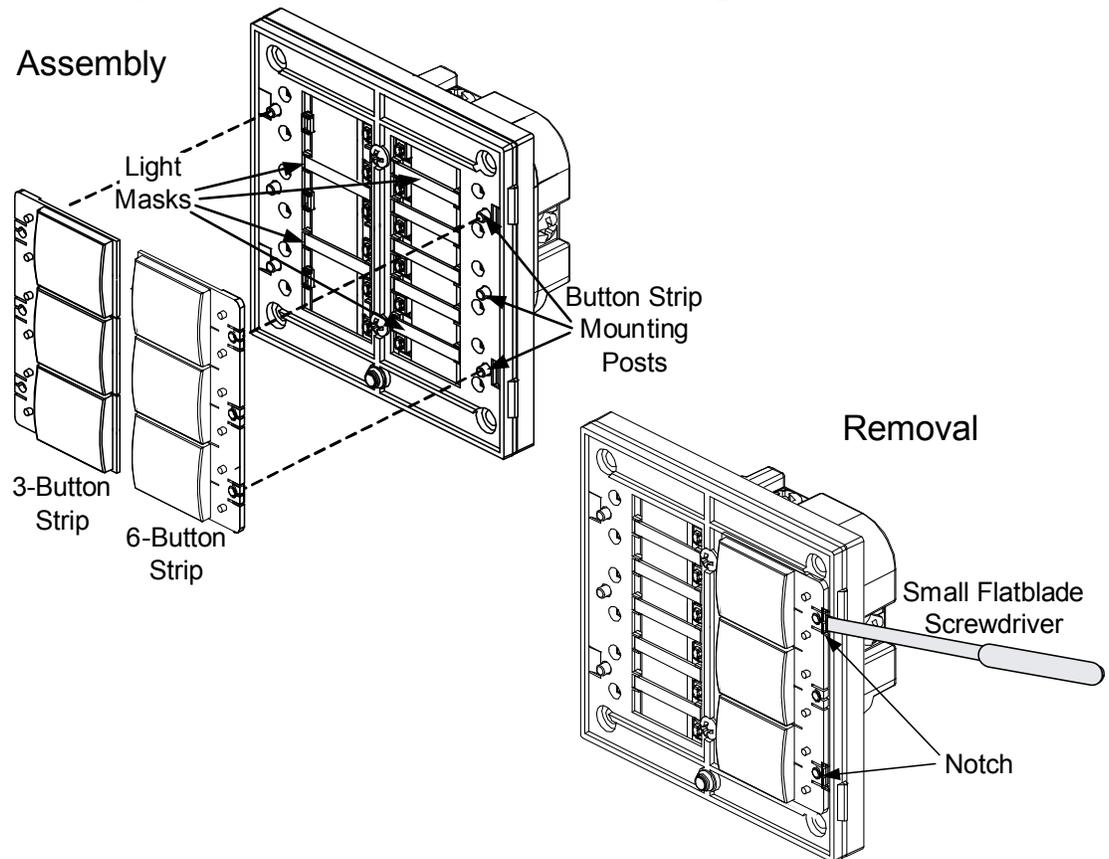
Assembly

Assembly of the keypad includes the proper placement of light masks between each button cap. (The light masks are used to reduce the backlight intensity between the buttons.)

When using medium or large button cap strips, use one light mask for medium button strips and two masks for large button strips. (Retain the extra light masks in case the keypad is reprogrammed for a different configuration.) Refer to the illustration on the next page.

1. Make sure the light masks are correctly positioned. The light masks will not fall out of their locations, but can easily be removed and/or relocated as necessary.
2. Attach the button strips to the housing assembly according to the way the unit is programmed. The button strips are held in place by three mounting posts.

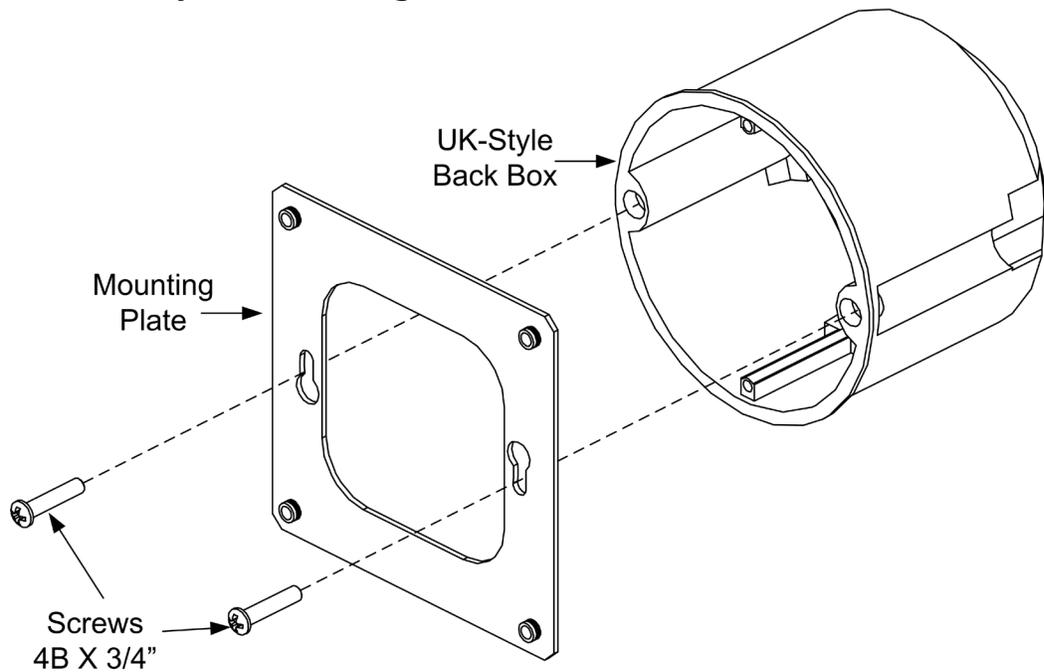
Assembly and Removal of Button Caps and Light Masks



3. If the button strips need to be changed or replaced, insert a flat blade screwdriver into the notches provided and carefully pry the button strip up and off the mounting posts.
4. Attach the mounting plate to the back box as shown in the illustration on the following page.

NOTE: The mounting plate can be attached as shown, or can be rotated 90° if necessary to accommodate the orientation of the back box.

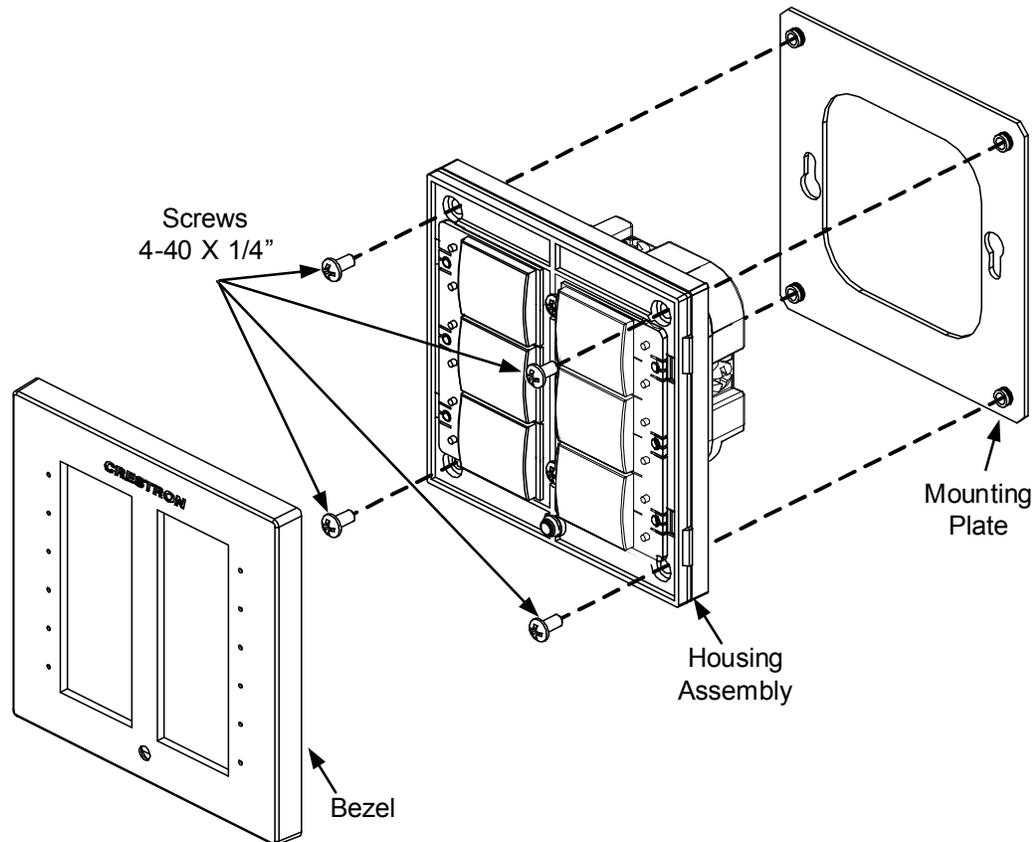
Attachment of the Mounting Plate



Installation

Use the following procedure to install the keypad in an electrical box (not supplied).

1. Turn AC power **OFF**.
2. Connect the AC power cable to the line, neutral, and ground INETI-CB screw terminals following all local codes.
3. Attach the keypad assembly to the mounting plate as shown in the illustration on the next page.

Installation Into Electrical Box

4. Attach the bezel by putting it in position over the button caps and snapping it in place.
5. Turn AC power **ON**.

Acquire the INETI-CB on the infiNET Network

Before an infiNET device can be used on an infiNET network, it must first be acquired to a C2N-MNETGW gateway that is connected to a Cresnet[®] network.

NOTE: An INETI-CB can be acquired to only one gateway.

**Acquire
the
Keypad**

To acquire an INETI-CB to a C2N-MNETGW, perform the following:

1. Place the C2N-MNETGW in the *Acquire* mode, from the unit itself or from Crestron Toolbox, as described in the latest revision of the C2N-MNETGW Operations Guide (Doc. 6317), which is available from the Crestron website (<http://www.crestron.com/manuals>), or the Crestron Toolbox help file.

NOTE: In an environment where multiple gateways are installed, only one gateway should be in the *Acquire* mode at a time.

2. Put the INETI-CB into *Acquire* mode by doing the following:
 - Enter *Setup* mode by pressing any two buttons on the INETI-CB for about 10 seconds. The bottom left LED should start blinking - 0.5 seconds on; 0.5 seconds off. (Press and release the bottom left button to exit *Setup* mode. The unit will also exit *Setup* mode after one minute of inactivity.)
 - The second to bottom left LED will indicate infiNET connection status:
 - Solid: communications with GW (and SIMPL program).
 - Blinking (almost 2 seconds on; brief off): communications with GW but not being “polled” by the control system
 - Off: no communications with GW (this includes unacquired units)
 - Once you are in *Setup* mode, you can acquire the INETI-CB:
 - To acquire, press and hold the top left button for 5 seconds. The top left LED will stay lit while the button is being held and blink when you reach the 5-second mark. Release the button to go into *Acquire* mode. If you hold it for too long (see below), you might exit *Acquire* mode.
 - In the *Acquire* mode, the top left LED will blink 1/2 second on - 1/2 second off. When the unit is acquired to the gateway, this LED will stop blinking and the second to bottom left LED will become solid. Pressing the top left button again while you are in *Acquire* mode exits the *Acquire* mode.
3. To acquire multiple devices, put the gateway in *Acquire* mode and acquire each device individually to the gateway.
4. You do not need to “reacquire” other devices on the network after the INETI-CB is acquired to the gateway.
5. Exit the *Setup* mode on the keypad.
6. Take the C2N-MNETGW out of the *Acquire* mode once all devices have been acquired. Refer to the latest revision of the

C2N-MNETGW Operations Guide (Doc. 6317), which is available from the Crestron website.

To communicate with the control system program, an MNET ID value between 03 and 20 must be assigned to the INETI-CB. For information on assigning MNET ID values, refer to “Identity Code” on page 10.

**Remove
Gateway
Informa-
tion from
an
INETI-
CB**

In some rare cases, it might be desirable to release an INETI-CB from a gateway, i.e., clear the gateway information from the INETI-CB’s memory.

To clear gateway information from an INETI-CB’s memory:

1. Enter *Setup* mode by pressing any two buttons on the INETI-CB for about 10 seconds.
 - The bottom left LED should start blinking - 0.5 seconds on; 0.5 seconds off. (Press and release the bottom left button to exit *Setup* mode.)
 - The second to bottom left LED will indicate infiNET connection status:
 - Solid: communications with GW (and SIMPL program).
 - Blinking (almost 2 seconds on; brief off): communications with GW but not being “polled” by the control system.
 - Off: no communications with GW (this includes unacquired units).
2. Once you are in *Setup* mode, you can release the INETI-CB from the gateway either by working from the INETI-CB itself or by working from the gateway via Crestron Toolbox:
 - On the INETI-CB, press and hold the top left button for 10 seconds. The top left LED will stay lit, blink once to indicate the 5-second mark and then blink twice to indicate that you have reached the 10-second mark. Release the button after the 10-second mark to unacquire. (You cannot really “exit” the unacquire function because at this point you would have removed the gateway information from the keypad.)
 - To release the INETI-CB using Crestron Toolbox, refer to the latest revision of the C2N-MNETGW Operations Guide (Doc. 6317) or the Crestron Toolbox help file for instructions.

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. For the minimum recommended software versions, visit the Version Tracker page of the Crestron website (www.crestron.com/versiontracker).

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 D3 Pro

Crestron's D3 Pro lighting software provides all the tools necessary to create a complete Crestron lighting system for residential applications. The lighting system includes the control system logic program, touchpanel projects and keypad programming, documentation and real-time lighting adjustment capabilities.

As with all Crestron software, D3 Pro provides extensive right-click and drag-and-drop functionality in addition to convenient keyboard shortcuts for frequently used functions and commands.

Programming is organized into six system **Views** of the lighting system, each providing a moveable toolbox of devices such as interfaces, fixtures and control modules. You can add a device to your system simply by selecting it from one of the toolboxes and dragging it to a room. The available toolboxes differ depending on the View but all Views include a "General" toolbox that allows you to add areas and rooms at any time.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the Cameo 2 Series keypads, it is recommended to use SystemBuilder for configuring a system.

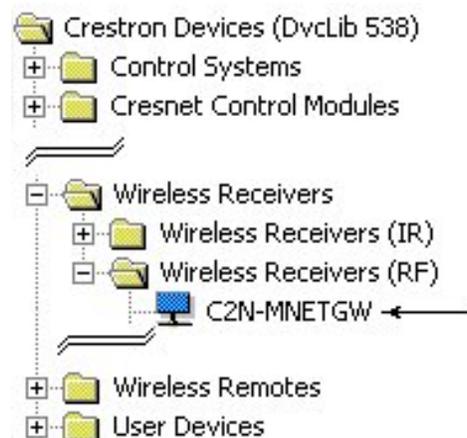
SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate but equally important "Managers".

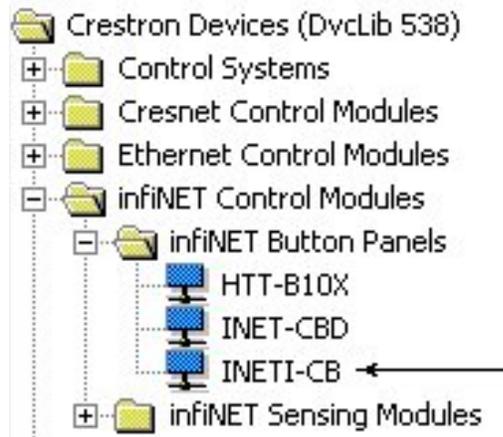
Configuration Manager

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

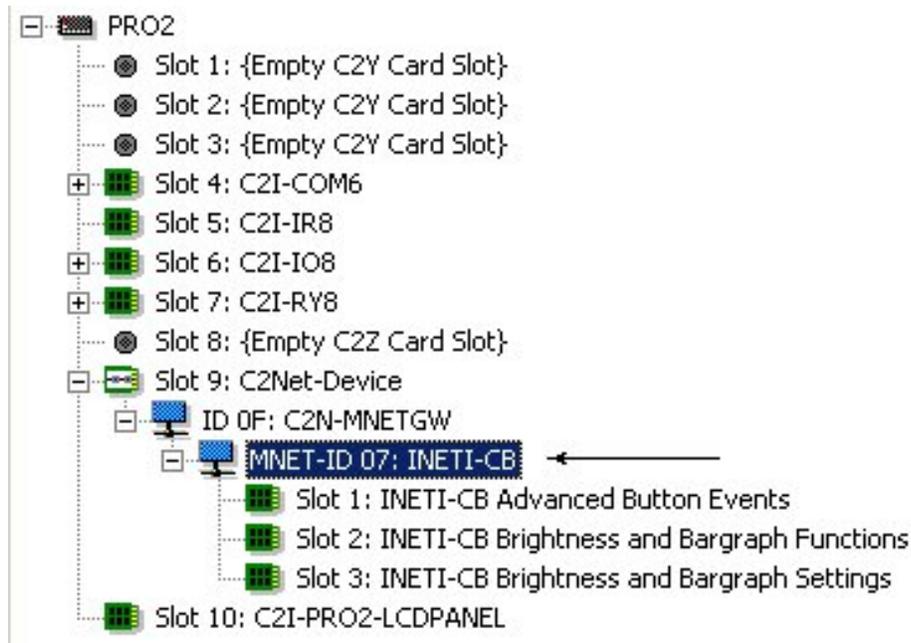
- To incorporate the INETI-CB keypad into the system, first drag a C2N-MNETGW gateway icon from the Wireless Receivers | Wireless Receivers (RF) folder of the *Device Library* and drop it in the *System Views* panel. Then, drag the INETI-CB icon from the infiNET Control Modules | infiNET Button Panels folder and drop it on the C2N-MNETGW icon.

Locating the C2N-MNETGW in the Device Library

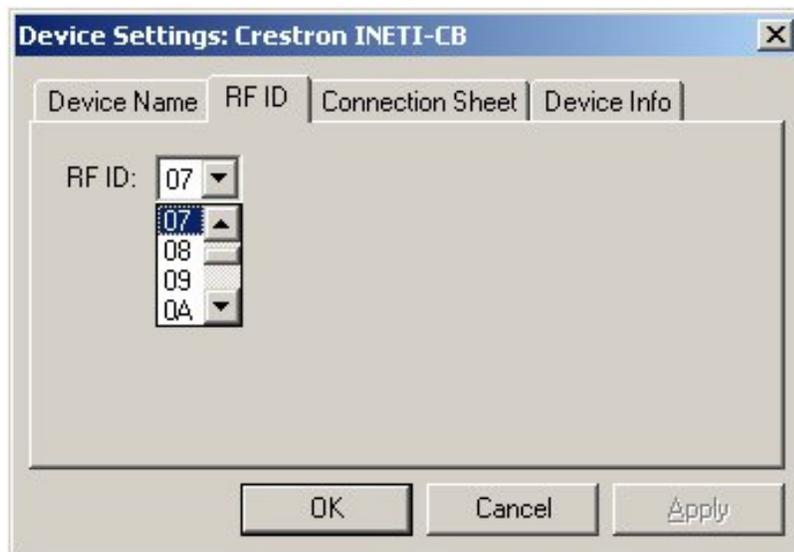


Locating the INETI-CB keypad in the Device Library

- The system tree of the control system displays the device in the appropriate slot with an MNET ID of 07 as shown in the following illustration.

C2Net Device, Slot 9

- Additional INETI-CB devices are assigned different MNET ID numbers as they are added.
- If necessary, double click the device to open the “Device Settings” window and change the RF ID, as shown in the following figure.

“INETI-CB Device Settings” Window

- The RF ID code(s) specified in the SIMPL Windows program must match the RF ID of each unit. Refer to “Identity Code” on page 10.

Program Manager

Program 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*. Each signal in the symbol is described in the SIMPL Windows help file (F1).

Button Arrangement

All buttons are programmable for normal, tap, double-tap, and hold functions. The buttons are arranged into a left and right bank. The top button in the left bank is button 1L and followed by 2L. The button numbers below 2L increase until the last button location is met. The top button in the right bank is 1R and follows the same pattern as the left bank of buttons.

Button caps for the INETI-CB are supplied in complete strip sets, rather than as loose button covers: three medium button cap strips and two large button cap strips; one set for each side of the keypad. You can mix or match the arrangement of the buttons on either side to suit the needs of the installation, but you cannot mix button sizes on one side.

When a button cap covers two or three buttons, different joins are activated depending on whether the button is on the left or right column, as follows.

Left column

When a medium button cap is used, only the bottom button will be activated when the button is pressed. For example, if buttons 1L and 2L are covered, then when the button is pressed, this will activate button 2L.

When a three-button cap is used, only the middle button will be activated when the button is pressed. For example if buttons 1L, 2L and 3L are covered, then when the button is pressed, this will activate button 2L.

Right column

When a medium button cap is used, only the top join will be activated when the button is pressed. For example, if buttons 1R and 2R are covered, then when the button is pressed, this will activate button 1R.

When a large button cap is used, only the middle join will be activated when the button is pressed. For example if buttons 1R, 2R and 3R are covered, then when the button is pressed, this will activate button 2R.

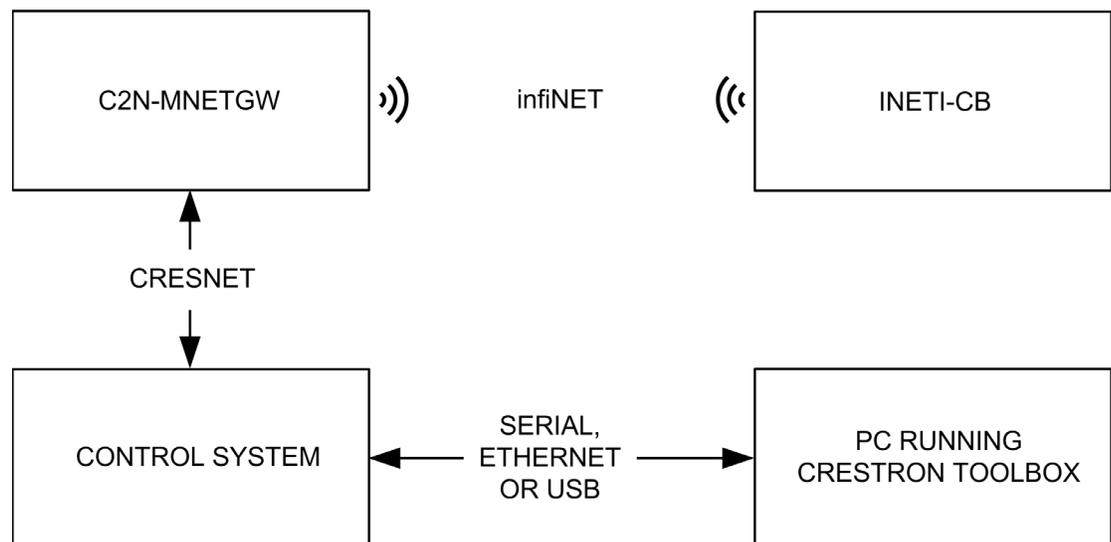
Uploading and Upgrading

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. Once communication has been established, files (for example, programs or firmware) can be transferred to the control system (and/or device). Finally, program checks can be performed (such as changing the device ID) to ensure proper functioning.

Establishing Communication

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

Indirect Communication



- The INETI-CB connects to the C2N-MNETGW gateway via infiNET; the gateway connects to the control system via Cresnet.
- Establish communications between the PC and the control system as described in the latest version of the 2-Series Control Systems Reference Guide (Doc. 6256), which is available from the Crestron website.

Programs and Firmware

Program or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron website as new features are developed after product releases. One has the option to upload programs via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the SIMPL Windows help file or the Crestron Toolbox help file.

SIMPL Windows

If a SIMPL Windows program is provided, it can be uploaded to the control system using SIMPL Windows or Crestron Toolbox.

Firmware

Check the Crestron website to find the latest firmware. (New users may be required to register to obtain access to certain areas of the site, including the FTP site.)

Upgrade INETI-CB firmware via Crestron Toolbox.

- Establish indirect serial communications with the INETI-CB keypad and display the “System Info” window.
- Select **Functions | Firmware...** to upgrade the INETI-CB firmware.

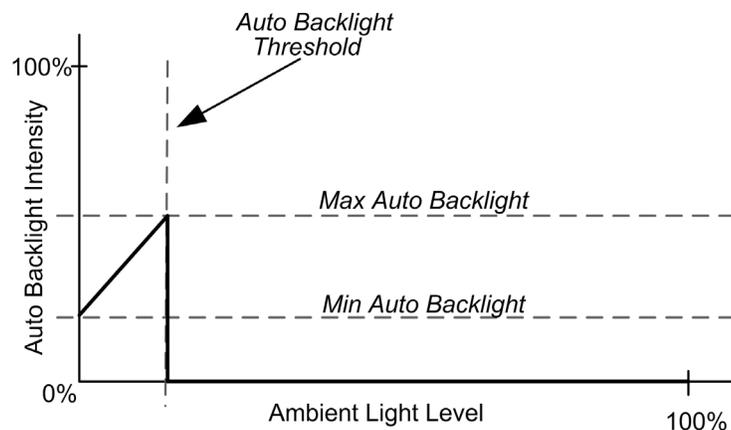
All LEDs will blink while the transfer is in progress. If the transfer fails, the unit will enter the bootloader. Refer to “Bootloader Mode” on page 26 for details.

Program Checks

In Crestron Toolbox, display the network device tree (**Tools | Network Device Tree View**) to show all network devices connected to the control system and all infiNET devices that have been acquired by the C2N-MNETGW. Right-click on the INETI-CB to display actions that can be performed on the keypad.

Ambient Light Sensor Operation

As noted previously, the INETI-CB keypad has an ambient light sensor that can be used to automatically turn the backlight on in a dark room, or off in a lit room to improve the readability of the button text. When this feature is enabled, three parameters are available to adjust this behavior: Auto Backlight Threshold, Max Auto Backlight, and Min Auto Backlight. The following chart illustrates the change in backlight intensity as ambient light increases until it reaches the threshold value, at which point the backlight is turned off.



Choosing the proper values for these parameters depends on factors such as the color of the keypad, the type and placement of lighting in the room, the orientation of the room's windows with respect to the sun, and personal preference. To simplify the process, Crestron ships INETI-CB keypads with preset values for the three parameters. The preset values have been selected to produce an effect that should be acceptable to most people, in many common scenarios.

To use one of the built-in preset settings, during programming simply choose a non-zero value for the "Auto Backlight Preset" parameter: select a value of (1) for white keypads (textured or smooth), (2) for almond, or (3) for black. Use a value of (0) to forego the preset values and set the parameters manually.

Finally, if you plan to install two or more keypads side-by-side, you may want to ensure that the backlights on all units are always in sync. To do this, there are signals available on the programming symbol to allow one unit to act as the master backlight controller, and the rest as slaves.

Refer to the SIMPL Windows help file for more information.

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.

INETI-CB Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The keypad does not function. All twelve feedback LEDs are on low.	Improper MNET ID used.	Verify that the keypad's MNET ID matches the MNET ID in the software program.
	Keypad is not receiving power.	Check circuit breaker. Check AC connection.
	Keypad is not communicating with the C2N-MNETGW.	Open Crestron Toolbox and select the Network Device Tree. Expand the tree until the gateway to be managed is selected. Right-click the NET ID of the selected gateway to open the sub-menu and select Functions MNET Gateway.... If the keypad is not listed, acquire the device to the infiNET network (refer to "Acquire the INETI-CB on the infiNET Network" which starts on page 14).

(Continued on following page)

INETI-CB Troubleshooting (Continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Keypad does not function, or does not function as expected. However, it reports on Cresnet at the proper MNET ID.	The unit is not programmed correctly.	Use SIMPL Debugger to check the behavior when buttons are pressed. Revise and reload the program as needed to correct the behavior.
Feedback indicators do not light.	Indicator intensity is set too low.	Set Min Auto Backlight Intensity to 1% or higher, or set Indicator Intensity analog input to 1% or higher if Auto Intensity has been disabled.

Bootloader Mode

In rare cases, it may be necessary to bypass the INETI-CB's standard firmware and enter into "bootloader" mode. This might be necessary if the unit was loaded with a faulty version of firmware that might prevent future firmware upgrades. In addition, in the event of a failed or aborted firmware upgrade, the unit will enter into bootloader mode on its own.

NOTE: Since the INETI-CB is hard wired, entering bootloader mode may require two people—one to turn power on and off; the other to manipulate the keypad buttons.

To enter bootloader mode, make certain AC power is off, then press and hold the bottom left button while turning AC power back on. Continue to hold the bottom left button.

NOTE: Button cap configuration does not affect these procedures; they will work with any combination of installed button caps.

- After approximately ten seconds, all twelve LEDs will flash to indicate the unit is in bootloader mode. Release the button. When the

unit is in bootloader mode (but not in *Setup* mode), the LED next to the bottom left button will be on solid.

- Once in bootloader mode, if you need to acquire the unit, press and hold the top left button for five seconds. The LED next to the top left button will blink every half second to indicate the unit is being acquired by the gateway and the LED next to the bottom left button will indicate the link status (refer to “Acquire the INETI-CB on the infiNET Network” which starts on page 14 for LED behavior).

When the unit is running in bootloader mode, new firmware can be uploaded from the Crestron Toolbox. During firmware upload, all LEDs will blink.

To exit the bootloader and restore the firmware that is currently installed, cycle power by turning AC power off and then on again. If a previous attempt to upload firmware had failed, there is no way to restore it; firmware must be uploaded again.

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
C2N-MNETGW infiNET Gateway

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].

You can also log onto the online help section of the Crestron website (www.crestron.com/onlinehelp) 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 INETI-CB keypads, 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; touch screen 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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change without notice.