

# User Manual



## Serial Host Protocols Driver Valerus VMS

XX285-70-02



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Introduction

The information in this manual describes the Serial Host Protocols driver and its use with the Valerus™.

This driver was created to allow controlling the Valerus application functions through the RS-232 port. The use of this driver requires Valerus 1.2 or higher.

The Serial Host driver is based on the keypad functionality, but allows other devices (i.e., an alarm system, access control or PLC) to switch/control camera functions through the Valerus software. This driver supports all keypad-like operations transferred in two different protocols:

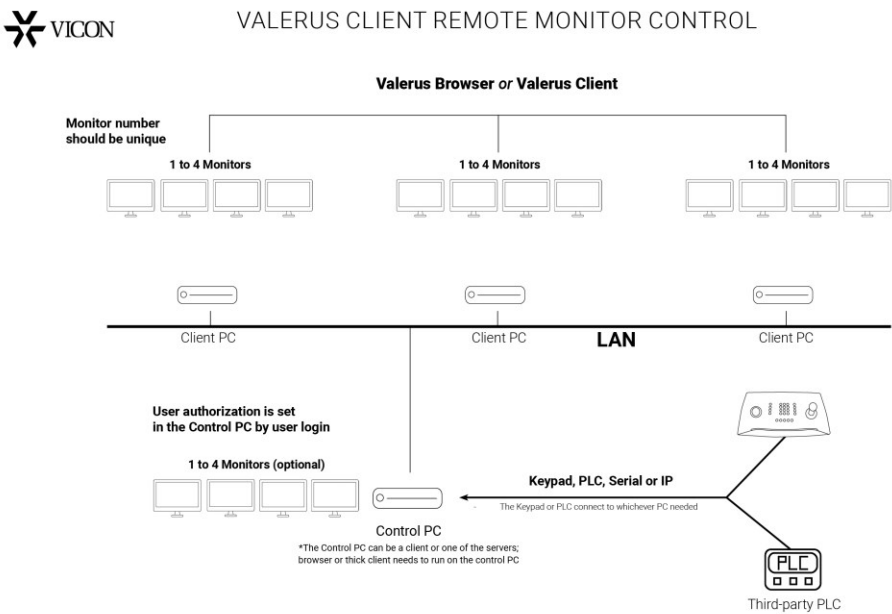
- Valerus Serial Host Protocol
- Valerus Serial Host Short Protocol

This manual shows how these two protocols operate with the Serial Host driver.

Note: Read all instructions before beginning any installation.

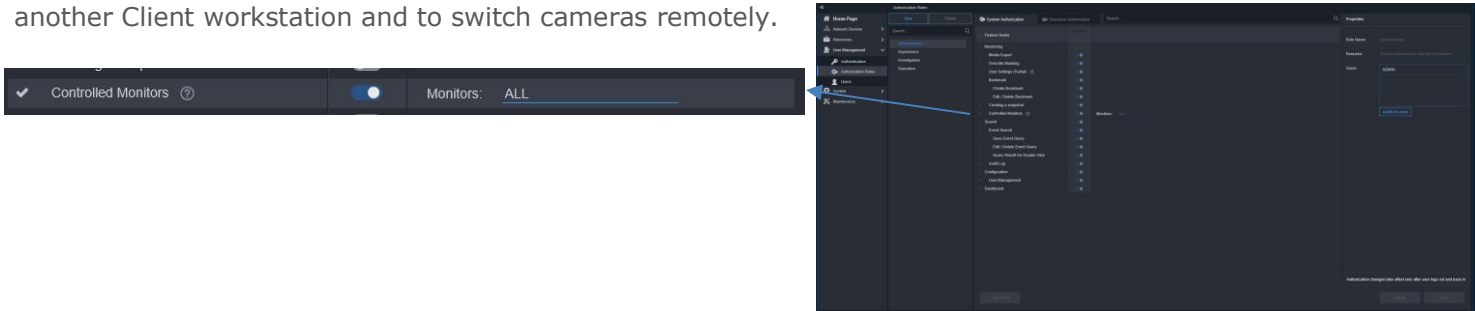
Controlling Monitors on Remote Clients

Starting in version 20.2, Valerus provides the capability to use a keypad/PLC to work not only on the Client PC to which the keypad/PLC is connected, controlling only its own monitors, but to control monitors on remote clients. Refer to the diagram below and refer to the full Valerus User Guide for details on configuration.



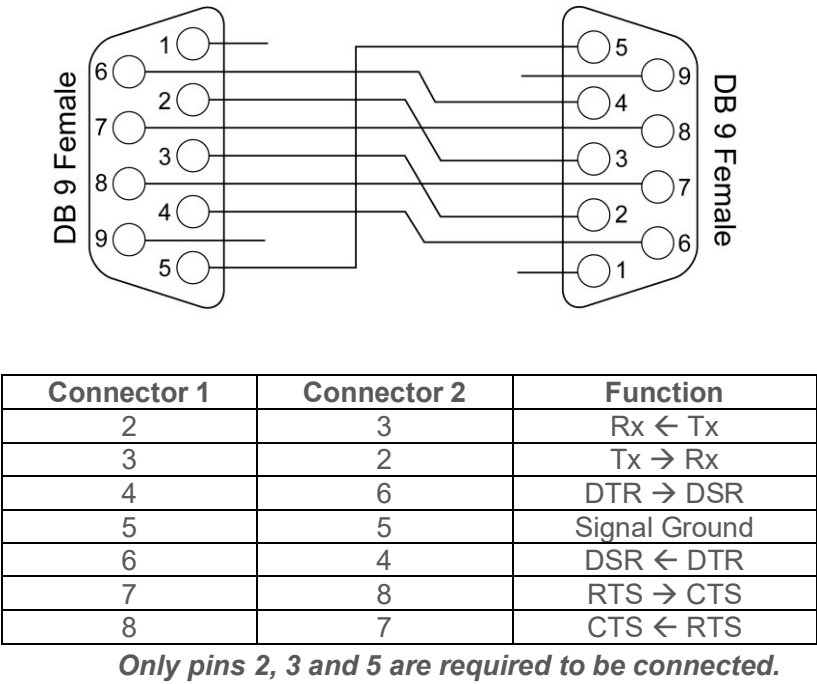
The Valerus Client, whether browser version or Thick-Client, must be running on the Control PC (noted in the diagram above; the Control PC can be a Client, Application Server or NVR) in addition to the Keypad/PLC service, and the user that is logged in will set the authorization to allow this type of use.

To control which users have authorization to control which monitors, a Controlled Monitors entry was added in the Roles portion of Configuration. When Controlled Monitors is enabled, it allows the authorized users to control another Client workstation and to switch cameras remotely.



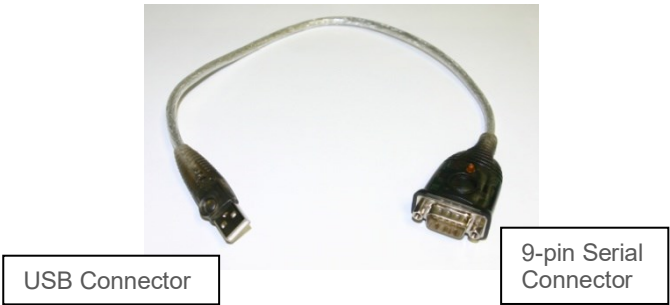
Installation

The Valerus VMS can be connected to a device to allow it to switch/control camera functions through the RS-232 port. If the “WS” does not have a COM port, this is done using a USB to serial port connector (converter). Plug the USB end of the adapter into any USB port on the “WS.” Refer to the typical system diagram that follows for a sample connection. For the RS-232 pin-out connections, refer to Figure 1, Standard Wiring (null modem).



**Figure 1: Standard RS-232 Cabling**  
(Note: If using other protocols, refer to that manufacturer’s documentation.)

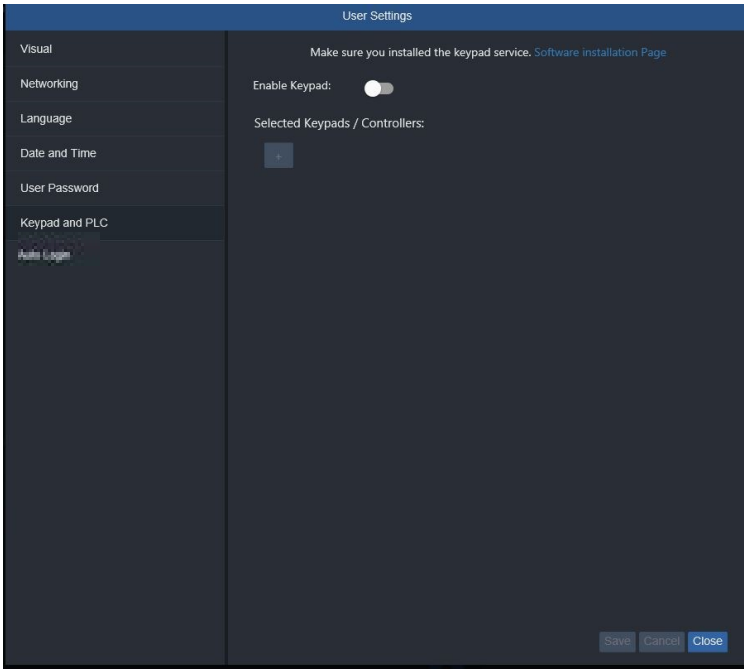
While most standard USB to serial port connectors (converters) work well, Vicon offers a USB to RS-232 COM port converter that has been tested and is certified by Vicon, model VRS232-USB-CD.



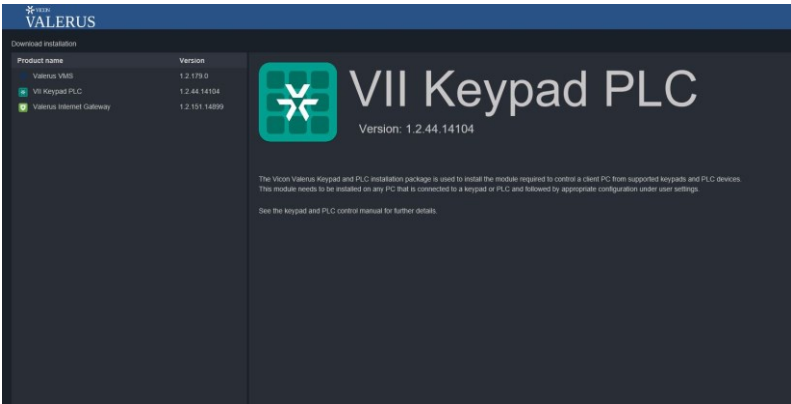
**Figure 2: USB – RS-232 Converter**

The serial host driver must have a dedicated COM port. The “User Settings” dropdown on Valerus presents an overview of the local settings of the system. These settings can be modified and saved directly from this screen. To configure the PLC, click on the “Keypad and PLC” category.

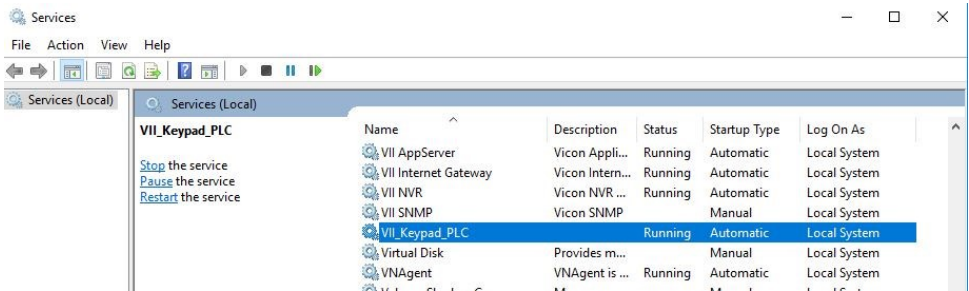
The Keypad and PLC screen allows you to enable your Keypad/PLC controller to this local client by clicking the button and then selecting the controller. The list will display the currently available devices; the serial must be connected first to have it show up in the list. The current software for the Valerus PLC must be installed. There is a link provided to the Valerus download page to make sure that the current software for the controller is downloaded; if it is not, it can be downloaded directly from this screen. Remember to assign numeric IDs to cameras, monitors, views, tours, relays and microphones to use the PLC.



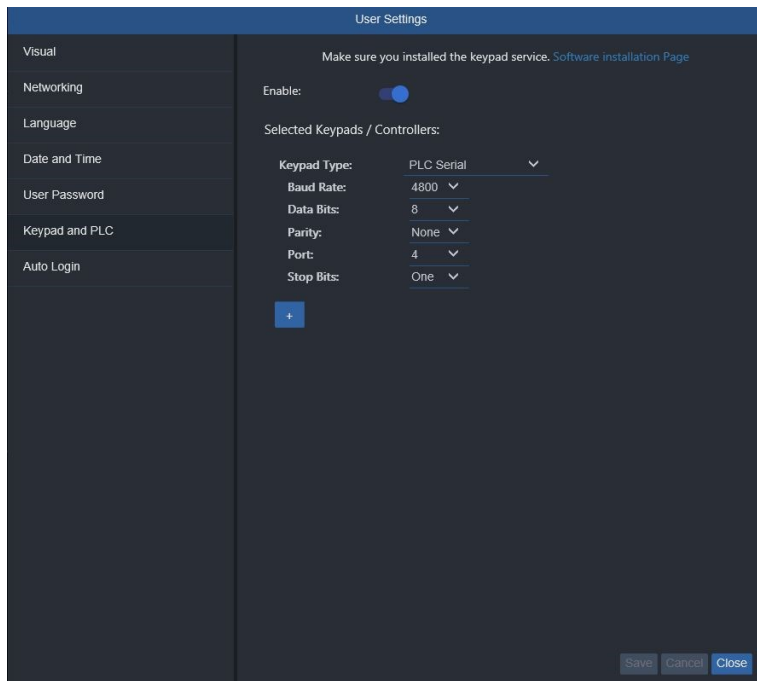
Click on the “Software Installation Page” hyperlink and choose the “VII Keypad PLC” product.



After downloading, run the installation. The “VII\_Keypad\_PLC” process will run.



Click on the “Enable” button on the User Settings, Keypad and PLC. Under “Selected Keypads/Controllers, Keypad Type”, choose type: “PLC Serial.” The other parameters should match the serial port parameters of the unit’s serial COM parameters.



For testing purposes, Vicon has successfully used Realterm Software (<http://realterm.sourceforge.net>). Hyperterminal is NOT recommended.

## Protocols

Following is a list of commands for use with the Serial Host driver.

Notes: All protocols use only capital letters.

All switching commands sent to the Valerus must be sent as a complete string, not character by character.

The time that it takes the video to display may require delaying some commands, such as presets or PTZ. If this is necessary, the sender must send a pause before the command to allow the video to display before the command can be recalled. Start with a 50 millisecond delay and increase in 50 millisecond increments until the command is recalled in a timely fashion on the video display.

For details on commands for Views, Tours and Microphones, refer to the Notes at the end of the document.

### Select Monitor & Quadrant

This is a mandatory command for using the Serial Host driver with the Valerus. The driver needs to know the monitor and the quadrant (rectangle) that is selected.

Product Support	Protocol	Command	Example	Notes
Valerus		MONITOR,x x,yy.	MONITOR,11,25.  The 25 <sup>th</sup> rectangle on monitor no. 11 in Valerus is selected	xx- Monitor # yy- Rectangle #
Valerus	Valerus Host Serial Short Protocol	M,xx,yy.	M,11,25.  The 25 <sup>th</sup> rectangle on monitor no. 11 in Valerus is selected	xx- Monitor # yy- Rectangle #

### Change Display Layout

Prior to this command, a monitor has to be selected.

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	CHANGEMODE,xx,yy.	CHANGEMODE,0,16.  The selected monitor layout is switched to 16 way (4x4)	xx - 0 yy – Layout

Important Notes: The layout change depends on the specific GUI capabilities.

## Start/Stop Camera

Prior to this command, a monitor and quadrant (rectangle) must be selected.

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	CAMERA,xx,0.	CAMERA,2,0.  Camera 2 is started on the previous selected Monitor	xx- Camera Number
Valerus	Valerus Host Serial Short Protocol	C,xx,0.	C,2,0.  Camera 2 is started on the previous selected Monitor	xx- Camera Number

## Cam/Goto Preset

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	GOTO,xx,0.	GOTO,11,0. Preset 11 is called	xx- Preset Number
Valerus	Valerus Host Serial Short Protocol	G,xx,0.	G,11,0. Preset 11 is called	xx- Preset Number

## Pan Left

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	LEFT,xx,0.	LEFT,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	4,xx,0.	4,11,0.	xx- Speed 1-99



## Pan Right

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	RIGHT,xx,0.	RIGHT,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	6,xx,0.	6,11,0.	xx- Speed 1-99

## Tilt Up

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	UP,xx,0.	UP,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	8,xx,0.	8,11,0.	xx- Speed 1-99

## Tilt Down

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	DOWN,xx,0.	DOWN,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	2,xx,0.	2,11,0.	xx- Speed 1-99

## Zoom In

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	ZOOMIN,xx,0.	ZOOMIN,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	+,xx,0.	+,11,0.	xx- Speed 1-99

## Zoom Out

The monitor needs to be defined prior to using this command. (In the Valerus application the camera needs to be selected in the GUI prior to using this command.)

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	ZOOMOUT,xx,0.	ZOOMOUT,11,0.	xx- Speed 1-99
Valerus	Valerus Host Serial Short Protocol	-,xx,0.	-,11,0.	xx- Speed 1-99

## Quick Playback

The monitor needs to be defined prior to using this command.

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	QPB,xxx,YY.	QPB,15,1.	xxx = Seconds, YY = Camera ID
Valerus	Valerus Host Serial Short Protocol	X,xx,YY.	X,3,1.	xx= 3 - 15 secs xx= 4 - 30 secs xx= 5 - 1 min xx= 6 - 5 min  Must have YY YY – Camera ID

## Stop Camera Stream on a Monitor

The monitor and rectangle on which to stop the stream.

Product Support	Protocol	Command	Example	Notes
Valerus	Valerus Host Serial Protocol	STOPSTREAM,xxx,yy.	STOPSTREAM,15,1.	xxx = Monitor Number yy = Rectangle Number
Valerus	Valerus Host Serial Short Protocol	D,xx,yy.	D,15,1.	xx = Monitor Number yy = Rectangle Number

Notes for Views, Tours or Microphones:

To start/stop a View, Tour or Microphone, use the same commands as Start/Stop Camera, however only a monitor needs to be selected prior to the command; a rectangle is NOT required.

Views, Tours or Microphones cannot be stopped by the PLC. To stop a View, a Stop Camera Stream on a Monitor command should be used to individually stop each camera in the view.

In a mixed channel, with a camera and microphone linked, the Stop command will stop both the camera and the microphone.

## Shipping Instructions

Use the following procedure when returning a unit to the factory:

1. Call or write Vicon for a Return Authorization (R.A.) at one of the locations listed below. Record the name of the Vicon employee who issued the R.A.

Vicon Industries Inc.  
135 Fell Court  
Hauppauge, NY 11788  
Phone: 631-952-2288; Toll-Free: 1-800-645-9116; Fax: 631-951-2288

For service or returns from countries in Europe, contact:

Vicon Industries Ltd  
Unit 4, Nelson Industrial Park,  
Hedge End, Southampton  
SO30 2JH, United Kingdom  
Phone: +44 (0)1489/566300; Fax: +44 (0)1489/566322

2. Attach a sheet of paper to the unit with the following information:
  - a. Name and address of the company returning the unit
  - b. Name of the Vicon employee who issued the R.A.
  - c. R. A. number
  - d. Brief description of the installation
  - e. Complete description of the problem and circumstances under which it occurs
  - f. Unit's original date of purchase, if still under warranty
3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.
4. Mark the R.A. number on the outside of the carton on the shipping label.

## Vicon Standard Equipment Warranty

Vicon Industries Inc. (the “Company”) warrants your equipment to be free from defects in material and workmanship under Normal Use from the date of original retail purchase for a period of three years, with the following exceptions:

1. Access Control System Components: Two year from date of original retail purchase.
2. Uninterruptible Power Supplies: Two years from date of original retail purchase.
3. For PTZ cameras, “Normal Use” excludes prolonged use of lens and pan-and-tilt motors, gear heads, and gears due to continuous use of “autopan” or “tour” modes of operation. Such continuous operation is outside the scope of this warranty.
4. Any product sold as “special” or not listed in Vicon’s commercial price list: One year from date of original retail purchase.

**NOTE:**

- If the product is to be used outdoors or in dusty, humid, or other hostile environments, it must be suitably protected.
- Camera products must be protected, whether in use or not, from exposure to direct sunlight or halogen light as the light may damage the camera image sensor. This applies to both indoor and outdoor use of the cameras.
- Failure to comply with any of the aforementioned requirements will invalidate this Limited Hardware Warranty.

Date of retail purchase is the date original end-user takes possession of the equipment, or, at the sole discretion of the Company, the date the equipment first becomes operational by the original end-user.

The sole remedy under this Warranty is that defective equipment be repaired or (at the Company’s option) replaced, at Company repair centers, provided the equipment has been authorized for return by the Company, and the return shipment is prepaid in accordance with policy. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer. When a product or part is exchanged the replacement hardware becomes the property of the original purchaser and all hardware or part thereof that is replaced shall become the property of Vicon.

The warranty does not apply (a) to faulty and improper installation, maintenance, service, repair and/or alteration in any way that is not contemplated in the documentation for the product or carried out with Vicon consent in writing, operation adjustments covered in the operating manual for the product or normal maintenance, (b) to cosmetic damages, (c) if the product is modified or tampered with, (d) if the product is damaged by acts of God, misuse, abuse, negligence, accident, normal wear and tear and deterioration, improper environmental conditions (including, but not limited to, electrical surges, water damage, chemical exposure, an/or heat/cold exposure) or lack of responsible care, (e) if the product has had the model or serial number altered, defaced or removed, (f) to consumables (such as storage media or batteries) (g) to products that have been purchased “as is” and Vicon the seller or the liquidator expressly disclaim their warranty obligation pertaining to the product, (h) to any non-Vicon hardware product or any software (irrespective of packaged or sold with Vicon hardware product) and Vicon products purchased from an unauthorized distributor/reseller, (i) to damage that occurs in shipment or (j) to damages by any other causes not related to defective design, workmanship and/or materials.

The warranty for the products shall run from Vicon to End User customers only (including product purchased through authorized partners and resellers). Vicon is not obligated under any circumstances to honor warranties on product(s) purchases from internet auction sites including eBay, uBid or from any other unauthorized resellers. Except as explicitly provided herein, Vicon disclaims all other warranties, including the implied warranties of fitness for a particular purpose and merchantability.

**Software supplied either separately or in hardware is furnished on an “As Is” basis. Vicon does not warrant that such software shall be error (bug) free. Software support via telephone, if provided at no cost, may be discontinued at any time without notice at Vicon’s sole discretion. Vicon reserves the right to make changes to its software in any of its products at any time and without notice.**

**The Warranty and remedies provided above are exclusive and in lieu of all other express or implied warranties including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. Certain jurisdictions do not allow the exclusion of implied warranties. If laws under such jurisdictions apply, then all express and implied warranties are limited to the warranty period identified above. Unless provided herein, any statements or representations made by any other person or firm are void. Except as provided in this written warranty and to the extent permitted by law, neither Vicon nor any affiliated shall be liable for any loss, (including loss of data and information), inconvenience, or damage, including, but not limited to, direct, special, incidental or consequential damages, resulting from the use or inability to use the Vicon product, whether resulting from breach of warranty or any other legal theory. Notwithstanding the foregoing, Vicon total liability for all claims under this warranty shall not exceed the price paid for the product. These limitations on potential liabilities have been an essential condition in setting the product.**

No one is authorized to assume any liability on behalf of the Company, or impose any obligations on it in connection with the sale of any Goods, other than that which is specified above. In no event will the Company be liable for indirect, special, incidental, consequential, or other damages, whether arising from interrupted equipment operation, loss of data, replacement of equipment or software, costs or repairs undertaken by the Purchaser, or other causes.

This warranty applies to all sales made by the Company or its dealers and shall be governed by the laws of New York State without regard to its conflict of laws principles. This Warranty shall be enforceable against the Company only in the courts located in the State of New York.

The form of this Warranty is effective March 22, 2019.

**THE TERMS OF THIS WARRANTY APPLY ONLY TO SALES MADE WHILE THIS WARRANTY IS IN EFFECT. THIS WARRANTY SHALL BE OF NO EFFECT IF AT THE TIME OF SALE A DIFFERENT WARRANTY IS POSTED ON THE COMPANY’S WEBSITE, [WWW.VICON-SECURITY.COM](http://WWW.VICON-SECURITY.COM). IN THAT EVENT, THE TERMS OF THE POSTED WARRANTY SHALL APPLY EXCLUSIVELY.**



VICON INDUSTRIES INC.

For office locations, visit the website: [vicon-security.com](http://vicon-security.com)

