IVDS
Intelligent Video Door Station
Reference Guide

IVDS-B
Intelligent Video Door Station Black

IVDS-FIB
Flush Installation Box

IVDS-SIB
Surface Installation Box

both sold separately

The IVDS Intelligent Video Door Station delivers a premium front door experience fully integrated with your RTI control system. This sophisticated IP video intercom combines cutting-edge security features with elegant design to enhance your home's protection and convenience. With its Full HD 156-degree wide-angle camera and Adaptive Face Zooming technology, the IVDS provides exceptional video quality and comprehensive monitoring of your entrance area. The system immediately alerts you to unexpected activity, allowing constant awareness of your home surroundings.

Key Features

- Clean, minimalist design.
- Adjustable button color backlight
- Resistance against vandalism, water, and dust
- Superb sound quality
- Full duplex audio with acoustic echo cancellation
- Built-in full HD camera with 156° viewing angle and motion detection
- PoE powered
- Supports SIP 2.0
- Video codecs: H.264, H.265, MJPEG
- Audio codecs: G.711, G.722, G.729, L16/16 kHz
- Seamless integration with RTI systems
- Easy installation

Product Contents

- IVDS Intelligent Video Door Station
- Connector Plate (1)
- Torx Head Screws (3)
- Torx Wrench (1)
- Quick Start Guide

Version 1.0

Dimensions

78mm
3.07"

172mm
6.77"

10mm
0.39"

Mounting Depth:
56mm / 2.21"
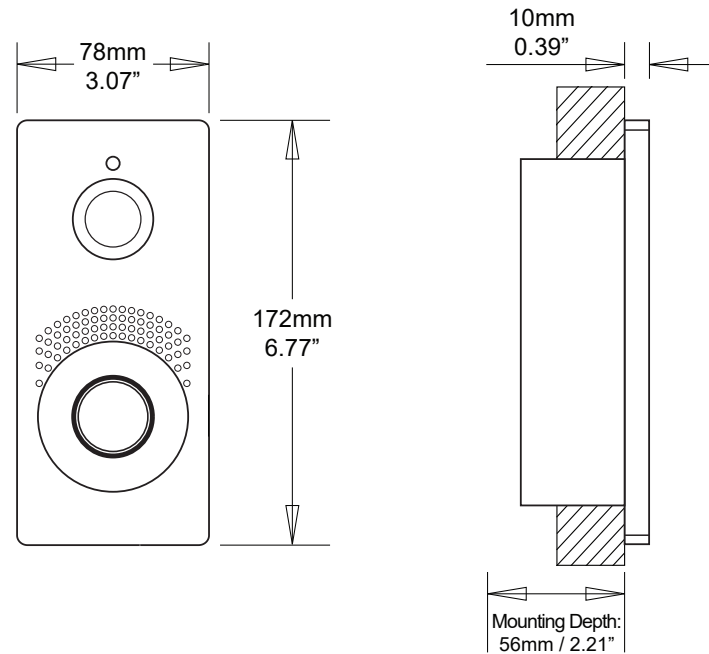
Mechanical Installation: General

General Mounting Principles

• Before starting the mechanical installation in a selected place, make sure carefully that the preparations associated with it (drilling, wall cutting) cannot damage the electrical, gas, water and other existing wires and pipes.

• The warranty does not apply to the product defects and failures that resulted from improper installation.

• When the proper installation instructions are not met, water might get in and destroy the electronics. As the device circuits are constantly under voltage water leakage causes electrochemical reaction. The manufacturer's warranty shall be void for products damaged in this way!

• Make sure that the dowel holes have the required diameter. If the diameters are too large, the dowels may get loose! Use the mounting glue to secure the dowels if necessary.

• Make sure that the depths of the dowel holes are accurate!

• Do not use low-quality dowels to avoid their falling out of the wall!

• Having removed the front panel, make sure that no dirt gets inside the product, especially onto the sealing surface.

• Make sure that the plasterboard interior does not show a pressure value significantly different from that of the room, e.g. that it is not connected with overpressure ventilation. If the difference is too great, separate the device in terms of pressure (using, e.g., a mounting box) and seal the cable passage

Flush or Surface Mounting
IVDS-FIB Flush Installation Box (not included) or IVDS-SIB Surface Installation Box (not included) are required to install the IVDS Intelligent Video Door Station.

Note:
Before starting the mechanical installation in a selected place, make sure carefully that the preparations associated with it (drilling, wall cutting) cannot damage the electrical, gas, water and other existing wires and pipes.

Mounting Height
The recommended height is 135cm / 53" for standard installations (100–120cm / 39-47" for disabled persons) from the floor to the device camera level. The installation heights may vary depending on the device's use.
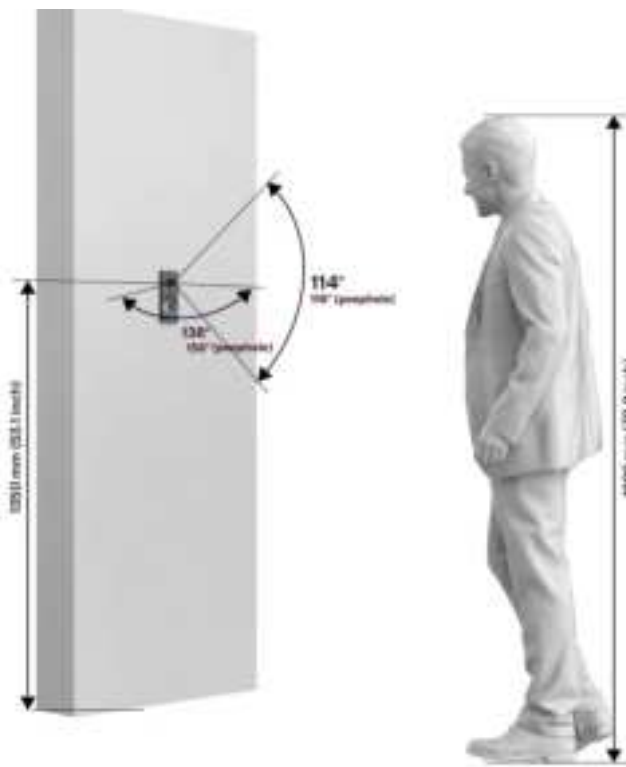
Mechanical Installation: Flush Mount

1. Cut a hole in the wall. The recommended hole depth is 56mm (2.2").

    Tip: Use the drilling template that's included in the IVDS-FIB box or download it from www.rticontrol.com
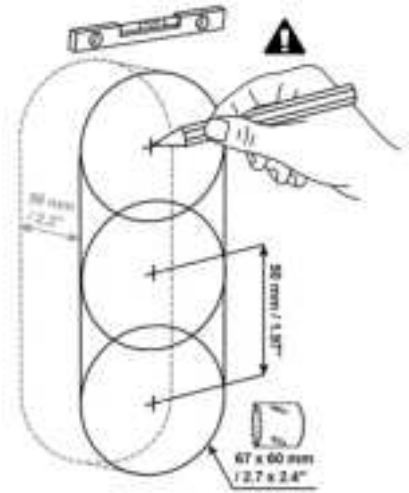
2. Remove one of the blinds on the plastic box and pull the cables through. The recommended length of the accessible cables is 15cm (22"). Mind the two arrows engraved on the box bottom and the included blind to keep the proper installation orientation. Place the box into the wall hole. Use the four side bosses to determine the proper depth of the flush mounting. Use walling material of your choice.
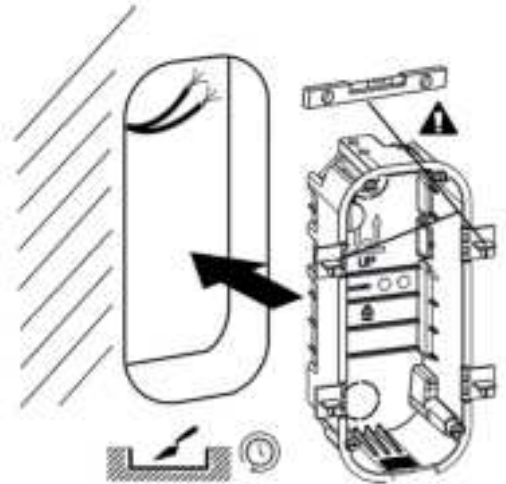
3. Use the four side bosses to determine the proper depth of the flush mounting. Make sure that the box edges are aligned with the wall after finishing the masonry. Break off the bosses after the walling material hardens.
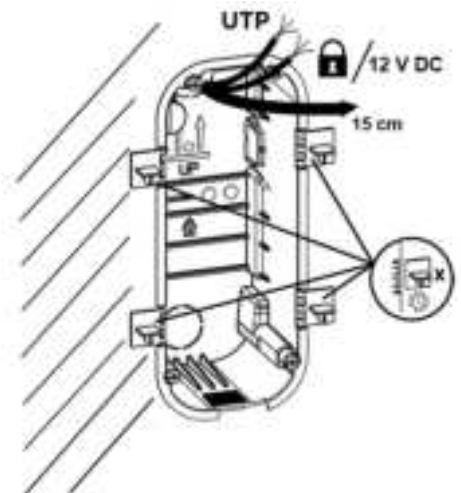
4. Close the box with a blank. This prevents the walling and surfacing dirt from getting into the box surroundings.
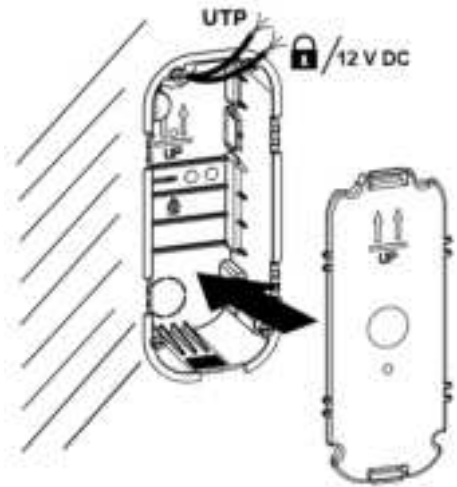
5. Let the walling material harden after finishing the masonry and wall surfacing and remove the blank.

6. The package includes an L-shaped plastic plate and 3 Torx head screws. Cut 1–2mm (0.04-0.08") off the upper part of the cylinder-shaped rubber on the plate. Pull the cable through the remaining part. Use a crimping tool to crimp the cable connector and insert it in the terminal. Cover the terminal space with a plate and screw it.
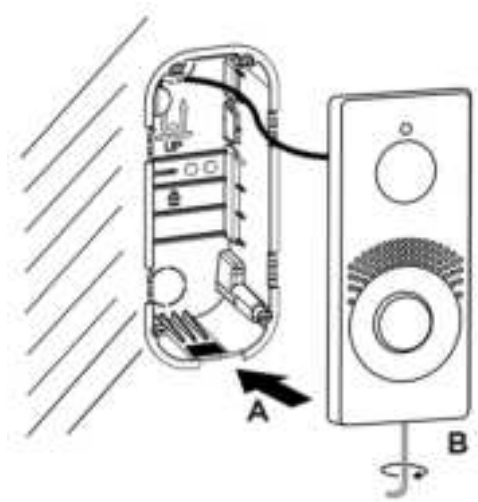
Note:
Don't exceed the maximum tightening torque of 0.5 Nm.

7. Insert the metal device body in the walled-in box and fit it on the bottom using a Torx head screw.
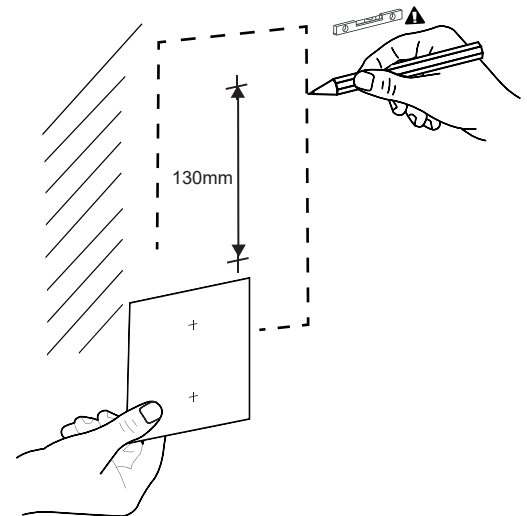
   Caution:
   Loosen the screw if too tight to make the device fit in the box. Then tighten the screw again.

Mechanical Installation: Surface Mount
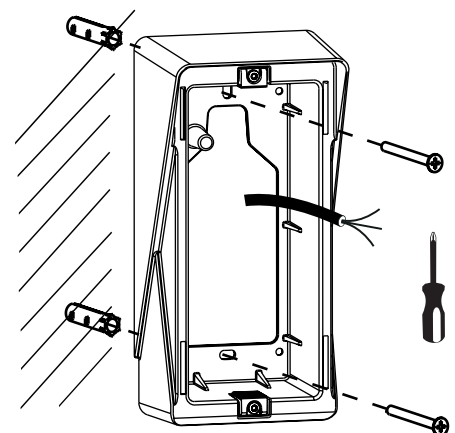
1. Drill holes of the diameter of 8mm (5/16") and depth of 55mm (2.2") using the drilling template.

   Tip: Use the drilling template that's included in the IVDS-SIB box or download it from www.rticontrol.com
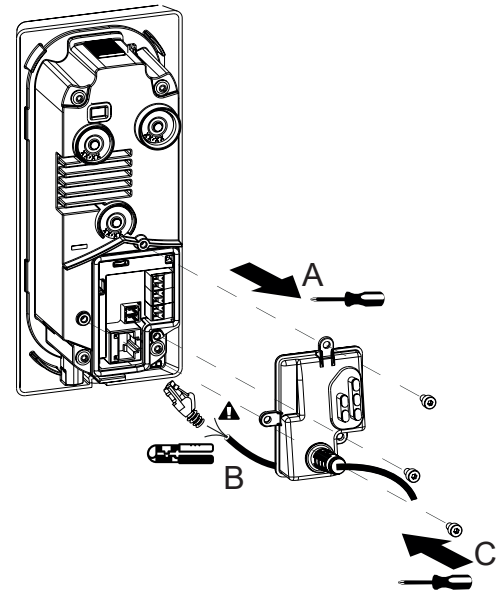

2. Put the surface mount box on the wall.
   Pull the available cables through the box opening.
   Fit the surface mount box using the included countersunk head screws.

3. The main unit package includes an L-shaped plastic plate and 3 Torx head screws. Cut 1–2mm (0.04-0.08") off the upper part of the cylinder-shaped rubber on the plate. Pull the cable through the remaining part. Use a crimping tool to crimp the cable connector and insert it in the terminal. Cover the terminal space with a plate and screw it.

   Note:
   Don't exceed the maximum tightening torque of 0.5 Nm.

4. Put the main unit metal body in the surface mount box attached to the wall.
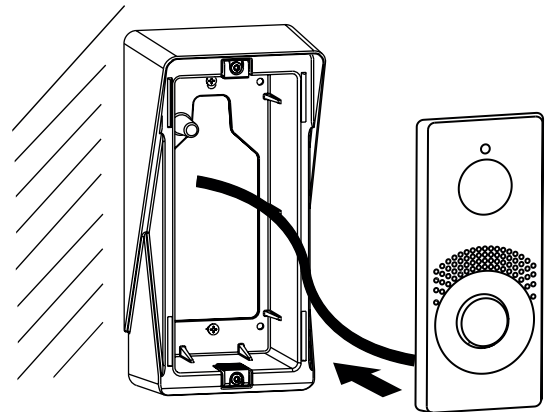
5. Press the main unit to the box and push it upwards. Screw a Torx head screw from the device bottom.

Electrical Installation

Power Supply

IVDS can be fed either directly from the LAN if equipped with PoE 802.3af supporting network elements or from an external 12 V ±15 % / 2 A DC power supply.

Caution: The device must be part of the electrical system of the building
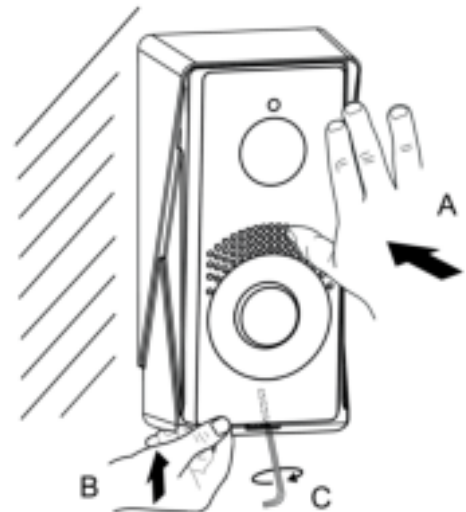
External Power Supply

Use a SELV supply 12 V ±15 % dimensioned to the current consumption required for feeding the device to make your device work reliably.

Current Consumption: 2A

Available Power Output: 24W

Combined Power Supply

IVDS can be fed from an external power supply and PoE at the same time. In this configuration, the maximum power for the unit is available.
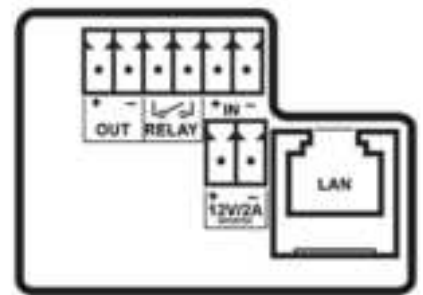
Main Unit Connector Wiring

OUT: Active switch output: 12 V DC, max. 600 mA

RELAY: RELAY terminals with accessible 30V/1A AC/DC NO contact.

IN: IN1 terminals for input in passive/active mode (−30V to +30VDC)
            OFF = open contact or UIN > 1.5 V
            ON = closed contact or UIN < 1.5 V

12V/2A   External power supply terminals /

LAN   LAN connector (PoE 802.3af)

LAN Connection

IVDS is connected to the LAN by inserting a SSTP cable (category Cat-5e or higher) in the dedicated LAN connector on the device. As the device is equipped with the Auto-MDIX function, you can use either the straight or crossed cable version.

Warning: This device cannot be connected directly to telecom lines (or public wireless networks) of any telecom service providers (i.e. mobile providers, landline providers or Internet providers). A router has to be used for the device Internet connection.

Caution: We recommend the use of a LAN surge protection.
            We recommend the use of a shielded SSTP Ethernet cable.

Overvoltage Protection

The IVDS cables have to be protected against atmospheric overvoltage caused by external causes (lightning, e.g.). A surge can damage a device installed outside/inside the building if the wires are unprotected.

Therefore, we recommend that additional overvoltage protectors (OVP) be installed on the outer walls or roof for all the wires leading outside the building. Keep the following instructions while installing overvoltage protectors:

• Make sure that the overvoltage protector is installed as close as possible to the device installed outside the building.
• Make sure that the overvoltage protector is installed as close as possible to the device installed on an external part of the building.
• Make sure that the overvoltage protector is installed as close as possible to the point where the cabling leaves the building.

Examples of Overvoltage Protection Installation

Example 1:
Overvoltage protection installation diagram for a device installed on the building facade and cables outside the building
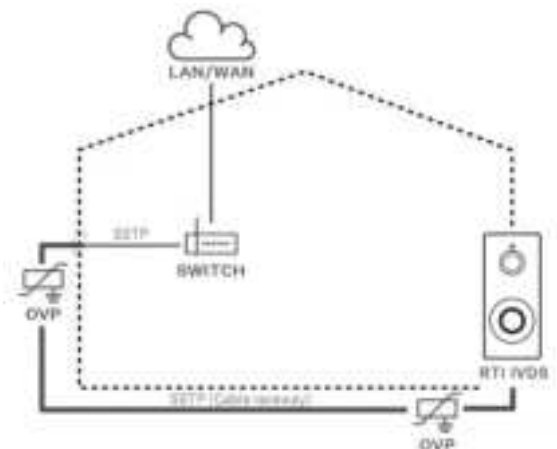
Example 2:
Overvoltage protection installation diagram for a device installed on the building facade and cables inside the building.
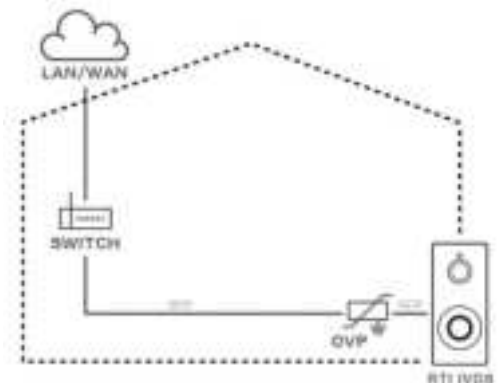
Example 3:

Overvoltage protection installation diagram for a device and cables installed outside the building.
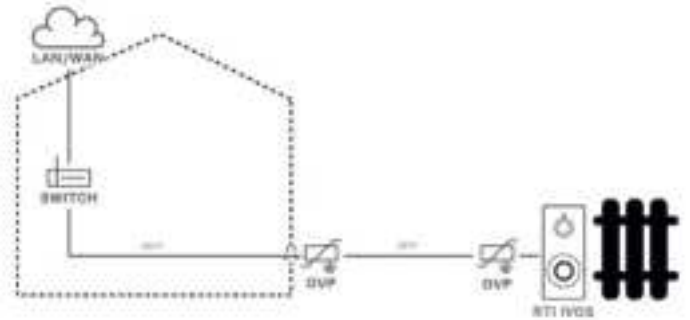
Installation Completion

Check the connection of all the wires in the board connectors.

Warning:

- Make sure that all the terminals of the unused connectors are properly tightened to avoid vibrations caused by sound.

- An incorrectly made installation may compromise the device waterproofness. Water infiltration may damage the electronic part.

- Make sure that all the holes are filled with some waterproof material – the top part, around the cables and the screws.

- Use silicone or some other sealant to seal the box against an uneven wall. Thus, you prevent water leakage and wall damping.

Web Interface Configuration

The web-based GUI (Graphical User Interface) for the Intelligent Video Door Station (IVDS) provides access to all administrative and configuration options necessary for successful deployment and operation. It is accessible through modern web browsers such as Chrome, Safari, Firefox, etc.

To access the Web GUI

1. Ensure that a Local Area Network (LAN) with a DHCP server is available. This allows for automatic IP address assignment to facilitate communication between a local PC and the IVDS.

2. Connect the IVDS's Ethernet port to the LAN using a CAT-5e, CAT-6, or CAT-6a cable.

3. Connect a local PC to the same network.

4. Access the IVDS via a supported web browser by entering either its mDNS hostname or known IP address into the address bar, then pressing Enter.

   Connecting to the IVDS Using mDNS
   Using mDNS (Multicast DNS) is recommended when the IVDS is assigned a dynamic IP address, as the domain name remains constant even if the IP changes.

   mDNS Hostname Format: IVDS-B-XXXXXX.local

   Replace XXXXXX with the last six characters (three pairs) of the IVDS's MAC address. The MAC address can be found on the back of the unit or in the included Quick Start Guide.

   Example: If the MAC address is AA:BB:CC:DD:EE:FF, the corresponding mDNS address would be: IVDS-B-DDEEFF.local

   Note: The default IP mode is DHCP.

   Connecting to the IVDS Using an IP Address
   To find the IVDS's IP address use the network scanner built into Integration Designer. Communications > Show Devices on Local Network

5. By default, the IVDS Web GUI is only accessible by a secure HTTPS connection. The browser will automatically be redirected to use the appropriate URL. You may encounter a privacy error message. If using the mDNS address to access the IVDS, the correct device should have been reached, and it is safe to proceed. If directly accessing the IVDS by IP address, please verify the IP address that corresponds to the IVDS hardware. If you do not have a certificate generated for the IP address or domain name, an invalid security certificate warning may be displayed. In this case, you need to confirm that you want to go to the web configuration interface.

The below example instructions are for the certification error seen in a Google Chrome browser:
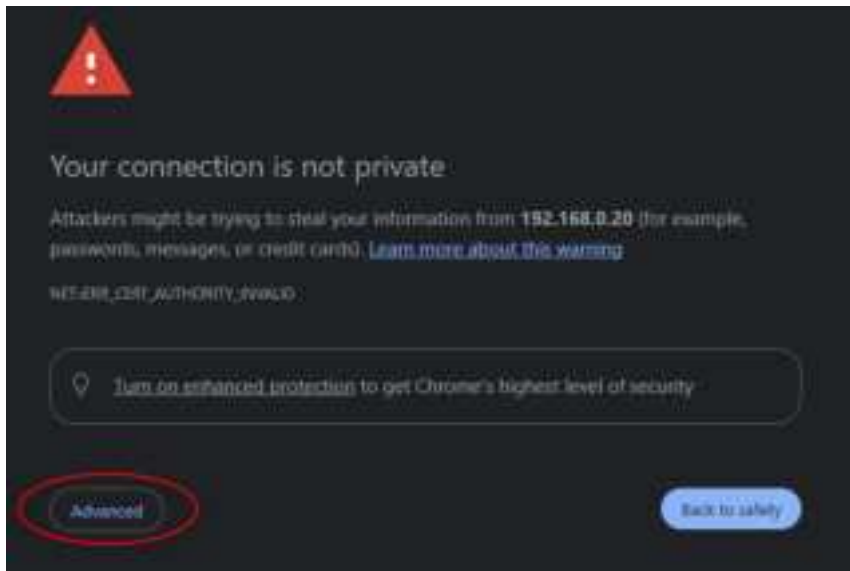
Press the Advanced button to expose the option to proceed.
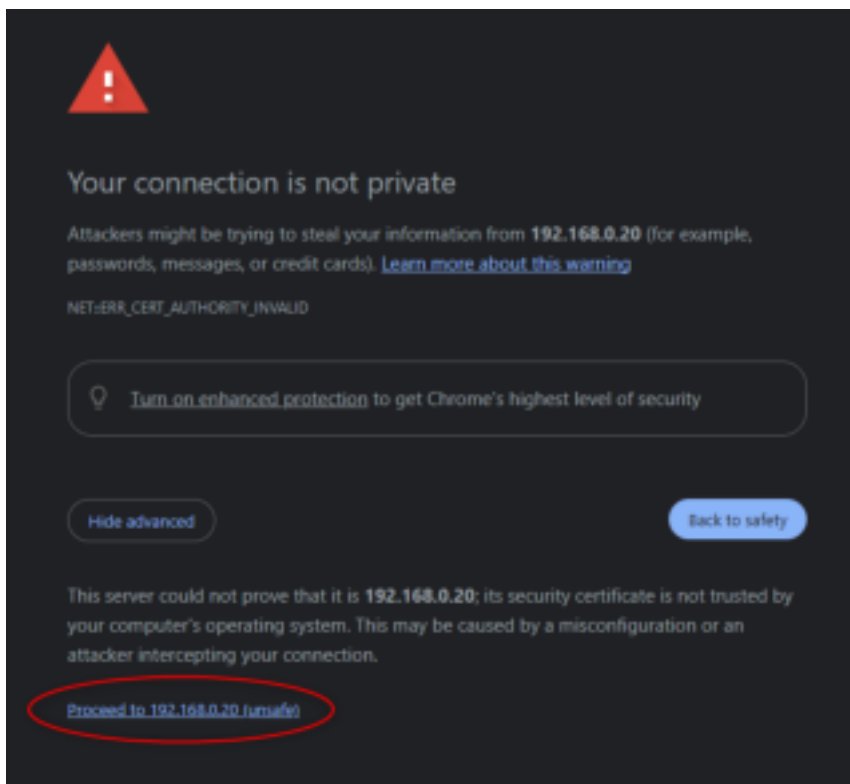
Press the "Proceed to..." button to continue to the web GUI of the IVDS.

6. The login screen is now displayed:

Should the login screen fail to appear, you must have typed the wrong IP address, port, domain name or the administration web server has been switched off.

7. Enter the default login credentials. Default login credentials are:
    Username: RTI
    Password: RTI123
    It is required to change the password immediately upon the first login:

Tip:
It is recommended that a password is used that is difficult to break. It is not recommended that names, places or things, especially those closely related to the user, are used in the password. For increased password security, it is recommended that:
- A random password generator is used.
- The password length is 12 characters at least.
- Various characters from different character sets are combined (small/capital letters, digits, special characters, etc.).

Device Restart
To restart the device, choose one of the following options:
- Using disconnection from the power supply.
- Via the web configuration interface.

Note: The device restart does not result in any change in the configuration settings.

Restart Using Web Configuration Interface
You can restart the device via the web configuration interface. Refer to Web Configuration Interface Login. Restart the device in System > Maintenance > System > Restart

Firmware Update
We recommend that the firmware is also updated during the IVDS installation. Refer to www.rticontrol.com/dealer/firmware for the latest FW version.
Update firmware via the web configuration interface in System > Maintenance
Once the firmware is uploaded successfully, the device is restarted automatically.

Factory Default Reset
Located among the main unit connectors, the CONTROL button helps you reset the factory default values.
1. Disconnect the device from the power supply.
2. Press and hold the CONTROL button.
3. Connect the device to the power supply.
4. Keep holding the button for a few seconds and then release it.

Call Connection
To make calls with other terminal devices in IP networks, it is necessary to assign the device to a contact in the Directory.

Connection with Other Devices

1. Select one of the existing Intercom Groups.

2. Enter the user phone number in the format – sip:200@xxx.xxx.xxx.xxx (Where xxx.xxx.xxx.xxx is the IP Address of the device you want to call).

3. Selecting Group Call to Next Number will call the next number as well.

4. Selecting Call Deputy will also call the group specified in the User Deputy field

If you deselect the Group Call checkbox the first number will be called, if they fail to answer, the next number will be called, and so on.

Technical Specifications

Power Supply

PoE	IEEE 802.3af, Class 0 (0.44–12,95 W, 44-57 V DC, 400 mA)
External Supply	12 V ±15 % / 2 A DC

Signaling Protocol

SIP	UDP, TCP, TLS

Audio

Microphone	Electret
Amplifier	3 W RMS / 6 W (class D)
Speaker	3 W / 4 Ω
Sound Pressure Level (SPL max)	78 dB (for 1 kHz, distance 1 m)
Volume Control	Adjustable with automatic adaptive mode
Full Duplex	Yes (AEC)
Audio Power Output	1.9 W

Audio Stream

Protocols	RTP, RTSP
Codecs and Used Bandwidth	G.711 (PCMA, PCMU) – 64 kbps (with 85.6 kbps headers)
	G.729 – 16 kbps (with 29.6 kbps headers)
	G.722 – 64 (with 85.6 kbps headers)
	L16/16kHz – 256 kbps (with 277.6 kbps headers)

Camera

Sensor	1/2.7" color CMOS
JPEG Resolution	Up to 1920 x 1440 (4:3); FHD (16:9)

Video Resolution	1920 x 1440 (4:3); FHD (16:9)
Frame Rate	up to 30 frames
Sensor Sensitivity	14000e-/lux-sec
Viewing Angle	138° (H), 114° (V)
Infrared Illumination	Yes
Focal Length	1.935 mm

Video Stream

Protocols	RTP, RTSP, SRTP, HTTP
ONVIF/RTSP Streaming Codecs	H.264, MJPEG, H.265, MJPEG
IP Camera Function	Yes – compatible profiles: ONVIF v2.4 profile S

Interface

LAN	10/100BASE-TX s Auto-MDIX, RJ-45
Recommended Cabling	Cat-5e or higher
Switched Voltage	Max. 20 V AC or 30 V DC
Passive Switch (Relay)	30V / 1A AC/DC NO contact

Mechanical Specifications

Cover	Hardened glass
Body Material	Material: Zamak 410 - Zn95Al4Cu1
	Surface Treatment: PUR Wet coating 15-25 µm, RAL 9005 Jet black, inner side - passivated zinc
Body Material	Material: EN AC-46100
	Surfacing: RAL 7021
Dimensions (W x H x D)	3.07" x 6.77" x 0.39" (78mm x 172mm x 10mm)
Weight	12.5 oz. (355 g)
Operating Temperature	-22°F to +140°F (-30°C to 60°C)
Relative Humidity	10 to 95 % (non-condensing)
Protection Class	IP66
Resistance Level	IK08

IVDS-FIB Flush Installation Box (sold separately)

Material:	Plastic black
Dimensions (WxHxD)	2.64" x 6.58" x 2.21" (67mm x 167mm x 56mm)

IVDS-SIB Surface Installation Box (sold separately)

Material:	Aluminum black grey (RAL 7021)
Dimensions (WxHxD)	3.661" x 7.323" x 2.835" (93mm x 186mm x 72mm)

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.

Accessories
Only use attachments/accessories specified by the manufacturer.

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

Power
Unplug this apparatus during lightning storms or when unused for long periods of time.

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

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 this product, lightly dampen a lint-free cloth with plain water or a mild detergent and wipe the outer surfaces. **NOTE**: Do not use harsh chemicals as damage to the unit may occur.

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.

Declaration oF Conformity (DoC)

The Declaration of Conformity for this product can be found on the RTI website at: www.rticontrol.com/declaration-of-conformity

Contacting RTI

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

For general information, you can contact RTI at:

Remote Technologies Incorporated
5775 12th Ave. E Suite 180
Shakopee, MN 55379
Tel. +1 (952) 253-3100
info@rticontrol.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 new products for a period of three (3) years (excluding consumables such as rechargeable batteries which are warrantied for one (1) year) from the date of purchase by the original purchaser (end user) directly from RTI / Pro Control (herein referred to as "RTI"), or an authorized RTI dealer.

Warranty claims may be initiated by an authorized RTI dealer using the original dated sales receipt or other proof of warranty coverage. In the absence of the receipt of purchase from the original dealer, RTI will provide warranty coverage extension of six (6) months from the date code of the product. Note: RTI warranty is limited to the provisions set forth in this policy and does not preclude any other warranties offered by third parties who are solely responsible for those other warranties.

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

- Product purchased via unauthorized sellers or internet sites will not be serviced- regardless of purchase date.
- Damages caused by accident, misuse, abuse, neglect or acts of God.
- Cosmetic damage, including, but not limited to, scratches, dents and normal wear and tear.
- Failure to follow instructions contained in the Product Installation Guide.
- Damages due to products used in an application or environment other than that for which it was intended, improper installation procedures or adverse environmental factors such as incorrect line voltages, improper wiring, or insufficient ventilation.

- Repair or attempted repair by anyone other than RTI and Pro Control or authorized service partners.

- Failure to perform recommended periodic maintenance.

- Causes other than product defects, including lack of skill, competence or experience of user.

- Damage due to shipment of this product (claims must be made to the carrier).

- Altered unit or altered serial number: defaced, modified or removed.

RTI Control is also not liable for:

- Damages caused by its products or for failure of its products to perform, including any labor costs, lost profits, lost savings, incidental damages, or consequential damages.

- Damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made on behalf of a third party.

- Loss of, or damage to, data, computer systems or computer programs.

RTI's liability for any defective product is limited to repair or replacement of the product, at the sole discretion of RTI. In cases where the warranty policy conflicts with local laws, the local laws will be adopted.

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