ASGARD PHYSICAL INTERFACE

Installation Guide

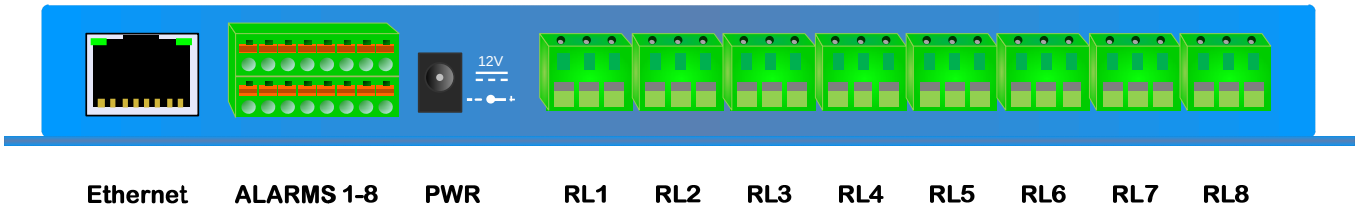
8 x 8

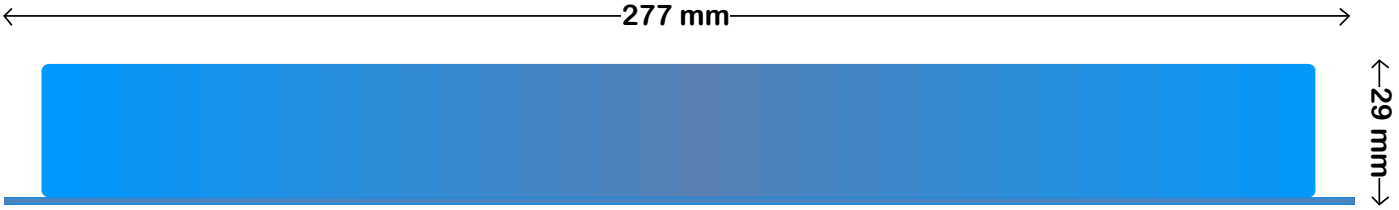
Building Block Video Ltd
17 Apex Park,
Diplocks Industrial Estate,
Hailsham, East Sussex, BN27 3JU, UK
Tel: + 44 (0) 1323 842727
Fax: +44 (0) 1323 842728
www.asgardhd.com

Contents

Unit specification

Power supply	12Vdc
Power consumption	6 watts
Network connections	IEEE 802.3 Compatible Ethernet Controller Fully Compatible with 10/100/1000Base-T Networks Integrated MAC and 10Base-T PHY Port 80 Webpage interface
Change over relays	8x 230Vac 5A
Alarm Inputs	8 x Volt free inputs
Temperature, ambient	32°F (0°C) to 104°F (40°C) operating
Temperature, ambient	-40°F (-40°C) to 167°F (75°C) non-operating and storage
Humidity (RH), ambient	10% to 90% (non-condensing) operating
Dimensions (H x W x D)	29mm, 277mm, 92mm
Weight	639 grams





Unpacking - Inspect the packaging for signs of damage. If damage has occurred, advise the carrier and/or the suppliers immediately. Unpack the Physical Interface carefully and check that all the items are present and correct.
Retain Packaging - The shipping carton is the safest container in which to transport the unit. Retain undamaged packaging for possible future use.

IMPORTANT SAFETY PRECAUTIONS

Read & Retain Instructions - All relevant safety, installation and operating instructions should be read & retained before attempting to install, connect or operate the unit.

Water and Moisture - Do not expose the internal electronics of this unit to water or dampness.

Power Sources - This unit should be operated only from a 12Vdc source.

Servicing - Servicing of the unit should only be undertaken by qualified service personnel.

Damage Requiring Service - Servicing by qualified personnel should be carried out under the following conditions:

(a) When the power-supply cord or plug is damaged
(b) If liquid has been spilled, or objects have fallen into, the unit
(c) If the internal electronics of the unit have been exposed to rain or water
(d) If the unit does not operate normally by following the operating instructions
(e) If the unit has been dropped or the enclosure is damaged

Replacement Parts - If replacement parts are required, ensure that only replacement parts recommended by the product manufacturer are used.

Safety Check - Upon completion of any service or repairs to the unit, safety checks should be performed to ensure that the unit is in proper operating condition.

Pre-installation Checks - It is recommended that the unit be bench-tested prior to installation on the site.

Adhere to Safety Standards - All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed or relevant local regulations.

WARNING

TO PREVENT DANGER OF FIRE OR SHOCK, DO NOT EXPOSE THE INTERNAL COMPONENTS OF THIS EQUIPMENT TO RAIN OR MOISTURE.

The “lightning flash with arrowhead” symbol inside an equilateral triangle is used to warn the user of this equipment that there are sufficiently high voltages within the enclosure to constitute a risk of electric shock.

The “exclamation point” symbol inside an equilateral triangle is used to alert the user of this equipment to important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Introduction

The ASGARD Physical Interface is a standalone unit that can be integrated into a large scalable system. It can be used to provide a hardware switch for the ASGARD HD Decoder. In addition the RS422 port can be used in one of two ways:

i, To send serial telemetry to additional controllers or other BBV products.

ii, To be provide a transparent RS422 path over an Ethernet network.

Technial Speciftion:

8 x volt free contact inputs

8 x single pole change over relay

Facilitates network

Features:

LEDs	1	Power
	8	Contact Status
	1	Network activity
Power socket	1	2.1mm (centre positive)

System setup

On receipt, the ASGARD Physical Interface will have a default IPv4 address of 192.168.0.100.

Open a web browser, type “192.168.0.100” in the address bar and press Enter.

Now you will be presented with a user name and password prompt.

On delivery and or after a factory reset the default user and password are:

User name: admin

Password: admin

When the correct user name and password have been used you will be presented with the root webpage. Using the webpage you will need to edit the Network settings,
IP address:
Subnet mask:
Default gateway:
Hostname:
Primary DNS:
Secondary DNS:

The decoder can also have its own Hostname name. As default it is ‘ASGARDHD’ this information should be supplied by your network administrator.

Root Webpage

When you’ve logged into the physical interface you will be presented with the root webpage.
The below is a copy of the root web page showing the full settings.

System Settings

Network Settings

IP address:	192.168.0.100
Subnet mask:	255.255.255.0
Default gateway:	0.0.0.0
Hostname:	ASGARDHD
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0

Edit Serial Settings
Edit Email Settings
Edit Admin Login Details
Edit User Login Details
Connection Diagram
Save Config
Logout
Download Config File
Chose File | No File Chosen
Upload Config File

Live Status

Relays

Toggle	1	2	1	2	1	2	1	2
On	1	2	1	2	1	2	1	2
Off	1	2	1	2	1	2	1	2

Contacts

Status	1	2	3	4	5	6	7	8

Contact Settings

Edit settings:	IP string:	Target IP address:	Target port:	Serial string:	Relay action:	Send Email
Contact 1		0.0.0.0	0		None	
Contact 2		0.0.0.0	0		None	
Contact 3		0.0.0.0	0		None	
Contact 4		0.0.0.0	0		None	
Contact 5		0.0.0.0	0		None	
Contact 6		0.0.0.0	0		None	
Contact 7		0.0.0.0	0		None	
Contact 8		0.0.0.0	0		None	

WWW.ASGARDHD.COM
Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

Network Settings

The network interface is set for Static addresses only. When you receive the Physical Interface it will have a static address of 192.168.0.100 & a default DNS name /Hostname of 'ASGARDHD'.

System Settings

Network Settings

IP address:	192.168.0.100
Subnet mask:	255.255.255.0
Default gateway:	0.0.0.0
Hostname:	ASGARDHD
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0

Network settings these should be given to you by the network administrator. If you have more than one Asgard physical interface on the network you can keep them all independently identifiable by using different Hostnames. As default the unit will be called ASGARDHD.

Live Status

The Root Webpage shows the real time status of the input Contacts & Relays. If the mouse cursor is held over the Relay status window and on the mouse up click the relay will toggle on the off, if the relay is already on it will turn off.

Status window:

Relays – When the window is red, it indicates that the relay is energised.

Contacts – When the window is red, it indicates that the contact is open.

Live Status

Relays

Toggle	1	2	3	4	5	6	7	8
On	1	2	3	4	5	6	7	8
Off	1	2	3	4	5	6	7	8

Contacts

Status	1	2	3	4	5	6	7	8

Email Settings

The ASGARD Physical Interface can be configuered to send an email on contact activation.
The massage that is sent is typed into the message box below. It will require an SMTP server address plus a valid username and password.

Edit Email Settings

Email Settings

SMTP server:	Port:	User name:	Password:	To:	Message:
relay.plus.net	25	username.smpt.com	**********	support@bbvcctv.com	This is to inform you that you have had an activation

Save Config
Send Test Email
Main Settings

WWW.ASGARDHD.COM
Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

When you are happy with your message, SMTP server details, you can send a text message to prove that you have got everything set up correctly, by pressing the Send Test Email button.

Edit Admin Login Details

Edit Login Details

Username Password:

admin .....

Edit Admin login details can be used to change the username & admin password.

Edit User Login Details

Edit Login Details

Username Password:

user .....

Save Config

Main Settings

WWW.ASGARDHD.COM
Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

Edit User login details can be used to change the username & admin password.

User Login in page

Logout

Live Status

Relays

Toggle	1	2	3	4	5	6	7	8
On	1	2	3	4	5	6	7	8
Off	1	2	3	4	5	6	7	8

Contacts

Status	1	2	3	4	5	6	7	8

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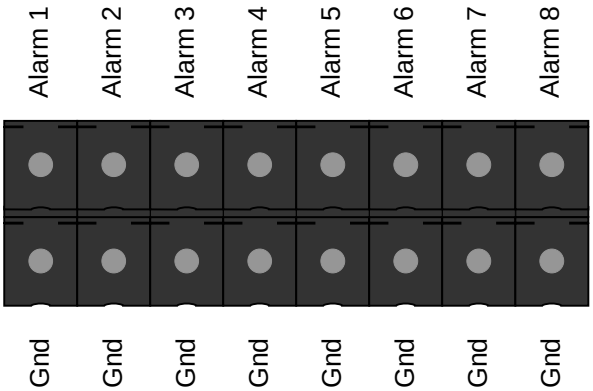
MAC Address: 00:04:A3:00:00:00

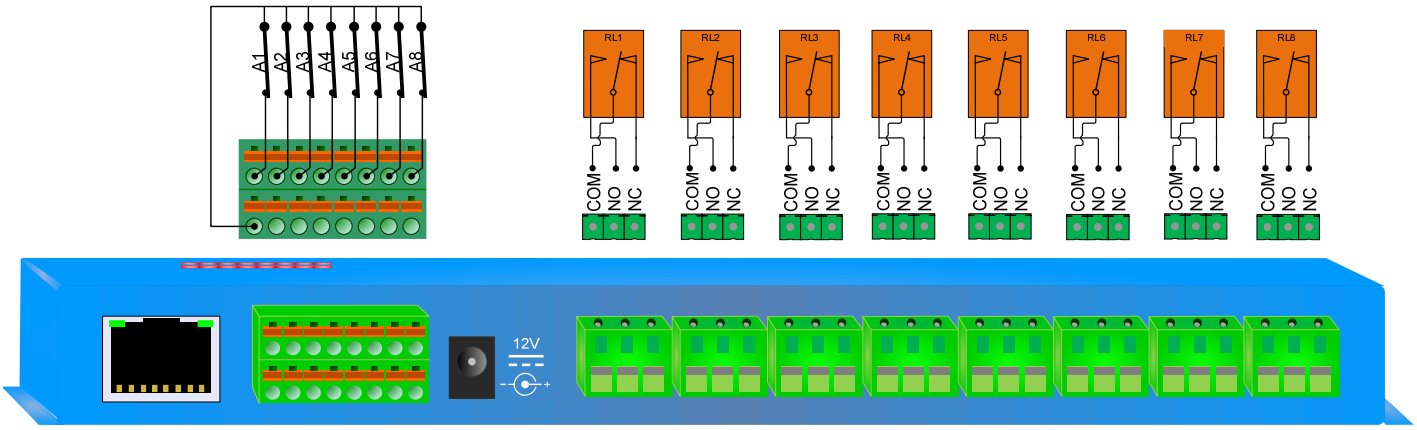
The user page shows the Contact & Relay status. By clicking on either the relay boxes or the contact boxes allows you to active each function remotely.

Connection diagram



Above is the pin out of the connector on the rear of physical interface, you can see that each alarm input has its own corresponding ground. All the grounds are on a common bus and all alarm inputs can be taken back to a single ground connector if this makes installation easer.

This model of Asgard Physical Interface has eight single pole change over relays.



Edit Contact Settings

Edit Contact Settings

Contact Settings

No:	Ip string:	Target Ip address:	Target Ip username:	Target Ip password:	Target Port:	Serial string:	Relay Action:	Send Email:
1		0.0.0.0			0		None	Yes / No

Relay Action: None

None
ALL ON
ALL OFF
ALL T
DIS EMAIL
DIS CON
DIS CON
DIS BOTH
MIMIC
R1 T
R1 ON
R1 OFF
R2 T
R2 ON
R2 OFF

Save Config

Main Settings

WWW.ASGARDHD.COM
Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

No: 1	This is the contact number you are editing the actions for.
Ip string:	This will be the CGI submission that will be sent for this contact.
Target Ip address: 0.0.0.0	This will be the target that receives the CGI submission.
Target Ip username: Target Ip password:	The target may be protected by standard-basic attenuation.
Target Port: 0	The remote devices may have different ports for remote control for example: 8080 8081 etc.
Serial string:	This will be the packet of telemetry that will be sent out of the RS422 port. This will not be available if the com port is set up for Transparent.
Relay Action: None None ALL ON ALL OFF ALL T DIS EMAIL DIS CON DIS BOTH MIMIC R1 T R1 ON R1 OFF R2 T R2 ON R2 OFF	**None** when contact opens there will be no relay action attached to this contact **ALL ON** when contacting opens all the relays will be put into the ON state **ALL OFF** when contacting opens all the relays will be put into the OFF state **ALL** T when the contact opens all relays will turn on a timed period **DIS EMAIL** when this contact is open emails will not be sent on contact activation **DIS CON** when this contact is open serial data will not be sent on contact activation **DIS BOTH** when this contract is open neither serial data or emails will be sent on contact activation **MIMIC** when the contact changes state the corresponding relay will mimic the input **R1 T** when the contact opens the relay will change state for a timed period **R1 ON** when the contact opens relay one will turn ON **R1 OFF** when the contact opens relay one will turn OFF **R2 T** when the contact opens the relay will change state for a timed period **R2 ON** when the contact opens relay one will turn ON **R2 OFF** when the contact opens relay one will turn OFF In the 8 X 8 model it shows 8 relays instead of 2 only (as shown in this table)
Send Email: Yes No	You can select independently which contact activation will send email

Creating a CGI command to trigger relays in another ASGARD Physical Interface

Edit Contact Settings

Contact Settings

No:	Ip string:	Target Ip address:	Target Ip username:	Target Ip password:	Target Port:	Serial string:	Relay Action:	Send Email:
3	/protect/rlys.cgi?rly=1,T	192.168.1.22	admin	admin	80		None	Yes / No

Save Config

Main Settings

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Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

No: 3	This is the contact number you are editing the actions for.
Ip string: /protect/rlys.cgi?rly=1,T	This will be the CGI submission that will be sent for this contact. In this example it will trigger relay 1 for a timed period.
Target Ip address: 192.168.1.22	This will be the destination that receives the CGI submission.
Target Ip username: admin	The target may be protected by standard-basic attenuation.
Target Ip password: admin	
Target Port: 80	The destination devices may have different ports for remote control for example: 80 8080 etc.

Ip string options are:

/protect/rlys.cgi?rly=1,T	Energise the relay for a 2 second period
/protect/rlys.cgi?rly=1,ON	Energise the relay
/protect/rlys.cgi?rly=1,OFF	De-energise the relay

CGI Commands from other network devices

Example http://192.168.1.185/protect/rlys.cgi?rly=2,T&user=root&pass=root

192.168.1.185 this is the destination IP address
/Protect sends the CGI command to the protected folder of the device
/rlys.cgi? the command type
rly=2,T the command that you wish to be actioned (turn on relay 2 for 2 seconds)
&user=admin the destination has user
&pass=admin & password protection

CGI Commands examples

send:
http://192.168.1.185/protect/rlys.cgi?rly=2,T&user= admin&pass=admin
http://192.168.1.185/protect/rlys.cgi?rly=2,ON&user= admin&pass=admin
http://192.168.1.185/protect/rlys.cgi?rly=2,OFF&user=admin&pass=admin

receive:
Success! 0

Creating a CGI command to select cameras streams on an ASGARDHD Decoder

Edit Contact Settings

Contact Settings

No:	Ip string:	Target Ip address:	Target Ip username:	Target Ip password:	Target Port:	Serial string:	Relay Action:	Send Email:
1	/command.cgi?layout=1&1	192.168.1.45	admin	admin	8080		None	Yes / No

Save Config

Main Settings

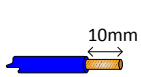
WWW.ASGARDHD.COM
Build Date: Jan 07 2014 16:34:03
MAC Address: 00:04:A3:00:00:00

No: 1	This is the contact number you are editing the actions for.
Ip string: /command.cgi?layout=1&1	This will be the CGI submission that will be sent for this contact. In this example it will initialize a stream from camera 1.
Target Ip address: 192.168.1.45	This will be the destination that receives the CGI submission.
Target Ip username: admin	The target may be protected by standard-basic attenuation.
Target Ip password: admin	
Target Port: 8080	The destination devices may have different ports for remote control for example: 8080 8081 etc.

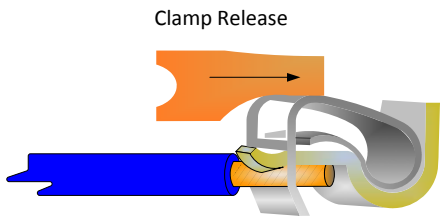
Ip string options are:

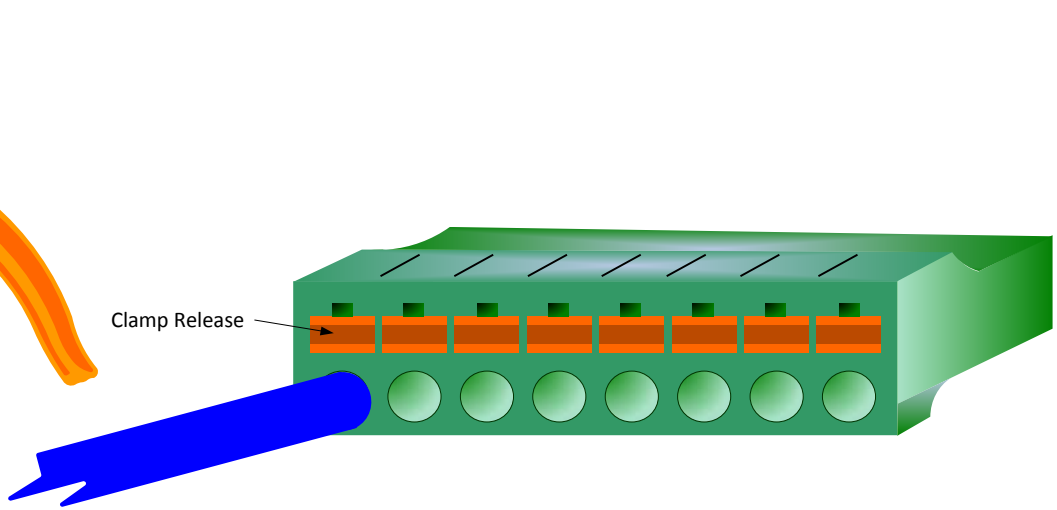
layout=1&0	Request the decoder to show a blue screen (request no streams)
layout=1&1	Request a single stream from camera 1
layout=1&2	Request a single stream from camera 2
layout=4&1,2,3,4	Request a stream from cameras 1, 2, 3 & 4 this will be showed as a quad

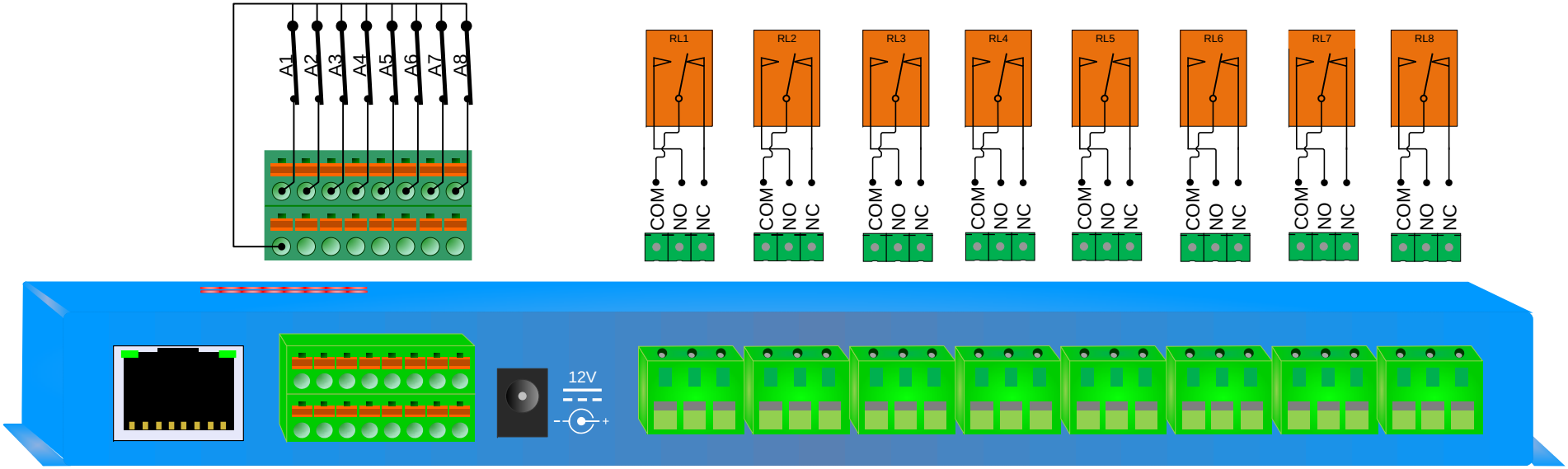
Cable Connection Information



Press the 'Clamp Release' to release the cage clamp, then insert the wire & release the 'Clamp Release' to lock the wire in place. Attention must taken to make sure that the clamp locks onto the conductor not the sleeving

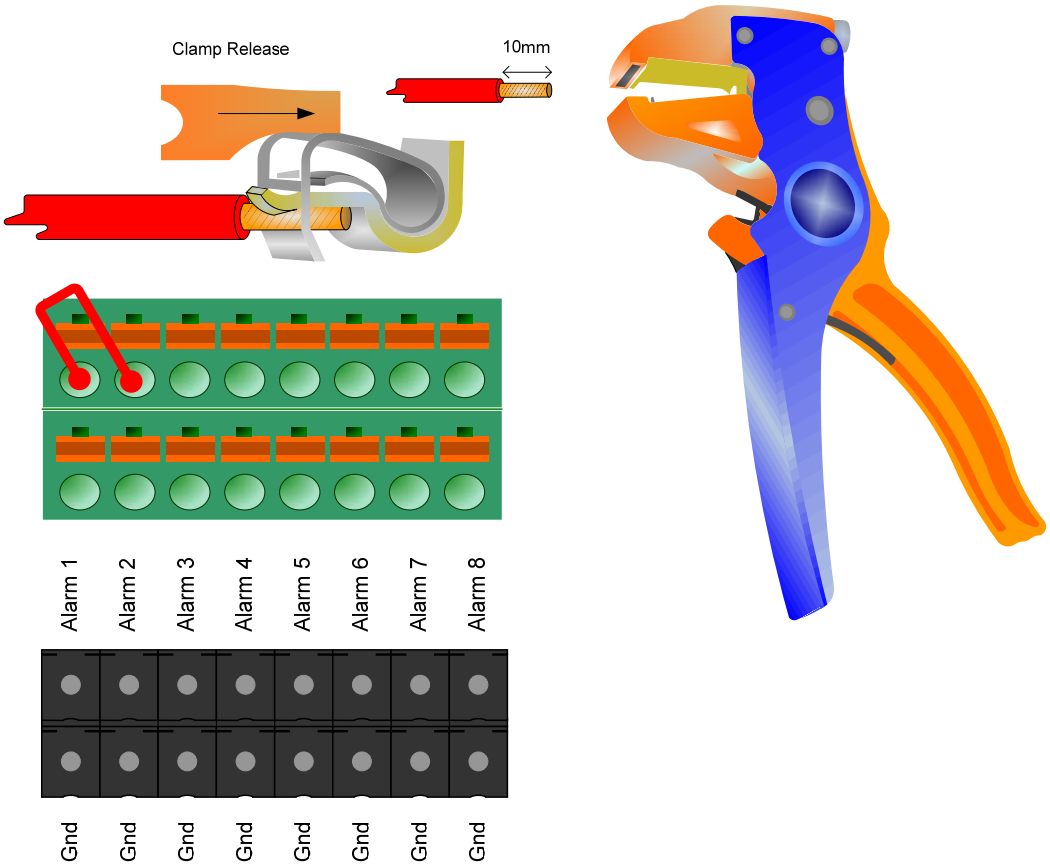






Factory default

To perform a factory reset you will need to power down the physical Interface. Link Alarm 1 and Alarm 2 and reapply power, wait until you see the contact LEDs flashing. Then power down the Physical Interface & remove the link. On repowering the unit it will have returned to factory settings.



CGI Commands

send:
http://192.168.1.185/protect/rlys.cgi?rly=2,T&user=admin&pass=admin
http://192.168.1.185/protect/rlys.cgi?rly=2,ON&user=admin&pass=admin
http://192.168.1.185/protect/rlys.cgi?rly=2,OFF&user=admin&pass=admin

receive:
Success! 0

send:
http://192.168.1.185/protect/status.xml?user=admin&pass=admin
receive:
- <response>
<rly0>1</rly0>
<rly1>1</rly1>
<rly2>1</rly2>
<rly3>1</rly3>
<rly4>1</rly4>
<rly5>1</rly5>
<rly6>1</rly6>
<rly7>1</rly7>
<alm0>1</alm0>
<alm1>1</alm1>
<alm2>1</alm2>
<alm3>1</alm3>
<alm4>1</alm4>
<alm5>1</alm5>
<alm6>1</alm6>
<alm7>0</alm7>
</response>

Product		Description
Rx10X		The Rx10X is designed to offer a simple solution for applications where there is a need to control one of a variety of 3rd Party Dome Cameras. The receiver offers considerable opportunities for upgrading existing BBV telemetry systems as it is now possible to add a wide range of integrated domes into the system.
Rx200/WBX		The Rx200 offers control of AC driven pan only or wash / wipe / lights for static cameras. The compact dimension of this PCB allows it to be fitted within a camera housing or dome as an alternative to the more usual weather-proof enclosure.
Rx300/WBX		The Rx300 offers control of AC driven pan, tilt and zoom cameras, whether mounted externally or internally. This gives you entry level control of AC Pan/Tilt/Focus with 1 auxiliary output. Controlled by BBV up-the-coax and 20mA twisted pair. The compact dimensions of the PCB allow it to be fitted within camera housing as an alternative to the more usual weather-proof enclosure.
Rx400/WBX		The Rx400P Telemetry Receiver is ideal for controlling full function ac pan/tilt/zoom Cameras in an external environment where accessories such as wiper, washer etc. are the norm. The Rx400P offers up to 16 full scene presets. These may be used as a method of visually patrolling large areas of a site. They may be interlinked with detection devices in automated system designs. Presets effectively reduce reliance on the operator.
Rx25X		The Rx25X Multiple Protocol Auxiliary Relay Receiver is designed to offer a simple, cost effective solution to activate an auxiliary output, for example to activate a Washer, Wiper or Lights in a static Camera application via a twisted pair cable. The compact dimensions of the PCB allows fitting within the camera housing.
Rx35X/WBX		The Rx35X is a telemetry receiver with ac pan and tilt outputs. It supports BBV RS422, Pelco P, Pelco D, Molynx D type, Sensormatic RS422, Vista RS485 & VCL RS485 telemetry and it allows entry level control of ac pan/tilt and zoom/focus with a wiper auxiliary output. The compact dimensions of the PCB allow it to be fitted within a camera housing as an alternative to the more usual weather proof enclosure. The unit is suitable for 230V mains operation. As a factory fitted option, the receiver can be supplied to operate from 24Vac or 110Vac. This option must be specified at the time of order.
Rx45X/WBX		The Rx45X MK5 is designed to control fixed speed AC pan & tilts heads from BBV and Baxall up-the-coax telemetry and a range of BBV485/422 telemetry protocols. The receiver offers system designers the option of using traditional P/T/Z heads for applications where it is necessary to specify a range of camera / lens combinations.
Rx55X/WBX		The Rx55X MK5 is designed to control variable speed DC pan & tilts heads from BBV and Baxall up-the-coax, and a range of RS485/422 telemetry protocols. The receiver offers system designers the option of using traditional P/T/Z heads for applications where it is necessary to specify a range of camera / lens combinations.
Tx1000		The Tx1000 MK2 series combines a video switch with the simplicity of installation associated with coax controlled systems. These combinations provide a flexible, cost-effective control solution for both internal and external pan / tilt / zoom and dome applications. Like all BBV products, simplicity of use and aesthetic casework are inherent in the design. The Tx1000 series supports coaxial telemetry and BBV422 telemetry as standard and 20mA twisted pair operation as an option, allowing integration with infrared, microwave and fibre-optic links, IP links an optional factory-fitted alarm card with programmable functions is available for connection to up to 16 external detection devices.
Tx1500		The Tx1500 series combines a state-of-the-art-video matrix with the simplicity of installation associated with coax controlled systems. This combination provides a flexible and cost-effective control solution for internal and external pan / tilt / zooms and dome applications. The Tx1500 series supports BBV up-the-coax and BBV 422 twisted pair Telemetry as standard, allowing integration with IR, microwave and fibre-optic Links IP. Modules can be added allowing control of several different domes or receiver types on one system. 20mA telemetry available via add-on optional Tx/MK2/TPO Additional 16-way alarm cards with programmable functions are available for connection of up to 16 external detection devices per card. Up to 6 alarm cards can be added, either local to the Tx1500, or distributed around the site allowing up to 96 inputs. System features include variable sequence dwell time, advanced alarm options including multiple events per alarm and keypad programmed to limit access to cameras and monitors
FBM		Available from 16 to 512 camera inputs and 16, 32, 48 or 64 monitor outputs. Distributed units allow systems of up to 4,096 cameras to be designed Up to 16 keypads Up to 512 alarm inputs The FBM series combines a state-of-the-art video matrix with the simplicity of installation associated with all BBV products. This combination provides a flexible and cost-effective control solution for both internal and external pan / tilt / zooms and dome applications. The FBM series supports BBV422/485 twisted pair telemetry as standard, allowing integration with IR, microwave and fibre-optic links. Modules can be added, allowing control of several different domes or receiver types on one system. Coaxial output cards are available for up-the-coax control of PTZ and domes. Additional alarm cards with programmable functions are available for connection of up to 16 external detection devices per card. Up to 32 alarm cards can be added either locally to the FBM or distributed around the site, allowing up to 512 inputs. Programmable features include variable sequence dwell time, multiple events and programmable alarm text per alarm upon activation. Keyboards can be programmed to limit access to cameras and monitors.
AD121 Converter		The AD 1-2-1 converter is designed to provide single address protocol conversion. The AD 1-2-1 converter accepts AD422 data from a single source, converts it to one of the range of possible RS485/422 protocols.
BBV121 Converter		The BBV 1-2-1 converter is designed to provide single address protocol conversion. The 1-2-1 converter accepts RS485/422 data from a single source, converts it to one of a wide range of possible RS485/422 protocols.
Star Repeater 16		The Star Repeater 16 provides a simple and cost-effective solution in the installation of RS422/485 telemetry systems. The Star repeater 16 takes RS422/485 data from one source and repeats it across 16 isolated outputs, which can be wired in a star format. This unit is optimized for camera systems that only require unidirectional commands.
Starcard		The Starcard provides a simple and cost-effective solution in the installation of RS485/422 telemetry systems. The Starcard takes RS485/422 data from one source and distributes it across 8 isolated outputs which can be wired in a star format or allow up to 31 cameras to be daisy chained. 8 RS422/485 outputs to allow star wiring of telemetry systems and Tx1500 Key boards and alarm Cards can also be used when star wiring is required for other systems
Starcard Converter		The Starcard Converter is designed to provide simple and cost effective RS485/422 protocol conversion. The Starcard converter accepts RS485/422 Data from one source converts it to one of a wide range of possible RS485/422 protocols and distributes it across eight isolated outputs. The outputs can be wired in a star format or a daisy format to allow up to 31 cameras to be controlled from each output.
ASGARD HD Decoder		The Asgard HD Decoder is a 30fps, 1080p standalone unit, which facilitates the streaming of camera images from one or more media servers, without the need of a PC. This enables display monitors to be mounted remotely around the premises or network. The unit can be additionally controlled by simple CGI commands from control workstations or hand held devices.
ASGARD Keypad		The BBV Asgard HD keyboard is a unique camera control system with an inbuilt video decoder for intuitive control of IP cameras. This can be connected directly to one or more Cisco Media Servers. Operation is achieved without the use of an additional PC, simplifying system setup and offering a robust high-security solution, with no user internet access.