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ION-R100S User Manual

Version 1.1



The **smart** appliance of media.

IONODES INC. www.ionodes.com



ION-R100S

User Guide

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The following words and symbols mark special messages throughout this guide:

Warning:	Text set off in this manner indicates that failure to follow directions could result in dam- age to persons or equipment.
Note:	Text set off in this manner indicates special instructions which should be paid attention to.



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1 Important Safety Instructions

WARNING: Read and save these instructions! Follow all warnings and instructions specified within this document and/or on the equipment.

CAUTION: The unit will be powered on upon connecting a valid power supply source. Please make sure to properly shutdown the device's operating system prior to removing its power source.

The equipment shall be installed in a FIXED or DESKTOP configuration and should be installed by qualified personnel only (person having the appropriate technical training and experience necessary for product installation).

When installing the equipment, please make sure that cables are installed so that accidents cannot occur. Cables connected to the equipment must not be subject to any mechanical strain.

To reduce the risk of fire, electric shock and/or injury, observe the following:

- Do not position the equipment as such that persons could walk on the connected cables.
- Do not spill any type of liquid substance on or near the equipment.
- Do not touch the equipment and its connected cables during an electrical storm; there may be a risk of electric shock.
- Do not attempt to connect this equipment to electrical outlets controlled by switches or automatic timers.
- Do not attempt to perform hardware service on this product yourself. Opening the equipment casing may expose you to dangerous voltage or other risks. Refer servicing to IONODES technical service personnel. Never open the device yourself as this will void the warranty.
- The equipment should be situated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat.
- Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.

Note:	Opening the equipment case, damaging or altering the tamper proof label will void the
	warranty.

2 Cleaning Instructions

- Unplug this product from the wall outlet before cleaning.
- Use a soft dry cloth for cleaning.
- For stubborn dirt, soak the cloth in a weak detergent solution, wring well and wipe. Use a dry cloth to wipe it dry. Do not use any type of solvent, such as thinner and benzene, as they may damage the surface of the product.

3 Handling Notes

When shipping the product, the original shipping carton and packing materials should to be used. For maximum protection, repack the unit as it was originally packed at our factory.

Do not use volatile liquids, such as insect spray, near the unit. Do not leave rubber or plastic products in contact with the product for long periods of time. They will leave marks on the surface finish.

4 Moisture and Condensation Notes

Moisture condensation will damage the product. Read the following notes carefully.

Moisture condensation occurs during the following cases:

- Transferring the product directly from a cold place to a warm place.
- Using the product in a room where you just turned on the heater, or a place where the cold wind from an air conditioning unit directly hits the unit.
- In the summer, when moving the product to a hot and humid place after leaving an air conditioned space.
- Using the product in a humid place.

Warning: Do not use the product when moisture or condensation may occur. If the product is used in such an environment, it may damage discs and internal parts.

5 Before you begin

5.1 About the ION-R100S

The ION-R100S decoder delivers high quality H.264 video decoding and display to the video surveillance market. It is an embedded, high-performance digital video decoder, capable of decoding multiple H.264 and/or MJPEG video streams and display them onto a Full HD monitor.

The high-performance decoding capabilities of the ION-R100S offer a cost-effective way to decode and display digital camera streams while providing the benefits of video over IP.

The ION-R100S provides innovative configuration options and tools that can significantly decrease the amount of time and effort required to deploy a unit. Using web-based configuration tools, users can easily and remotely manage all aspects of the appliance.

To support high-performance decoding, while keeping the total cost of ownership within budget constraints, the ION-R100S uses highly efficient hardware-based stream decompression.

The ION-R100S is fully compatible with H.264 or MJPEG video streams provided by most thirdparty IP cameras and video encoders on the market. Combined with the IONODES line of IPbased video encoders, the ION-R100S can also decode video streams provided by most thirdparty analog cameras.

5.2 Parts List

Qty Description

- 1 ION-R100S appliance
- 1 5V DC power supply with country-specific power plug attachments
- 1 VESA mounting bracket and screws
- 1 Quick install guide

Below are additional items which are not included but may be required:

- USB mouse & keyboard
- Display with HDMI interface
- Internet access and/or a network switch
- Power bar with surge protection
- **Note:** When unpacking, inspect the shipment box and appliance to identify any possible damages due to shipping. Make sure all items have been delivered and that no items are missing. Contact your IONODES representative should you find any damages or defects.
- **Note:** The product serial number label helps the IONODES product support team identify your device and its factory configuration in the event that your ION-R100S or its components require service. The label is attached on the underside of the enclosure.

6 Hardware Installation

6.1 Equipment Installation

The ION-R100S can be placed on a flat surface, such as a desktop, or mounted via the available mounting bracket.

When installing the ION-R100S, position the unit to allow for cable clearance at the front and rear of the unit. Make sure that minimal air flow is provided to the unit.

The ION-R100S can be mounted to various mounting structures via the available VESA mounting assembly. Ideal to mount the ION-R100S behind a screen. Note that VESA mounting screws are shipped with the device.

Warning: Be careful not to damage the enclosure when using mounting screws.

7 Connections

The ION-R100S offers one dedicated digital video output connection (HDMI), one LAN port as well as several USB ports. More details can be found below.



1. 1x Power button (recessed)

The power button can be used to turn the unit on or off. It needs to be pressed with a small sharp object like a paperclip.

2. 1x Power Input

Appliance power connector. Connect to the power adapter provided with the appliance (5V DC, 4A, 20W max).

3. 1x HDMI Output

HDMI v1.4b connector interface for video output to a single screen with max. 1080p resolution.

4. 1x USB 3.0 Port

General purpose USB connector interface. To be used for future expansion.



5. 1x Ethernet Port

Gigabit Ethernet (10/100/1000 Base-T) RJ-45 network port. Please use RJ45 (cat. 5e or 6) network cable. Note that the ION-R100S cannot be powered using Power-over-Ethernet (PoE).

6. 4x USB 2.0 Ports

General purpose USB connector interface. To be used with mouse & keyboard.

8 Powering the ION-R100S for the first time

Before you can use the ION-R100S, you need to connect the following cables:

- Display: You can connect one display using the HDMI connector
- Ethernet network
- Keyboard and mouse (optional)
- Power

Connecting a keyboard and mouse to the ION-R100S allows you to configure the ION-R100S locally and for this reason are strongly recommended. If you plan on configuring the device remotely, then the keyboard and mouse are optional.

On first power on, once all the required cabling is connected, the appliance will boot automatically. If the appliance was previously shut down using the power button, in order to turn it back on, you'll need to press the power button for a couple of seconds and then release. After a few moments, the image below appears on the connected display:





View 1 ~	Switch to Configuration View	CPU GPU Mem 16:28 2018-02-28

When the device is ready to be used, the display switches to the main user interface:

The ION-R100S is now ready to be configured.



• Currently Displayed View

In the top left corner appears the view currently displayed. You can select a different view by clicking the down arrow beside the view name. Views are configured using the device's web interface or by switching to configuration view (see below).

• Switch to Display/Configuration View

This button allows you to switch between displaying video and the configuration interface.

• Video Streams Details

When in display view, toggle this button to display performance details about each video tile:

- o Video stream name and URI displayed in the video tile
- o Current connection state
- o Stream Resolution
- o Current framerate and bitrate
- Network packet lost count (displayed only when one or more packets are lost)

• Performance Graphs

These graphs show the device's recent resource usage.

- o CPU: shows the main processor's activity
- o GPU: shows the graphics adapter's activity
- \circ $\,$ Mem: shows the system's RAM memory utilization $\,$
- o Eth: shows the traffic on the Ethernet interface

9 Device Configuration

Before the ION-R100S can be used on your video network, it must undergo an initial setup step during which its network configuration is determined. This initial configuration setup step is required so that the ION-R100S can communicate with computers and cameras on the network.

Once the initial network configuration step is completed, video output and connectivity settings will need to be set-up through the device's web interface. The device keeps this configuration within its internal memory and acts as a fully standalone video decoding & display appliance.

The initial network configuration can be performed directly on the device by connecting a keyboard and a mouse to the ION-R100S, or it can be performed remotely using a computer or laptop connected to the same network.

9.1 Network Configuration Basics

By factory default, the ION-R100S is configured in DHCP mode (Dynamic Host Configuration Protocol). In DHCP mode, when the device boots up, if it is connected to a network it scans that network for a DHCP server. If a DHCP server is found on the network, the device requests that the DHCP server provide a unique network address and associated settings. The device then uses the DHCP-provided network configuration to communicate with other computers and cameras the network.

If no DHCP server is found on the network, the device switches to APIPA mode (Automatic Private IP Addressing). In this mode, the device automatically assigns itself a unique network address in the range 169.254.0.1 to 169.254.255.254 with subnet mask 255.255.0.0. APIPA mode ensures that devices in the APIPA network address range can communicate with one another.



If computers and cameras on your network are not configured in APIPA mode, the ION-R100S will not be able to communicate with them while in APIPA mode. In such a case, the network configuration of the ION-R100S must be set manually.

When the network configuration is set manually, the ION-R100S skips all the steps above and always uses the user-provided configuration. It is then the responsibility of the user to ensure that the network configuration in the ION-R100S is compatible with the computers and cameras on the network.

9.2 Setting Up the Initial Network Configuration Locally

The configuration of the ION-R100S can be accessed on the device itself by switching to the configuration view.



Login			
To access this sy	stem, you need to provide	ne following credentials:	
Username:			
Password:			
	Remember me.	Log in	
<i>c</i>			-



To access the device's configuration, you must enter a valid username and password. The factory default user name and password are both '*admin*'. The following screen is then displayed:



On the left side, select *Configuration*. The configuration interface is then displayed on the right side. Select the *Network* tab to display the network configuration.

View 1		Switch to Display View	CPU GPU Mem Eth 17:0: 2018-02
	ODE	ES	
Con System Statu Configuration	nnected US N	Configuration Please select from the following subsections:	Logout
Maintenance Information Product ION Version: 5.5.	I-R100S 0.4	System Date / Time Network Video Out User Accounts Network Interface #1 - LAN 1 Network Interface connected. ✓ Use DHCP IP address: 192 168.178.163 Subnet mask: 255.255.255.0 Default gateway 26c	r 192, 168, 178, 1
User: adm Cpu:	in	Primary DNS server: 0.0.0.0 Secondary DNS server: 0.0.0.0 Get Domain From DHCP DNS domain:	
		Host Name Configuration	Hide
		Host name: WIN-LOAUONEASU2 NTP Configuration Save Cancel	Hide 😱



The Ethernet network configuration is shown in the first section **Network Interface #1 – LAN 1**. The first information displayed is the connection status of the Ethernet cable. If the configuration reports the network interface as not connected, check the Ethernet cable between the ION-R100S and the network before proceeding.

By default, the ION-R100S is configured in DHCP mode. If a DHCP server is present on the network, the network configuration provided by the DHCP server is displayed. In that case, nothing needs to be done; the device is ready to communicate with computers and cameras on your network.

If the IP address shown is in the range 169.254.*.*, this means that the device could not obtain its network configuration from a DHCP server. In that case, the network configuration must be set manually.

To set the network configuration manually, uncheck **Use DHCP**. You can then enter each network setting separately. If you are unsure what values to enter, ask your network administrator to provide configuration settings compatible with your network. At a minimum, a valid **IP address** and **Subnet mask** must be entered. Once this is done, click on **Save** at the bottom to apply the configuration changes.

View 1 🛛 🗸	Switch to Display View		Mem Eth	17:11 2018-02
IONODE	ES			総位置は、 第10回 第10回 第100回 第100回 第100回 第100回 第100回 第100回 第100回 第100回 第100回 第10回
Connected System Status	Configuration Please select from the follow	ving subsections:	L	ogout.
Maintenance	System Date / Time Net Network Interface #1 - LA	Video Out User Accounts	Hide	•
Information Product ION-R100S Version: 5.5.0.4 Up time: 04.00h.00m User: admin Cpu:	Network interface connect Use DHCP IP address: Subnet mask: Default gateway: Primary DNS server: Secondary DNS server: DNS domain:	192 168.178.163 255 255 255 0 192 168.178.1 0.0.0 0 0.0.0		
	Host Name Configuration Host name:	WIN-LOAUQNEASU2	Hide	
	NTP Configuration		Hide	-
	Save Cancel			

The device is now ready to communicate with computers and cameras on your network.

9.3 Setting Up the Initial Network Configuration Remotely

Initial device network configuration can also be done via the ION Configuration Tool (ICT), a tool provided by IONODES and that can be found on the IONODES web site at <u>www.ionodes.com</u>.

The ICT plays several roles:

- 1. Discovery of all ION-R100S and other IONODES devices on the network
- 2. Remote configuration of the IP address and subnet mask
- 3. Applying batch firmware upgrade of all common IONODES devices
- 4. Accessing a device's web based management interface

Once your device is installed on your network and powered up, launch the ICT from any computer located on the same network as the device.

The ICT supports 2 methods for discovering a device on the network. The first method doesn't require any configuration and uses the Bonjour discovery protocol. In order to be able to discover a device via Bonjour, the network must support multicast IP.

If multicast is not supported, you can use the second method: Unicast Discovery. Unicast Discovery can be configured by using the "Unicast Discovery" menu option under the Admin menu list.



NODES - Configuratio	n Tool			-		×
Admin 🕶 Help 👻						
Device Discovery «	Discovery 🖏	Networks 😼 192.168.178.28 (LAN)	~	Tools 👍 💿 🖉 🚱		
🔩 🛋	MAC Address	Serial Number IP Address Type	Version	Video Audio I/O	Serial Port	
Search Domain	INAL FUUESS		VEINOI			

nicast Discovery			
Start Address: 192 . 168 . 17	8 . 1 End Addre	ss: 192 . 168 . 178 .	255 Add
Ping Timeout (ms):	1000 🜲	Unicast Discovery Only	
192.168.178.1 - 192.168.178.255			Remove
			Close

To configure Unicast Discovery, add one or more IP address ranges. Unicast Discovery will attempt to reach a device at a specific IP address in the configured ranges. Discovery can be a long process if the range of IP addresses is large. To accelerate the discovery, add several small ranges of IP addresses.

The ping timeout option can be increased for a high latency network. The ICT will display as many devices as it discovers on the network.



NODES - Configuratio	n Tool							_		×
Admin 🕶 Help 👻										
Device Discovery «	Discovery	Networks	192.168.178.28 (LAN)		\sim	Tools		80		
Search Domain Q. Search Domain IQ. <mark>Iocal</mark>	MAC Address	Serial Number R400-3173-4900-0038	IP Address 192.168.178.163	Type ION-R100S	Version 5.5.0.4	Video In: 0 Out: 1	Audio In: 0 Out: 0	I/O In: 0 Out: 0	Serial Po 0	ort
Device Discovery										
	In: = Input Out: = Output									

The ICT displays the current IP address of each detected device. If the device is configured in DHCP mode, its IP address appears in blue.

If a DHCP server is present on your network, it assigned an IP address to the device during the device's boot-up sequence.

If no DHCP server was able to assign an IP address to an ION-R100S, it will appear in the ICT device list with an APIPA address (169.254.*.*). If an ION-R100S displays an APIPA address it must be configured with a valid IP address before it can be used on the network. Select the "Assign IP address" from the selection list and apply the desired TCP/IP settings to the device.



NODES - Configuration	n Tool						-		×
Admin - Help -									
Device Discovery «	Discovery 🖏	Networks 🛃 192.168.178.28 (LAN	۷)	\sim	Tool	5 4 6 0	80		
₽ ₽	MAC Address	Serial Number IP Address	Туре	Version	Video	Audio	1/0	Serial	Port
Search Domain	♥ 00:07:32:4B:91:50	R400-3 Assign IP Address(es)	ION-R100S	5.5.0.4	In: 0 Out: 1	In: 0 Out: 0	In: 0 Out: 0	0	
Device Discovery	lo: = logit_Ort: = Ort: t								
	in: = input Out: = Output								

Start Address:	1 9 2	. 168	178	163	Start
Subnet Mask :	255	. 255	255	0	Close
Gateway :	0	. 0	0	0	
Status					
					1

Once the network settings are set, the web-based configuration interface of the ION-R100S can be launched from the ICT or directly in your web browser by typing the device's IP address in the address bar.



9.4 Setting up the Time

In the Configuration page, select the Date/Time tab.

View 1 ~ [Switch to Display View			Mem	Eth 11:30 2018-03-0
IO NODES					
Connected System Status	Configuration Please select from the follow	ing subsections.			Logout
Configuration	System Date / Time Net	vork Video Out User Accounts			
Maintenance	General				Hide
Information	Current UTC Time: Device Current Local Time:	03/01/2018 11:30:27 03/01/2018 11:30:27			
Product ION-R100S Version: 5.5.0.4 Up time: 0d 00h 50m 04s User: admin Cpu:	Date / Time Update Time zone: Update UTC Time:	(UTC) Coordinated Universal Time 03/01/2018 11:29:45 Sync	•		Plate
	Save Cancel				

To set the time zone in the device, select the appropriate value from the list in *Time zone*. To set the current time in the device, enter the new UTC time in *Update UTC Time*. If you are configuring the time remotely from a computer, clicking on *Sync* automatically uses the current UTC time of the computer.



View 1	Switch	h to Display View			Eth 12:34 2018-03-
IONO	DES				
Conn System Status Configuration	ected	Configuration Please select from the follow System Date / Time Netv	ng subsections: ork Video Out User Accounts		Logout.
Maintenance	_	General Current UTC Time: Device Current Local Time:	03/01/2018 11:34:29 03/01/2018 12:34:29		Hide
Product: ION-R Version: 5.5.0.4 Up time: 0d 000 User: admin Cpu:	100S 1 54m 15s	Date / Time Update Time zone: Update UTC Time:	(UTC+01:00) Brussels, Copenhagen, Madrid, Paris Note: The new time zone may be applied only after the unit 03/01/2018 11:34:15 Sync	T is rebooled.	Hade
		Save Cancel	Parameter changes were applied.		

Click the Save button to apply the changes.

Note: Changing the time zone requires the device to be rebooted before the change takes effect.

9.4.1 Setting up the NTP time server

Some networks use a time server, also named NTP time server (Network Time Protocol). The role of a time server is to synchronize the time for all devices on the network. The ION-R100S can be configured to use such a time server to synchronize its internal clock.

In the *Configuration* page, select the *Network* tab and scroll down to the *NTP Configuration* section. Set the proper NTP server address under the *NTP Configuration* header. Click the *Save* button to apply the changes.

If the device is configured in DHCP mode and the DHCP server is set up to provide the address of the NTP time server, you can check *Get NTP Configuration from DHCP*. Click the *Save* button to apply the changes.



View 1		Switch to Dis	play View		CPU GPU Mem	Eth	14:11 2018-03-01
ION	ODE	S					 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Co System Stat Configuratio	nnected us N		Configuration Please select from the follo System Date / Time Net	wing subsections: work Video Out User Accounts		Lo	gout
Maintenance	50 1		NTP Configuration			Hide	-
Information Product ION Version: 5.5 Up time: 0d User: adr Cpu:	I-R100S 0.4 02h 30m 4 nin	6s	Get NTP Configuration F NTP server address: HTTP Configuration HTTP port: HTTPS port: Authentication mode:	80 (1 - 65535) 443 (1 - 65535) Digest *		Hide	
1			Boniour	Accept HTTPS connections Accept HTTPS only		hida	
			Search domain:	Jocal			-
			Save Cancel				

9.5 Video Configuration Concepts

In the *Configuration* page, then select the *Video Out* tab. The video configuration is divided in 4 sub-tabs:

- Data Sources
- On-Screen Displays
- Views
- Video Out

Data sources represent connections to external devices or cameras. Several types of connections are available: video streams over RTSP, passive RTP and HTTP as well as web pages. The ION-R100S supports up to 32 separate data sources.

On-Screen Displays (OSD) determine the information you want to display over video streams and how to display that information. For example, when displaying a video stream, you might want to display the camera name and current time over the video. The ION-R100S supports up to 32 separate OSD configurations.



Views determine how you want to group and display data. For example, if you wanted to display video from all the building entrances on one screen in a 2x2 layout, you could configure a view to do so. The ION-R100S supports up to 5 separate views. In addition to that, it also supports 4 Sequence modes.

Finally, the Video Out section contains the configuration specific to the monitor connected to the ION-R100S, like the display resolution for example. The ION-R100S supports a single display output (HDMI).

9.6 Configuring Video Connections

9.6.1 Video over RTSP Data Sources

In the *Configuration* page, select the *Video Out* tab, then the *Data Sources* sub-tab. After that, select the data source you want to configure. To configure an RTSP video connection, set *Data Source Type* to *Video over RTSP*.

View 1 ~ Switch to	Display View		Mem 14:20 2018-03-0
NODES			
Connected System Status Configuration Maintenance-	Configuration Please select from the fol System Date / Time N Data Sources On-Scree	lowing subsections: letwork Video Out User Accounts in Displays Views Video Outputs Integration	Logout
Information	Data Source Selection		Hide
Product ION-R100S Version: 5.5.0.4 Up time: 0d 00h 01m 35s User: admin Cpu:	Select Data Source: Name: Enabled: Data Source Type: Stream Mode: Username: Password: Connection URI:	1: Data Source 1 Video over RTSP Configure Data Source Using Discovery. Wizard RTSP/UDP (Multicast or Unicast) Test Connection	
	Save Cancel		

To connect to a video stream, the ION-R100S needs to know the **Connection URI** and **Stream Mode**, as well as any **Username** and **Password** required by the camera or encoder. If you know the exact connection URI of the video stream, you can type it in manually. Or you can use the discovery wizard by clicking on <u>Configure Data Source Using Discovery Wizard</u>. The discovery wizard guides you through a few simple steps in order to fill the data source configuration for you.

Step 1 – Data Source Type

In the first step of the discovery wizard, set the type of data source to configure to *Camera* and press *Next*.



View 1 🛛 🗸	Switch to Display View		Mem 14:23 2018-03-0
IO NODE	S		
Connected	Conf	Data Source Discovery	Logout
System Status Configuration	Please se		
Maintenance	Data Sourc		Hide
Product ION-R100S Version: 5.5.0.4	Select Dat	Please, select a data source type: Camera	
Up time: 0d 00h 03m 5 User: admin Cpu:	57s Enabled: Data Sour		
D.	Stream Mo		
	Password: Connectio		
	Save	Previous Next Cancel	

The wizard then displays a list of all cameras and encoders on the network. If the camera you are looking for does not appear in the list, make sure the camera is connected to the network and press *Refresh*.

Step 2 – Camera Discovery

Select the camera you want by clicking on the desired entry in the list. Then, enter the *Username* and *Password* required to connect to the camera. Press the *Next* button.



IO NODES		
Connected System Status Configuration	Conf Data Source Discovery Please se System t Sort by: IP Address	Logout
Maintenance Information Product: ION-R100S. Version: 5.5.0.4 Up time: 0d 00h 05m 38s User: admin Cpu:	Data Sour Name: SND-L6013R Address: 192.165.178.36 Data Sour Model: SND-L6013R Type: OnVif Select Dat Name: Enabled: Data Sour	inde
Г	Stream My Username Password: Connectio Username: admin Password: Previous Next Cancel	

Step 3 – Video Profile Selection

In this step, the wizard displays a list of all video streams available from the camera that are supported by the ION-R100S. Click on the desired video stream. The **Stream Mode** field shows a list of network connections supported by the camera. Select the desired streaming mode and press *Next*.

Note: If you entered a wrong username or password in the previous step, the wizard displays a warning indicating that it can't connect to the camera. In this case, press the *Previous* button to go back and enter the correct username and password.



Connected	Conf Data Source	Discovery				Log
em Status P	lease se Video Profile S	Selection Rel	fresh			
guration	tem C Resolution:	640x480	Framerate (fps):	5	Stream Mode:	
Dat	ta Source	MJPEG	Bitrate (Kbps):	8192	RTSP/UDP (Unicast Only)	
mation	Resolution: Encoding:	1920x1080 H264	Framerate (fps): Bitrate (Kbps):	25 2560	Stream Mode: RTSP/UDP (Multicast or Unicast) •	Hida
uct ION-R100S	Resolution: IME: Encoding:	1920x1080 H264	Framerate (fps): Bitrate (Kbps):	15 2048	Stream Mode: RTSP/UDP (Multicast or Unicast) 🔹	
me: 0d 00h 19m 55s En admin Da	abled: Resolution: ta Sour Encoding:	320×240 MJPEG	Framerate (fps): Bitrate (Kbps):	3 300	Stream Mode: RTSP/UDP (Multicast or Unicast)	
str	ream Mo					
Us	ername					
Co	nnectio				*	
				Pre	vious Next Cancel	

Step 4 – Summary

Here the wizard displays the details of the video stream you have selected. To confirm that this is the video stream that you want, click on *Finish*. The wizard then closes and the data source configuration is automatically populated.

NODES		
Connected System Status Configuration Maintenance Information Product: ION-R100S Version: 5.5.0.4 Up time: 0d 00h 20m 46s User: admin Cpu: Stream Maintename Password Connectio Statue	Data Source Discovery Summary Source Mare: SND-L6013R Model: SND-L0013R Address: SUD-L0013R Address: SUB-L0013R Model: SND-L0013R Address: SUB-L0013R Mares: SUB-L0013R Mares: SUB-L0013R Mares: SUB-L0013R Stream MJPEG Streaming Mode: RTSP/UDP (Unicast Only) Stream Uri: rtsp://192.168.178.36.554/onvit/profile1/media.smp Previous Finish Cancel	Logout
		2



IO NODES			
Connected System Status Configuration	Configuration Please select from the fol System Date / Time N	owing subsections: etwork Video Out User Accounts	Logout
Maintenance	Data Sources On-Scree	n Displays Views Video Outputs Integration	
Information	Data Source Selection		Hide
Braduct JON P100S	Select Data Source:	1: SND-L6013R 🔹	
Version: 5.5.0.4	Name:	SND-L6013R	
Up time: 0d 00h 02m 23s User: admin Cpu:	Enabled: Data Source Type:	Video over RTSP	
	Stream Mode:	RTSP/UDP (Unicast Only)	
	Username:	admin	
	Password:	•••••	
	Connection URI:	rtsp://192.168.178.36.554/onvit/profile1/media.smp Test Connection	
	Save Cancel		

To finalize the data source configuration, type in a name (optional) for the data source and press **Save** at the bottom to save the new configuration.

- **Note:** The ION-R100S connects to a video stream ONLY when that video stream is displayed. Enabling a data source indicates that the ION-R100S can establish this connection when needed, not that it needs to do so right away. Disabling a data source prevents the ION-R100S from connecting to the video stream for any reason.
- **Note:** A video data source creates a single connection. Even if the video is played on two different tiles at the same time, the video stream is captured only once.

9.6.1.1 Testing a connection

Once the data source is fully configured and saved, press the *Test Connection* button to test the connection.

Possible results are:

- Connection attempt successful. No error was reported while testing the connection.
- **Connection attempt timed out.** Tried to connect to the camera but got no answer. The camera may be temporarily offline, else it is unreachable.

- Connection attempt refused by remote. The connection to the camera was established, but the camera refused the username/password provided.
- Connection established, but unable to start video stream. The connection to the camera was established, but the video stream could not be started. The connection URI may not point to a valid video stream in the camera. This can also occur if the camera has reached a connection or streaming limit due to other third-party connections.
- Invalid connection URI or internal error, connection attempt impossible. The connection URI is malformed or incomplete.

IO NODES			
Connected System Status Configuration	Configuration Please select from the fol	lowing subsections:	Logout
Maintenance	Data Sources On-Scree	n Displays Views Video Outputs Integration	
Information Product: ION-R100S Version: 5.5.0.4	Data Source Selection Select Data Source: Name:	1: SND-L6013R SND-L6013R	
Up time: 0d 00h 16m 16s User: admin Cpu:	Enabled: Data Source Type:	Video over RTSP Configure Data Source Using Discovery Wizard	
	Stream Mode: Username: Password:	RTSP/UDP (Unicast Only) admin	
	Connection URI:	rtsp://192.168.178.36.554/onvilfprofile 1/media.smp Test Connection Connection attempt successful.	
	Save Cancel	Parameter changes were applied.	

Note: Connection testing is only available for Video over RTSP and Video over HTTP data sources.

9.6.2 Video over HTTP Data Sources

To configure an MJPEG over HTTP video connection, set **Data Source Type** to Video over *HTTP*. There is no standardized method to query the list of available HTTP video streams in a camera and thus the discovery wizard cannot be used to configure the data source. You have to enter the **Connection URI** as well as any **Username** and **Password** required by the camera. If you do not know the **Connection URI** to use, see your camera documentation or contact the camera manufacturer.



View 1		Switch to Display	y View		CPU GPU	Mem	Eth 16:16 2018-03-01
10	NODE	S					
System 3 Configur Maintena	Connected Status ation ance		Configuration Please select from the followi System Date / Time Netw	ng subsections: ork Video Out User Accounts			Logout.
Informat Product Version: Up time: User: Cpu:	ION-R100S 5.5.0.4 0d 00h 04m 4 admin	38	Data Sources On-Screen D Data Source Selection Select Data Source: Name: Enabled: Data Source Type: Username: Password: Connection URI:	I: E100-Mini + Sony EV7500 I: E100-Mini + Sony EV7500 I	source=videoinput_1		Hida
			Save	Parameter changes were applied.			

9.6.3 Video over Passive RTP Data Sources

Some legacy video systems use video over passive connections. In this mode, the camera just sends the video to a fixed IP address or multicast group address without knowing if there is somebody to receive the video.

To configure a passive video connection, set **Data Source Type** to Video over Passive RTP, and then set the **Stream Mode** and **Stream Port** to match the passive video stream. If the passive video is sent to a multicast group, you must also enter the **Stream Multicast Group**. If the passive video is sent using SSM (Source-Specific Multicast), you must enter the **Stream Multicast Group** and **Stream Source**.



View 1 ~ Switch to D	isplay View		CPU GPU Mem Eth 16:27 2018-03
NODES			
Connected System Status Configuration Maintenance Information Product: ION-R100S. Version: 5.5.0.4 Up time: 0d 00h 1555 User: admin Cpu:	Configuration Please select from the folion System Date / Time Net Data Sources On-Screen Data Source Selection Select Data Source: Name: Enabled: Data Source Type: Stream Mode: Stream Multicast Group: Stream Port:	ving subsections: work Video Out User Accounts Displays Views Video Outputs Integration 3: E100-Mini + Sony EV7500 ▼ E100-Mini + Sony EV7500 √ Video over Passive RTP ▼ Multicast ▼ 237 0.0.4 40001 (0 - 65535)	Logout
	Save Cancel	Parameter changes were applied.	

9.6.4 Displaying a Data Source

Now that we have configured an RTSP video data source, the next step is to display it. In the *Configuration* page, select the *Video Out* tab, then the *Views* sub-tab.

Views determine how data sources are grouped and displayed. For example, by default each view displays up to 4 data sources in a 2x2 layout. How to configure views will be discussed in full details in section 9.8. For now, scroll down to the *Tile Selection* section. Each tile is identified by its position in the currently selected layout.

For the top left tile, click on the *Data Source* field and select our newly configured video data source. Click on *Save* at the bottom to apply the change.



View 1 🛛 🗸	Switch to Display View	CPU GPU Mem Eth 16:42 2018-03-01
IONOD	ES	
Connected System Status Configuration Maintenance Information Product: ION-R100S Version: 5.5.0.4 Up time: 0d 00h 30m User: admin Cpu:	Configuration Please select from the following subsections: System Date / Time Network Video Out User Accounts Data Sources On-Screen Displays Views Video Outputs Integration Tile Layout: 2x2 - - Tile Borders Width: 1 (0 - 8) - Stretch Tile Content: - - - Data Source: - - - On-Screen Display: - 1: SND-L6013R - Data Source: - - - - On-Screen Display: - 4: Data Source 3 - - Data Source: - - - - - Data Source: - - - - - Data Source: - - - - - - Data Source: - - - - - - - Data Source: - - - - - - - - On-Screen Display: - - -	Logout

If you are configuring the ION-R100S from your computer through the device's web interface, the video is now displayed. If you are configuring the ION-R100S locally, click on *Switch to Display View* at the top of the screen to view the video.



9.6.5 On-Screen Displays

IONODES

In the Configuration page, select the Video Out tab, then the On-Screen Displays sub-tab.

Screen Preview is a visual representation of the area where the OSD will be displayed. As you configure the OSD, the preview will be automatically updated. Each OSD can display up to 4 strings of text, located as you wish over the video.

View 1 × S	witch to Display View	CPU Mem Eth 16x 2018-
IO NODES		
Connected System Status Configuration Maintenance Information Product ION-R100S Version: 5-5.0.4 Up time: 00 000 35m 29s User: admin Cpu:	Configuration Please select from the following subsections: System Date / Time Network Video Out User Accounts Data Sources On-Screen Displays Views Video Outputs Integration On-Screen Display Selection Select a view: 1: On-Screen Display 1 Name: Enabled: Colors: Text Foreground: Text Background: 1	Logout
	Save Cancel Parameter changes were applied.	String Text: Custom String Formats Alignment: Offset: Absolute V V V Text Size:

Click on *Text Foreground* to select the color of the OSD text. In the same fashion, click on *Text Background* to select the background color for the OSD text.

On the right side of the preview is where you configure each OSD string. Click on the button **1** to configure the first OSD string. In *String Text*, type in the text to display. *Alignment* lets you select where to anchor the text (ex: top left corner). Use the *Offset* arrows if you want to move the text around that anchor. Finally, *Text Size* lets you select how big to display the text.

Ton configure other OSD strings, click on **2**, **3** or **4** and set the appropriate text, alignment and size.



Note: The ION-R100S provides a wide range of possible text sizes to ensure readability on a wide variety of display sizes.

View 1 ~ Switch to Dis	play View			em 16:49 2018-03-0
IO NODES				
Connected System Status Configuration Maintenance Information Product ION-R100S Version: 5.5.0.4 Up time: 00 d0h 37m 42s User: admin Cpu:	Configuration Please select from the fo System Date / Time I Data Sources On-Scree Select a view: Name: Enabled: Colors: Screen Preview:	loving subsections: letwork Video Out User Accounts n Displays Views Video Outputs Integration 1: OSD 1 OSD 1 Text Foreground: Text Background: Indoor camtera	Screen Preview: Click on a string to configure. Click on a string to configure. 2 3 4 String Text: Castom String Formats Indoor camera Alignment: Offset: Text Size: 7 *	Logout
	Save Cancel	Parameter changes were applied.		

The ION-R100S supports a list of custom OSD strings to display dynamic information (ex: the camera name or the current time). Click on <u>*Custom String Formats*</u> to see the complete list.

IO NODES	_					
Connected Vetern Status Vetern Status Vetern Status Vetern Status Please select fr System Date / Data Sources Select a view: Name: Enabled: Colors: Screen Preview: Screen Preview:	%n %d %dz %t %tz %cc[format]	Custom String For Display the data source name. Display the timestamp (local time) in Display the timestamp (UTC time) in Display the current time (UTC time) in Display the current date/time (local) format definition below. Display the current date/time (UTC) is Supported format fields are: %YY Year (0000-999) %y Year (000-999) %y Year (000-999) %mm Month (01-12) %B Month name %b Month abbreviated %d Day of month (01-31) %A Weekday Ex: %cz[%B %d, %H:%M] could yie	the format y the format y in the format in the format in the custor wa Wee %H Hou %H Hou %H Hou %H Minu %5 Sect %p AM d %E Septem	yyy-mm-dd HH:mm:ss. HH:mm:ss. HH:mm:ss. i format specified. See format specified. kday abbreviated (00-23) (00-23) te (00-59) ind (00-59) or PM designation ber 20, 13:19 =. Close	re. 4 ng Formsts at *t	



View 1 🛛 🗸	Switch to Dis	splay View		CPU Mem	Eth 16:52 2018-03-0
IO NOI	DES				
Connect System Status Configuration Maintenance Information Product ION-R10 Version: 5.5.0.4 Up time: 04 00h 4 Upse: admin Cpu:	105 . 007 .	Configuration Please select from the followin System Date / Time Netwo Data Sources On-Screen Dir Select a view: Name: Enabled: Colors: Screen Preview: Save Cancel	ng subsections: ork Video Out User Accounts splays Views Video Outputs Integration 1: OSD 1 OSD 1 Text Foreground: Text Background: Indoor camera 2018-03-01 16:52:08 Parametar changes were applied.	Screen Preview: Click on a string to configure 1 2 3 4 String Text: Custom String Formats % String Text: Custom String Formats % Text Size: Z	Logout

Note: Using custom OSD strings allows for greater flexibility. For example, "Indoor camera" in your OSD makes sense only for a camera installed indoors. Instead, using "%n" (data source name) allows creating one OSD and displaying it over all of your video streams.

9.6.6 Displaying an On-Screen Display

In the *Configuration* page, select the *Video Out* tab, then the *Views* sub-tab. Scroll down to the *Tile Selection* section.

For the top left tile, click on the *On-Screen Display* field and select our newly configured OSD. Click on *Save* at the bottom to apply the change.



View 1 × Switch to Display View	CPU GPU Mem Lith 16:56 2018-03-0
NODES	
Connected System Status Configuration Maintenance Information Data Sources On-Screen Displays Views Tile Layout: 2x2	Logout t User Accounts Video Outputs Integration
Product ION-R100S Version: 5.5.0.4 Up time: 0d 00h 44m 13s User: admin Tile Borders Width: 1 0 -	- 8) Hide
Cpu: Data Source: On-Screen Display:	1: SND-L6013R • (None)
Data Source:	1: 0SD 1 2: On-Screen Display 2 3: On-Screen Display 3 4: On-Screen Display 4 5: On-Screen Display 5
Save Cancel Parameter char	6: On-Screen Display 6 7: On-Screen Display 7 8: On-Screen Display 8

If you are configuring the ION-R100S from your computer through the device's web interface, the OSD is now displayed over the video. If you are configuring the ION-R100S locally, click on *Switch to Display View* at the top of the screen.



9.7 Configuring Web Connections

IONODES

In the *Configuration* page, select the *Video Out* tab, then the *Data Sources* sub-tab. After that, select an unused data source to configure. To configure a web connection, set *Data Source Type* to *Web Page*.

Type in the address of the web page in *Connection URI*. Type in a name (optional) for the data source, check *Enabled* to enable this data source and press *Save* at the bottom to save the new configuration.

View 1		Switch to Display View				Mem	Eth 17:00 2018-03-
ION	IODE	S					
Configuration Configuration Maintenance Information Product IO Version: 5: Up time: 00 User: ad Cpu:	Connected atus con ce box-R100S 5.0.4 d 00n 48m 47 dmin	Configuration Please select from the follow System Date / Time Net Data Source: On-Screen Data Source: On-Screen Data Source: Name: Enabled: Data Source Type: Connection URI:	Ving subsections: work Video Out User Accounts Displays Views Video Outputs 2: IONODES Web Site IONODES Web Site Web Page http://www.ionodes.com Test Connection Unable to	Integration NOTE: Web pages ci Displaying multiple w impact the performan test connection.	an consume a lot of memory, eb pages simultaneously can ce of the system.		Hode
		Save Cancel	Parameter changes were applied.				

Note: The ION-R100S connects to a web page ONLY when that web page is displayed. Enabling a data source indicates that the ION-R100S can establish this connection when needed, not that it needs to do so right away. Disabling a data source prevents the ION-R100S from connecting to the web page for any reason.

To display the web page, we need to add it to a view. In the *Configuration* page, select the *Video Out* tab, then the *Views* sub-tab. Scroll down to the *Tile Selection* section.



For the top right tile, click on the *Data Source* field and select our newly configured web page data source. Click on *Save* at the bottom to apply the change.

View 1 ~ Switch to D	Display View		CPU GPU	Mem 17:07 2018-03-0
IO NODES				
Connected System Status Configuration Maintenance Information Product: ION-R1008 Version: 5.5.0.4 Up time: 0d 00h 55m 49s User: admin Cpu:	Configuration Please select from the following System Date / Time Network Data Sources On-Screen Displ Tile Layout: Tile Borders Width: Tile Solders Width: Tile Selection Data Source: On-Screen Display: Data Source: On-Screen Display: Data Source: Save Cancel Par	subsections: video Out User Accounts video Out User Accounts video Out User Accounts video Outputs Integration video Outputs		Logout
View 1 ~ Switch to 0	Configuration View		CPU GPU	Mem 17:10 2018-03-0
Indoor camera 2018-03-01 17	7:10:24		DNODES Houston. We'v Introducing the	Q ▲ → ■ Home We got a decoder. all new ION-R200.



Warning:	Modern web pages are often filled with highly dynamic media content. Displaying such
	content require a lot of resources. Displaying multiple web pages WILL affect the video
	decoding performance of the ION-R100S.



9.8 Configuring Views

In the Configuration page, select the Video Out tab, then the Views sub-tab.

Views have the following configuration:

Name

User friendly name. Also displayed in the view selector in the top-left corner of the screen.

• Tile Layout

Views display content in one or more tiles. The tile layout dictates how many tiles to display as well as how to organize these tiles.

• Tile Border Width

Determines the width of the borders around each tile. A value of 0 means that no border will be shown.

• Stretch Tile Content

When the aspect ratio of a video stream does not match the aspect ratio of the tile displaying it, this setting determine whether the video is stretched to fill the entire tile or scaled to fit inside.

View 1 ~ Switch to Display View	w	CPU GPU Mem Eth 17:13 2018-03-0'
IO NODES		
Connected System Status Configuration Maintenance Information Product: ION-R100S Version: 5.5.0.4 Up time: 0d 01h 01m 39s User: admin Cpu: Cpu: Status Data On-S Data On-S Data On-S Data Sav	onfiguration ase select from the following subsections: em Date / Time Network Video Out User Accounts a Sources On-Screen Displays Views Video Outputs Integration Layout Borders Width: 1x1 Selection a Source: Screen Display: 4x4 Screen Display: 4x4 yeplied. 	Logout

Note: Stretching the content of a video tile can visibly deform the video, as shown in the image below. Web pages simply adjust their layout based on the available space, so they are generally not affected in the same way.



9.9 View Sequences

Once you have configured two or more views to display your various video streams, you can configure the ION-R100S to cycle through each of your views automatically on a timer. The timer as well as the order of views in the sequence is user configurable.



Sequence 1 - View 1 ~	Switch to Display View		Eth 17:23 2018-03-01
IO NODES			
Connected System Status Configuration Maintenance	Configuration Please select from the follow System Date / Time Nets	ving subsections: work Video Out User Accounts	Logout
Information Product: ION-B100S	Data Sources On-Screen D View Selection Select a view:	Displays Views Video Outputs Integration	Hide
Version: 5.5.0.4 Up time: 0d 01h 11m 49s User: admin Cpu:	Name: View Sequence: View Sequence Interval:	1: View 1 2: View 2 3: View 3 4: View 4 5: View 5	
		s1: Sequence 1 s2: Sequence 2 s3: Sequence 3 s4: Sequence 4	
	Save Cancel	Parameter channes were applied.	
		ranameter changes were applied.	

To configure a view sequence, simply enter the list of views you want to display, in the desired order and separated by commas, and the duration each view will be displayed. Select a name for the view sequence (optional) and click on **Save** to save the configuration.

Security Tour - View 1	✓ Switch to Display Vie	w	CPU [CPU] [CPU] [Mem] [Eth] 17: 2018-
NODES			
Connected System Status Configuration	Configuration Please select from the follo System Date / Time Ne	wing subsections: twork Video Out User Accounts	Logout.
Maintenance	Data Sources On-Screen View Selection Select a view:	Displays Views Video Outputs Integration s1: Security Tour	Hide
Product: ION-R100S Version: 5.5.0.4 Up time: 0d 01h 13m 50s User: admin Cpu:	Name: View Sequence: View Sequence Interval:	Security Tour 1,2 (ex: 1,4,1,5,3) 5 (5 - 30 sec)	
	Save Cancel	Parameter changes viere applied.	
		and a shipman.	

Back in Display Mode, you can now select the view sequence start the sequence. When a view sequence is selected, the name of the view currently displayed will also be shown.







9.10 Configuring Video Output

In the Configuration page, select the Video Out tab, then the Video Output sub-tab.

View 1 ~ Switch t	o Display View		CPU	GPU	Mem	Eth 17:35 2018-03-0
ONODES						
Connected	Configuration	ŝ.				Logout
System Status	Please select from the follo	owing subsections:				
Maintenance 1280x7	20 Data Sources On-Screer	n Displays Views Video Outputs Inte	egration			
Information	Video Output Selection Select a video output:	Video Output 1 🔹 🖬	dentify			
Product: ION-R100S Version: 5.5.0.4	General					Hide
Up time: 0d 01h 24m 02s User: admin Cpu:	Connected: Output Resolution: Background Color:	✓ 1280x720 * Black				
(Overlay Visibility: Selected View:	Visible • 1: View 1	•			
	Save Cancel	Parameter changes were applied.				

The configuration of the display output is as follows:

• **Connected** (read only)

Indicates whether the display output is connected to a physical display.

• Output Resolution

Determines the display resolution to use for this output. See below for details.

Background color

Determines the background color for empty tiles.

• Overlay Visibility

The overlay is the utility bar at the top of the screen. The overlay can be displayed at all times or it can automatically hide itself after being used. When auto-hidden, moving the mouse to the top of the screen shows (temporarily) the overlay.

Selected View

Selects the view to display on this output. Changing this value is the equivalent of selecting a view in the view selector in the top-left corner of the screen.



• Identify

Identifies the display connected to the decoder and the resolution used. An overlay showing this information will appear briefly in the top left corner and then disappear a couple of moments later.

By default, display outputs are configured to automatically select the best resolution supported by the TV or monitor. In most cases, this is the desired behavior. If you want to use a different resolution, click on **Output Resolution** to display the list of supported resolutions.

View 1 ~ Swi	tch to Display View			CPU	GPU	Mem	Eth	17:41 2018-03-0
IO NODES						e Sector (S		
Connected System Status Configuration Maintenance Information Product ION-R100S Version: 55.0.4 Up time: 0d 01h 29m 54s User: admin Cpu:	Configuration Please select from the following System Date / Time Networ Data Sources On-Screen Dis Video Output Selection Select a video output: General Connected: Output Resolution: Background Color: Overlay Visibility: Selected View:	(Best Available) 1280x720 1280x765 1280x800 1280x400 1280x1024 1360x768 1360x768 1360x768 1440x900 1600x900 1600x1050 1800x10 18	tegration Identify					Hide
	Save Cancel p	arameter changes were applied.						

If you disconnect a display, the ION-R100S remembers the selected output resolution in case the display was disconnected by mistake. If you reconnect the same display, the output resolution remains unchanged. If you connect a different display in its place, the new display may not support the same set of possible output resolutions. In that case, the output resolution automatically reverts to *Best Available* to prevent any compatibility issues with the new connected display.

10 Performing a Firmware Update

This section describes how to update your ION-R100S to newer firmware versions from the web interface.

- 1. On the device, switch to configuration view OR navigate to your device's web interface.
- 2. If not currently logged in, log in using an administrator account's credentials.
- 3. Click on the *Maintenance* tab.
- 4. Click on the *Update* button. You will be asked for the firmware update file; please select the **.iof** file which was provided by IONODES.

View 1 Switch to D	isplay View	
IONODES		
Connected	Maintenance	Logout
Configuration Maintenance	Please select from the following operations: Retrieve system information file.	Click here
Information	Perform a firmware update.	Update
Product: ION-R100S Version: 5.5.0.4 Up time: 0d 01h 35m 40s User: admin Cpu:	Reboot: 	Device Reset Include network settings

- 5. You will see the following messages indicating the status of the update:
 - Firmware upload in progress... (100%)
 - Firmware uploaded. Saving to internal storage... (0%)
 - Validating and decompressing firmware... (0%)
 - Firmware ready for installation. Rebooting device... (0%)
 - Web page will disconnect and the device will reboot.
 - Once the device has rebooted, return to the configuration view. If you
 are performing the firmware update remotely, the web interface automatically reconnects.
 - Testing firmware stability... (26%)
 - Lasts 120 seconds.
 - Firmware update complete. (100%)

10.1 Batch Firmware Update

IONODES

This section describes how to perform a batch update of multiple ION-R100S devices to newer firmware versions from the ION Configuration Tool (ICT).

The batch firmware update works by starting a firmware update session. Only one session at time is allowed and only 20 devices can be selected by session.

From the ICT, select one or more ION-R100S devices.

NODES - Configuration	on lool							-	U >
dmin 🔻 Help 👻									
evice Discovery «	Discovery	Networks 🔩	192.168.178.28 (LAN)		\sim	Tools	: 💠 🗿 🖻	≫ 🥹	
Search Domain	MAC Address	Serial Number	IP Address	Туре	Version	Video	Audio	1/0	Serial Port
🔍 local	✓ 00:07:32:48:91:50 ✓ 00:22:CB:00:73:E9	R400-3173-4900-0038 E200-3172-0900-0001	192.168.178.163 192.168.178.138	ION-R100S ION-E100-MINI	5.5.0.4 4.1.1.0	In: 0 Out: 1 In: 1 Out: 0	In:0 Out:0 In:1 Out:1	In:0 Out:0 In:2 Out:1	0 1
-	In: = Input Out: = Output								

By using the right mouse button on the selected device(s), choose the "Firmware Update" menu option.



NODES - Configuration	on Tool							-	o x
Admin + Help +									
Device Discovery «	Discovery 🔇	Networks 🛃 1	92.168.178.28 (LAN))	\sim	Tool	s 💠 🕥 🖻	🔏 😡	
Search Domain	MAC Address ♥ 00.07/32/8 ↔ ♥ 00.22.CB:00 ⑧ ♥ ♥ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽	Serial Number Assign IP Address(es) Firmware Update Identify Device Configuration Web Page Live Viewer Restart Device(s) Export Configuration Import Configuration	IP Address 22.168.178.163 22.168.178.138	Type ION-R100S ION-E100-MINI	Version 5.5.0.4 4.1.1.0	Video In: 0 Out: 1 In: 1 Out: 0	Audio In: 0 Out: 0 In: 1 Out: 1	1/0 In: 0 Out: 0 In: 2 Out: 1	Serial Port 0 1
	In: = Input Out: = Out	tput							

To start a firmware update session, choose the ".iof" file corresponding to the new firmware by clicking to the "Select File ..." button. Once selected, click to the "Start" button.

nware File:			Select File
rial Number / MAC Address	IP Address	Version Status	Start
):07:32:4B:91:50	192.168.178.163	5.5.0.4	Clear
			Close



Once started, the "Firmware Update Session" window shows the progress of the firmware update. This window can be closed at any moment without losing the current session.

If closed, the progress of the current session can be followed by reopening the "Firmware Update Session" window by clicking the solution from the "Tools" toolbar.

Once done, clear the current session from the "Firmware Update Session" window and restart a new session if needed.

11 Diagnostics

IONODES

11.1 View Stream Details

In order to help diagnose connectivity or performance problems, the ION-R100S can display live details about the video displayed in each tile. To display the stream details, click on the stream details, click on the button at the top of the screen.

The stream details include:

- The name of the data source
- The connection URI
- The current connection status
- The video stream encoding and resolution (not the size of the tile the video is playing in)
- The video stream framerate
- The video stream bitrate
- The network packet lost count (displayed only when one or more packets are lost)

View 1 ~ Switch to Con	īguration View	CPU Mem	Eth 18:02 2018-03-01
SND-L6013R rtsp://192.166.178.36:55 Connection State: Conn Encoding: JPEG Resolution: 640x480	4/onvif/profile1/media.smp cted Framerate: 4.92 fps Bitrate: 3.37 Mbps		



11.2 Safe Mode

It is possible to configure the ION-R100S in such a way that there is just too much video to decode. Whether it is due to the number of concurrent video streams or the combined bitrate of all video streams being too high, in such scenarios the ION-R100S may run at maximum capacity and it may not be enough to decode all the video. In such a scenario, the ION-R100S may become increasingly unresponsive, thus preventing access the configuration of the device in order to fix the problem.

It is also possible that a video stream from a third-party camera may not strictly follow the H.264 video encoding standard, causing problems in the ION-R100S while decoding the video stream.

For all scenarios where the device becomes uncooperative, the ION-R100S offers a solution in the form of safe mode. Safe mode is a special mode of operation where all data sources are forcibly disabled. The device therefore no longer decodes any video, giving you easy access to the configuration of the device to fix the issue before returning to the normal mode of operation.

Safe mode is enabled during the boot-up of the device. It requires a keyboard to be connected to the device. While the ION-R100S is booting up, wait for the device to reach the step shown in the image below:



While the ION-R100S starts its system services, **press and hold the LEFT SHIFT key and <u>RIGHT SHIFT key on the keyboard</u>.** When the device detects the key combination, it acknowledges the switch to safe mode operation as shown below:



Note: It takes only a few seconds for the ION-R100S to start the system services and safe mode can be enabled only during that step of the boot-up sequence. If the device finishes booting up before you press the key combination, you can simply shut down and restart the device and try again.



Once you fix the configuration of the ION-R100S, you need to restart the device to return to its normal mode of operation.



Annex A – Statement Limited Warranty

The warranties provided by lonodes Inc. (Ionodes) in this Statement of Limited Warranty apply only to ION-R100S products purchased from an authorized Ionodes Inc. (Ionodes) Reseller, Integrator or Distributor and returned from European, Asian or North American countries, and excludes all Latin American countries. The term "ION-R100S" means an ION-R100S module, any module upgrade, or accessories, or any combination of them. The term "ION-R100S" does not include any software programs, whether pre–loaded with the ION-R100S, installed subsequently or otherwise which are covered by a separate Limited Warranty. Nothing in this Statement of Warranty affects any statutory rights of purchaser that cannot be waived or limited by contract. If you have any questions regarding this Limited Warranty, contact Ionodes Inc. and its resellers. The Warranty period for the ION-R100S is 2 years from date of billing for the ION-R100S product.

The lonodes Warranty for ION-R100S

lonodes warrants that each ION-R100S is free from defects in materials and workmanship, and conforms to the ION-R100S Official Published Specifications (See http://www.ionodes.com for details). The warranty period for an ION-R100S is a specified, fixed period commencing on date of billing by lonodes for the Product. If a valid proof of billing cannot be found, the warranty may be void by lonodes Inc. or measured from the date the ION-R100S has shipped from a lonodes Depot center based on its serial number.

If, during the warranty period, the ION-R100S is not in good working order, lonodes will, at its option, repair or replace it at no additional charge, except as is set forth below.

In some cases, the replacement product may not be new and may have been previously installed. Regardless of the replacement product used, lonodes' appropriate warranty terms apply.

In case lonodes or your reseller are unable to repair an lonodes ION-R100S, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired ION-R100S or ask for a cancellation of the respective agreement for such ION-R100S and get your money refunded.

Extent of Warranty

The warranty does not cover the repair or exchange of an ION-R100S resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by the end user, or failure caused by a product for which lonodes is not responsible. The warranty is voided by removal or alteration of ION-R100S or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Items Not Covered by Warranty

Ionodes does not warrant uninterrupted or error-free operation of an ION-R100S. Any technical or other support provided for an ION-R100S under warranty, such as assistance via telephone with "how-to" questions and those regarding ION-R100S set-up and installation, will be provided WITHOUT WARRANTIES OF ANY KIND.