RTI

KX10

10" In-Wall Controller
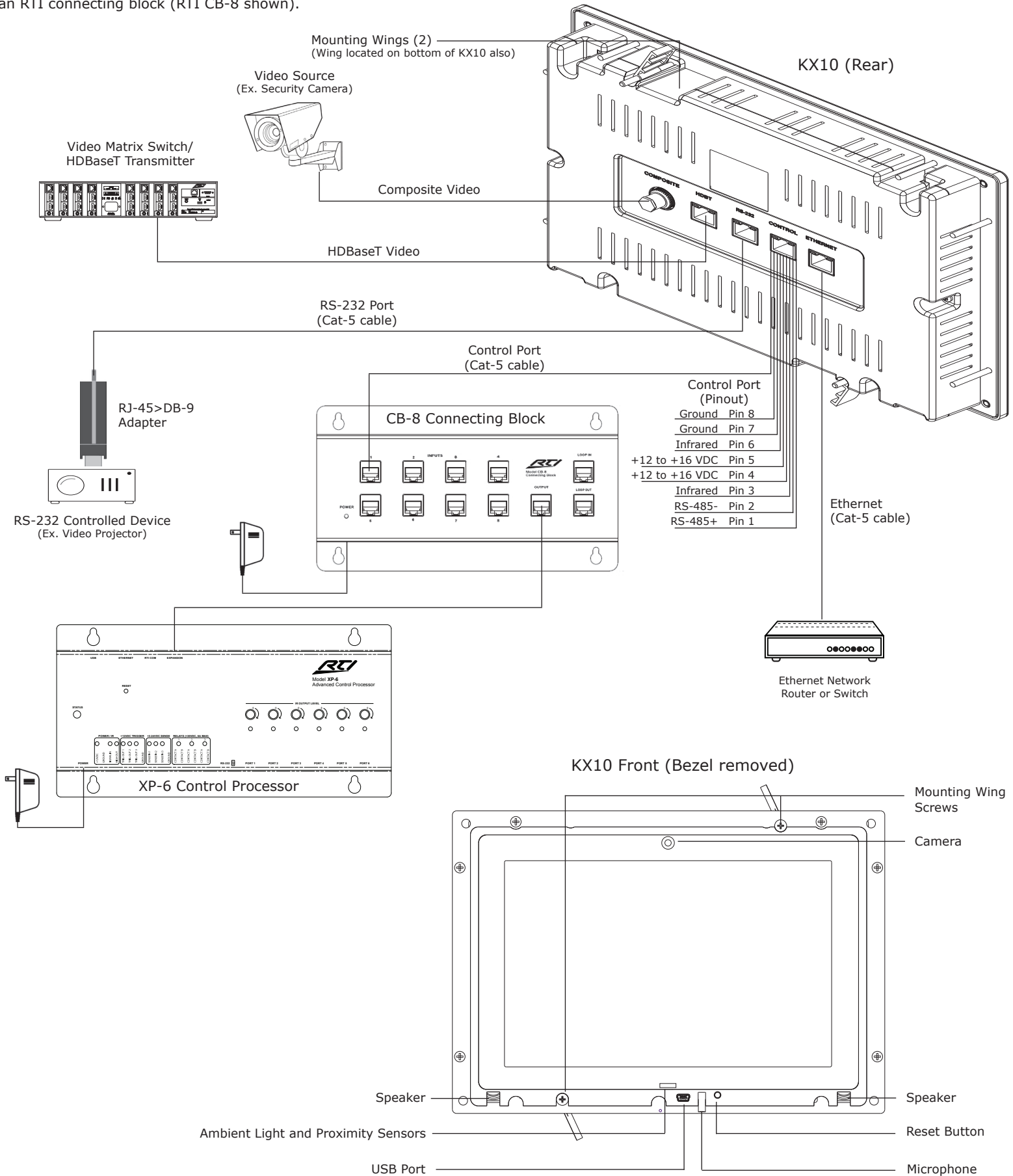
Quick Reference Guide

With a commanding presence and sophisticated style, the KX10 delivers the world of control and automation in residential and commercial settings. Simplifying and enhancing the control experience, the large 10" widescreen display is programmable to the finest detail and provides ample screen real estate for the ultimate custom user interface. The KX10's advanced engineering makes it much more than a control device – it's also a high-resolution display that offers a convenient place for viewing HD video, checking security cameras, and answering the door via the built-in video intercom. Capable of direct control over devices, the KX10 can also be incorporated into the powerful RTI ecosystem to take advantage of cutting-edge automation. With the KX10, anything is possible with a simple touch.

Features:

- A large 10.1" widescreen LCD with 1280x800 (WXGA) resolution and integrated capacitive touchscreen.
- The completely customizable touchpanel provides simple, intuitive control with programming that can be tailored to each installation.
- Display HD video via the integrated HDBaseT video input.
- Display analog video sources such as security cameras via the composite video input.
- Ability to function as a part of an RTI control system for powerful two-way control or control devices directly through built-in infrared and RS-232 ports.
- The proximity sensor automatically wakes the unit as a user approaches.
- The ambient light sensor adjusts the backlighting.
- Integrated 10/100 Base-T (with PoE+) and 802.11b/g/n wireless Ethernet for viewing video from IP security cameras, enhanced two-way feedback and remote programming updates.
- Video intercom capability with built-in camera, microphone, and speakers.
- Powered by a separate power supply, an RTI CB8 connecting block or PoE+ (Power over Ethernet Plus).
- Stylish low-profile faceplate available in white, black or brushed aluminum (ships with white).

Connection Options

The following diagram shows the KX10 connection options in a typical installation, including an RTI control processor (RTI XP-6 shown) and an RTI connecting block (RTI CB-8 shown).

Mounting Wings (2)
(Wing located on bottom of KX10 also)

KX10 (Rear)

Video Source
(Ex. Security Camera)

Video Matrix Switch/
HDBaseT Transmitter

Composite Video

HDBaseT Video

RS-232 Port
(Cat-5 cable)

Control Port
(Cat-5 cable)

Control Port
(Pinout)

RJ-45>DB-9
Adapter

CB-8 Connecting Block

Ground	Pin 8
Ground	Pin 7
Infrared	Pin 6
+12 to +16 VDC	Pin 5
+12 to +16 VDC	Pin 4
Infrared	Pin 3
RS-485-	Pin 2
RS-485+	Pin 1

RS-232 Controlled Device
(Ex. Video Projector)

Ethernet
(Cat-5 cable)

Ethernet Network
Router or Switch

Model XP-6
Advanced Control Processor

XP-6 Control Processor

KX10 Front (Bezel removed)

Mounting Wing Screws

Camera

Speaker

Speaker

Ambient Light and Proximity Sensors

Reset Button

USB Port

Microphone

Installation & Operation

MOUNTING
The KX10 is designed for flush-mount, in-wall installations. It requires an available mounting depth of 2 inches (52.5mm) from the surface of the wall.

IMPORTANT NOTE: There is little margin for error when fitting the KX10 into the wall opening.
Make sure to use the included cardboard cut-out template to create the correct size opening in the wall. Additionally, carefully double-check that all measurements taken using the cardboard cut-out template are accurate.

MOUNTING HEIGHT
The recommended mounting height for the KX10 is between 54 inches (1.37m) and 60 inches (1.52m) from the bottom of the faceplate.
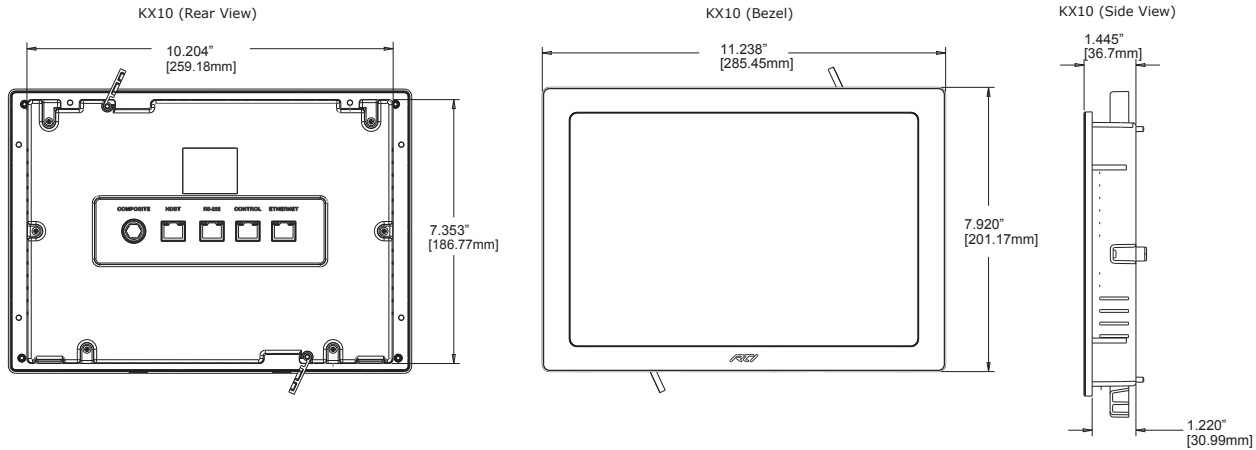
MOUNTING WINGS
The two mounting wings are located on the top and bottom of the KX10 can be used to secure the unit to drywall in retrofit installations. Place the KX10 in the opening in the wall and tighten the mounting wing screws located on the front of the unit (bezel removed).

CONDUIT BOX
For new construction installations a conduit box may be purchased separately from an RTI distributor. Refer to the conduit box installation guide for instructions.

DIMENSIONS

KX10 (Rear View)
10.204" [259.18mm]
7.353" [186.77mm]
COMPOSITE HOST RS-232 CONTROL ETHERNET

KX10 (Bezel)
11.238" [285.45mm]
7.920" [201.17mm]

KX10 (Side View)
1.445" [36.7mm]
1.220" [30.99mm]

POWER OPTIONS
- **CB-8 Connecting Block**: Wire a Cat-5 cable from the KX10 Control Port to the CB-8 Connecting Block (see diagram).
- **Ethernet Port (Power over Ethernet)**: Wire a Cat-5 cable from the KX10 Ethernet Port to an 802.3at compliant Power-over-Ethernet switch (Class #4).
  NOTE: Using a non-compliant PoE device may damage the KX10.
- **Power Supply**: Connect a power supply (+12VDC to +16VDC, 1.6A) to the KX10 Control Port using an RJ45 connection. Connect the power supply leads to the +12VDC-16VDC and Ground Pins. (See diagram on previous page for pinout).

CONNECTIONS

COMPOSITE VIDEO INPUT
The Composite Video Input uses a BNC jack and supports video sources such as a security camera or a cable box.

HDBASET VIDEO INPUT
The HDBaseT Video Input allows HD video to be delivered to the KX10 via a Cat-5 cable with an RJ-45 termination from an HDMI video matrix switch with an HDBaseT video output or an HDBaseT transmitter.

CONTROL PORT
The Control Port on the KX10 uses a Cat-5 cable with RJ-45 termination. When used in conjunction with an RTI control processor (e.g. RTI XP-6) and an RTI connecting block (e.g. RTI CB-8), this port serves as the power source for the KX10 in addition to infrared and RS-485 communication.

ETHERNET PORT
The KX10 Ethernet Port is for connection to a LAN via Cat-5 cabling with RJ-45 termination and supports PoE+ (Power over Ethernet Plus). When powering the KX10 using PoE+, wire a Cat-5 cable from the KX10 Ethernet Port to an 802.3at compliant Power-over-Ethernet Plus switch (Class #4).
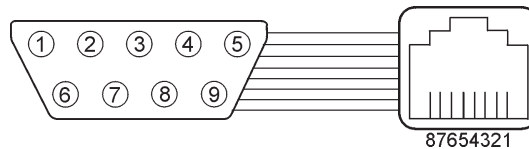NOTE: Using a non-compliant PoE device may damage the KX10.

RS-232
The KX10 is capable of direct RS-232 communication using a Cat-5 cable with RJ-45 termination. A DB9 - RJ45 adaptor is included for connection to the device being controlled (See below for adapter pinout).
NOTE: RS-232 communication should be limited to 50 feet (16m) depending on baud rate.

DB-9

Pin	Signal Name	Signal Description
1	DCD	Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Signal Ground/Common
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	Not Connected

DB9 - RJ45 ADAPTOR PINOUT

1 2 3 4 5
6 7 8 9
87654321

RJ-45 (KX10 RS-232 Output)

Pin	Signal Name	Signal Description
1	DSR	Data Set Ready
2	DCD	Carrier Detect
3	DTR	Data Terminal Ready
4	GND	Signal Ground/Common
5	RXD	Receive Data
6	TXD	Transmit Data
7	CTS	Clear To Send
8	RTS	Request To Send

PROGRAMMING

THE TOUCHSCREEN DISPLAY
The KX10 touchscreen display is programmed using the RTI Integration Designer Programming Software. Normally it is organized into a series of pages containing objects (buttons, text, graphics, etc.) that are related to each other. For example, they may all display information necessary for controlling a particular music server.

UPDATING FIRMWARE
It is highly recommended that this and all RTI products have the latest firmware installed. The firmware can be found in the Dealer section of the RTI website (www.rticorp.com). Install the firmware using a USB cable (USB A to Mini B).

UPDATING SOFTWARE
RTI's Integration Designer data files can be downloaded to the KX10 using a USB cable (USB A to Mini B), or via an Ethernet network (hard-wired or wireless). Also, if the KX10 is hard-wired to a LAN and the router has DHCP enabled, the initial data file download can be made over the Ethernet network.

CONTROL PANEL
Certain settings can be adjusted directly on the KX10 through the control panel. Please note that changes made directly in the KX10 control panel will be overwritten by changes made in Integration Designer.
Adjustable settings: Display Backlight and Sensors • Set Clock • Time Out • Sound • Calibrate Touchscreen • Network Information • VOIP Intercom
Access to the Control Panel: Assign a "Control Panel" page link to a button in the Integration Designer® programming software.

Product Contents

- One (1) KX10 In-Wall Touchpanel Keypad
- One (1) Bezel (White)
- Four (4) Mounting Wings (two preinstalled)
- One (1) RJ45 to DB9 Serial Adapters
- One (1) MAC Address Card
- One (1) Drywall Cutout Template
- One (1) Quick Reference Guide

Safety Suggestions

Read and Follow Instructions. Read all safety and operating instructions before operating the unit.

Retain Instructions. Keep the safety and operating instructions for future reference.

Heed Warnings. Adhere to all warnings on the unit and in the operating instructions.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Power Sources. Connect the unit only to a power supply of the type described in the operating instructions, or as marked on the unit.

Power Cord Protection. Route power supply cords so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to the cord plugs at power receptacles and at the point at which they exit from the unit.

Water and Moisture. Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

Object and Liquid Entry. Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

Servicing. Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when:
- The power supply cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure has been damaged.

Cleaning

To clean your KX10, lightly dampen a lint-free cloth with plain water or a mild detergent and wipe the touchscreen, keypad and outer surfaces.

NOTE: Do not use harsh chemicals as damage to the unit may occur.

Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at:
www.rticorp.com

For general information, you can contact RTI at:
Remote Technologies Incorporated
5775 12th Ave. E Suite 180
Shakopee, MN 55379
Tel. (952) 253-3100
Fax (952) 253-3131
info@rticorp.com

Service & Support

If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance (see the Contacting RTI section of this guide for contact details).

RTI provides technical support by telephone or e-mail. For the highest quality service, please have the following information ready:
- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

Please do not return products to RTI without return authorization.

Limited Warranty

RTI warrants its products for a period of one (1) year (90 days only for included battery packs); or for a period of time compliant with local laws when applicable from the date of purchase from RTI or an authorized RTI distributor.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required.

Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are not covered by the warranty.

Damage resulting from:
1. Accident, misuse, abuse, or neglect.
2. Failure to follow instructions contained in this Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Failure to perform recommended periodic maintenance.
5. Causes other than product defects, including lack of skill, competence or experience of user.
6. Shipment of this product (claims must be made to the carrier).
7. Being altered or which the serial number has been defaced, modified or removed.

Federal Communications Commission Notice

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. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

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 the 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.

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.
2. This device must accept any interference received including interference that may cause undesired operation.

Industry Canada Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes:
1. Ce dispositif ne peut causer des interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue y compris des interférences qui peuvent provoquer un fonctionnement indésirable.

Contains FCC ID: MMURTI2100
Contains IC (Canada): 3166A-RTI2100

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DECLARATION OF CONFORMITY (DOC)
The Declaration of Conformity for this product can be found on the RTI website at: www.rticorp.com/declaration