DW DIGITAL WATCHDOG
Everything's Digital

Blackjack NVR SERIES
POWERED BY
DW Spectrum IPVMS

State of the art hyper-optimized video management platform designed for ease, speed and efficiency.

SIMPLY **POWERFUL,**
POWERFULLY SIMPLE

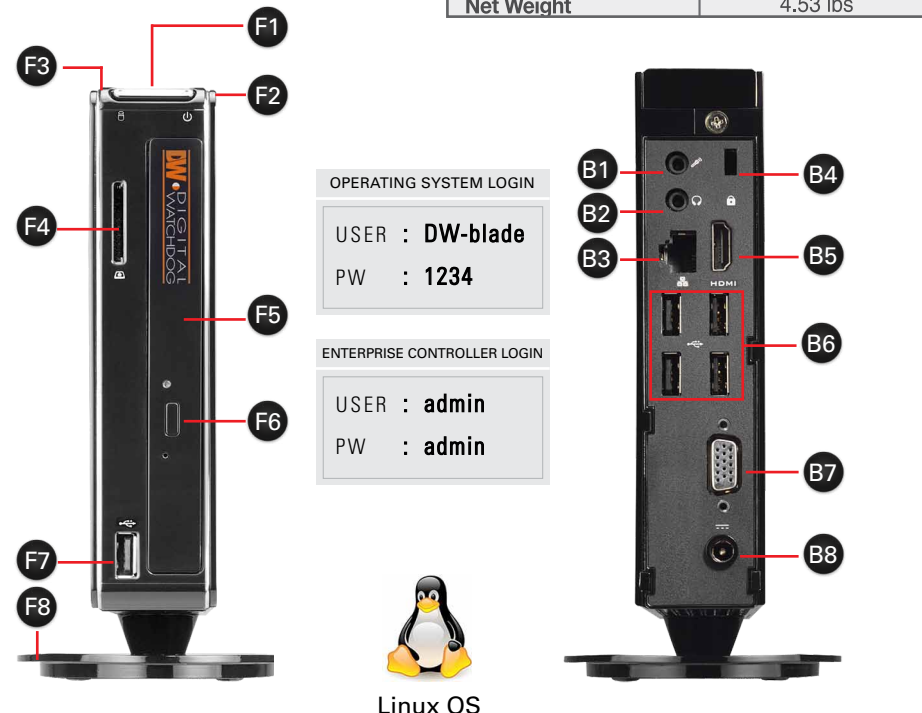| BLADE | Up to 16 2.1MP Cameras (1080p True HD Resolution) |
| CUBE | Up to 64 2.1MP Cameras (1080p True HD Resolution) |
| E-RACK | Up to 128 2.1MP Cameras (1080p True HD Resolution) * not shown |

Toll Free: 866.446.3595   Fax: 813.888.9262
www.digital-watchdog.com   sales@dwcc.tv

HARDWARE REQUIREMENTS

* Monitor, keyboard and mouse must be purchased separately

Recommended Specs for Client:

WINDOWS   LINUX

Processor	Intel Core i5 or greater
Video Card	Intel HD Graphics 2500 (or higher) with 1GB Dedicated Memory
Resolution	1920 x 1080
RAM	4GB
NIC	10 / 100 / 1000 Base-T Ethernet
OS	Windows 7, Server 2008, Vista, XP, Ubuntu 12.04 LTS or Newer

Network Requirements:

IEEE 802.3ab 1000BASE-T Gigabit Ethernet
* Cameras and servers in the network must be completely isolated

* NOTE: if you are not connecting to the Blackjack from within the same network, you may be required to perform port forwarding on your router to access the server. Contact your Network Administrator or Installer for additional information
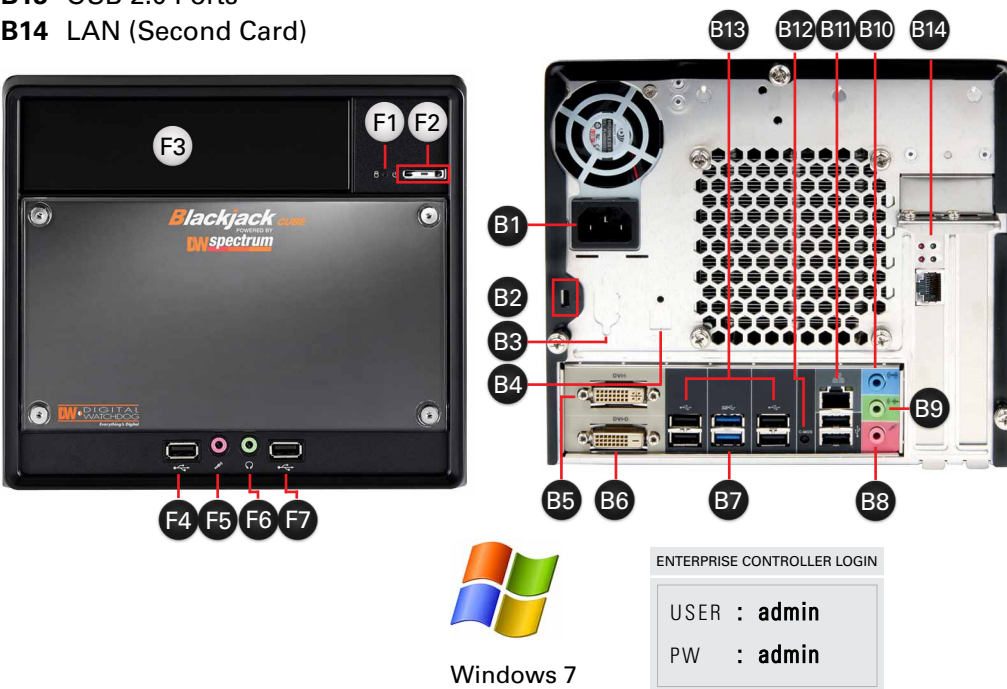
Mobile Access:

| Web | Internet Explorer, Firefox, Safari, Opera, Chrome |
| Apps | Android OS |

F1 Power Button
F2 Power Status LED
F3 HDD Status LED
F4 SD Card Reader
F5 ODD / Second HDD (optional)
F6 ODD Eject Button
F7 USB 2.0 Port
F8 Vertical Stand

B1 Microphone Jack
B2 Headphone / Line-out Jack
B3 LAN Port
B4 Kensington Lock
B5 HDMI Port
B6 USB 2.0 Ports
B7 D-Sub (VGA) Port
B8 Power Jack (DC-in)

BLACKJACK BLADE HARDWARE

SPECIFICATION

Max. Number of Cameras Supported (Recording)	Up to 16
Recording Performance	176Mbps*
Network	Gigabit(1x)
Video Compression	H. 264
Megapixel Recording	Up to 20 Megapixel
Multi-Server Monitor	Up to 128 Channels
Advanced Motion Detection	Yes
Video Port	VGA / HDMI
Local View	No
OS	Linux
Storage Capacity	2 TB(2x1TB HDD)
Hard Drive Interface	2.5˝ SATA, SSDx2
USB Ports	5xUSB 2.0
Warranty	3 years
Dimension	10˝(L) x 1.6˝(W) x 6.4˝(H)
Net Weight	4.53 lbs

F3
F1
F2
F4
F5
F6
F7
F8

OPERATING SYSTEM LOGIN
USER : DW-blade
PW : 1234

ENTERPRISE CONTROLLER LOGIN
USER : admin
PW : admin

B1 B4
B2
B3 B5
B6
B7
B8

Linux OS

F1 HDD LED
F2 Power Button / Power LED
F3 5.25" Bay
F4 USB 2.0 Port
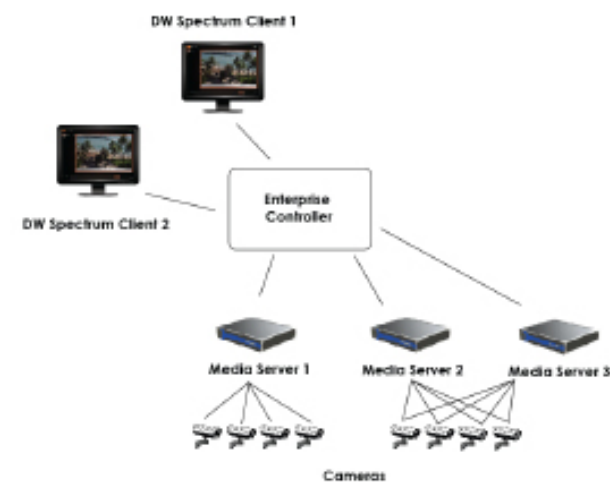F5 Microphone
F6 Headphone
F7 USB 2.0 Port

B1 AC Power Socket
B2 Kensington Lock
B3 Serial Port Perforation (optional)
B4 SPDIF Out Port (optional)
B5 DVI-I Port (for HDMI)
B6 DVI-D Port (for analog)
B7 USB 3.0 Ports
B8 Microphone Jack
B9 Line-Out Jack
B10 Line-In Jack
B11 WAN & USB 2.0 Ports
B12 Clear CMOS Button
B13 USB 2.0 Ports
B14 LAN (Second Card)

BLACKJACK CUBE HARDWARE

SPECIFICATION

Max. Number of Cameras Supported (Recording)	Up to 64
Recording Performance	360Mbps*
Network	Gigabit(2x)
Video Compression	H. 264
Megapixel Recording	Up to 20 Megapixel
Multi-Server Monitor	Up to 128 Channels
Advanced Motion Detection	Yes
Video Port	DVI/HDMI
Local View	Yes
Storage Capacity	9TB(3x3TB HDD)
Hard Drive Interface	3.5˝ SATA, SSDx3
USB Ports	8xUSB 2.0
Warranty	5 years limited
Dimension	12.8˝(L) x 8.5˝(W) x 7.5˝(H)

B13 B12 B11 B10   B14
F1 F2
F3
B1
B2
B3
B4
B5 B6   B7   B8   B9
F4 F5 F6 F7

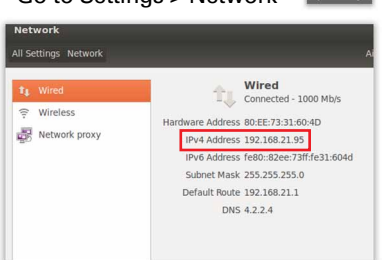ENTERPRISE CONTROLLER LOGIN
USER : admin
PW : admin

Windows 7

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① Select Your Primary Enterprise Controller

② Find the IP and Port information

③ Attach the servers to the Enterprise Controller (see below)

④ Repeat for all other servers in the same network

⑤ Enter primary EC's IP adress, port, and login information to enable live view

SYSTEM ARCHITECTURE

DW Spectrum Client 1
DW Spectrum Client 2
Enterprise Controller
Media Server 1   Media Server 2   Media Server 3
Cameras

Locating your IP address on Windows and Linux

On Linux:
Go to Settings > Network

On Windows:
Open Network and Sharing Center
Click on LAN or Wireless Connection
Click on "Details"

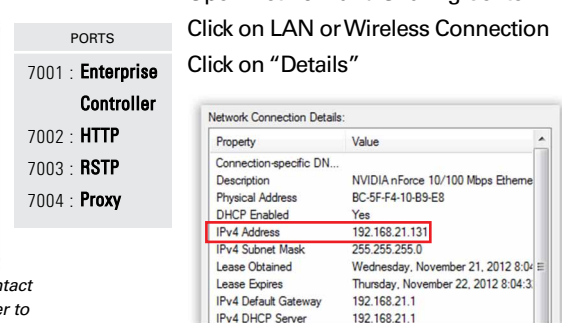| PORTS	
7001 :	Enterprise Controller
7002 :	HTTP
7003 :	RSTP
7004 :	Proxy

To view your cameras outside the network, contact your network admin or internet service provider to port-forward your system
Visit http://www.portforward.com/ for additional information

Multi-Site VMS - Combining Servers Into 1 Enterprise Contoller

On Cube:
Connecting to the Primary EC will allow all Media Servers to be shown on the Camera Display Tree. If those servers are located on the same network, you can assign cameras to each server by dragging and dropping.

On Blade:
1. Go to the PASSIVE Media Server (Server with only the Media Server on it)
2. Save the Media Server installation file in an accessible folder
3. Right-click on the Media Server installation file and select 'Open with UBUNTU Software Center'
4. Press 'reinstall'
5. Enter user credentials (default admin)
6. When asked to forward EC address, enter the PRIMARY Server's IP Address instead of Local Host.
7. If necessary, adjust default port, user and password

SOFTWARE INSTALLATION

When installing, you may choose to install all three components of the software (Client, Media Server, and Enterprise Controller) by choosing the 'Quick Full' option
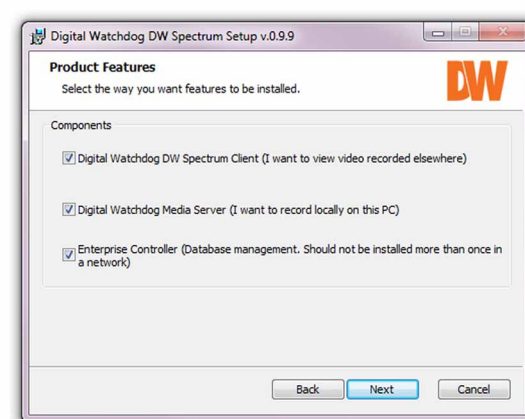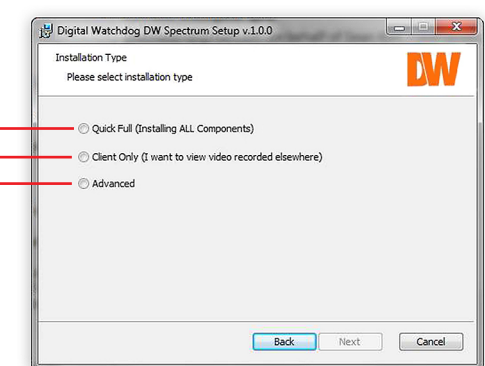
If an Enterprise Controller already exists within the network, you can choose to install only the client

Or you can choose which components you wish to install by choosing the 'Advanced' option

The three components of the DW Spectrum software are:

1. Digital Watchdog DW Spectrum Client
(For viewing video recorded elsewhere)

2. Digital Watchdog Media Sever
(For recording local video using the PC)

3. Enterprise Controller
(For managing database)

* Enterprise Controller should not be installed more than once in the same network

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The client will auto-detect all Enterprise Controllers in the network
Otherwise, input IP address into the 'Host' box

Use the following default ID & password

USER : admin
PW : admin

After logging, all supported cameras on the network will automatically populate through the auto-discovery feature

Select 'Auto Login' to log to the server automatically every time the client software is launched.

CAMERA & E.C. AUTO-DISCOVERY
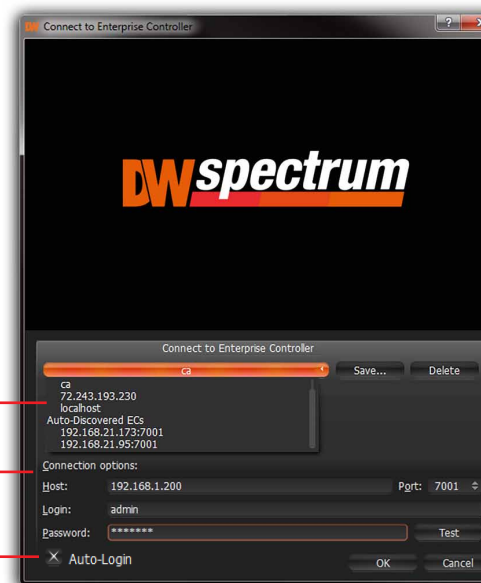
LICENSE REGISTRATION

The Blackjack Servers come equipped with complimentary four (4) free recording licenses that needs to be activated.
In addition, any licenses purchased with the hardware will be found at the bottom of the Blade's hardware, as a sixteen- digit code that needs to be activated.

If your server has internet access-
1. Go to DW Menu Button > System Settings > Licenses.
2. Select 'Automatic Activation via Internet' from the drop-down options.
3. Input your sixteen-digit license key
4. Press 'Activate License'. The system will notify you if the activation was successful or not.
5. If your licenses have been registered successfully, they will appear under the Active Licenses table.
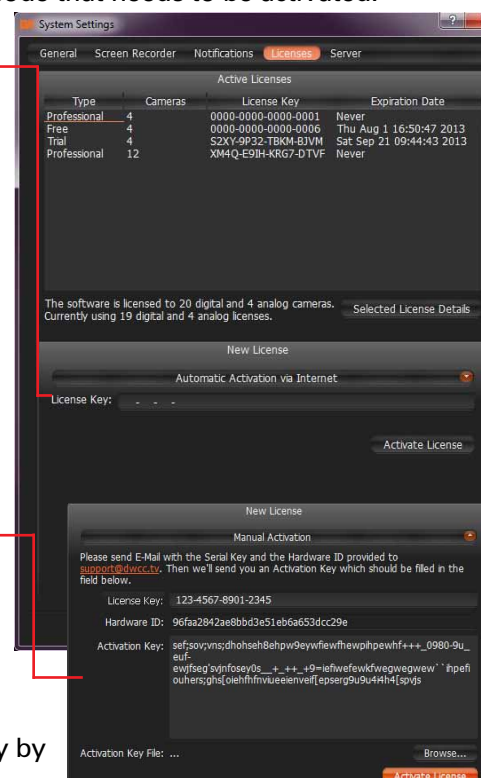
If you do NOT have internet access-
1. Go to DW Menu Button > System Settings > Licenses.
2. Select 'Manual Activation' from the drop-down options.
3. Copy your hardware ID. This information will be filled out automatically by your server.
4. E-mail your Hardware ID and your License Key to support@dwcc.tv. Please allow up to 48 hours for Digital Watchdog to reply.
5. Once provided with an Activation Key, Enter this information without altering it in the Activation Key space and press 'Activate Licenses'.

[7]

MANUALLY ADDING CAMERAS

Cameras can also be manually added by right-clicking on the server icon and choosing the 'Add camera(s)' option

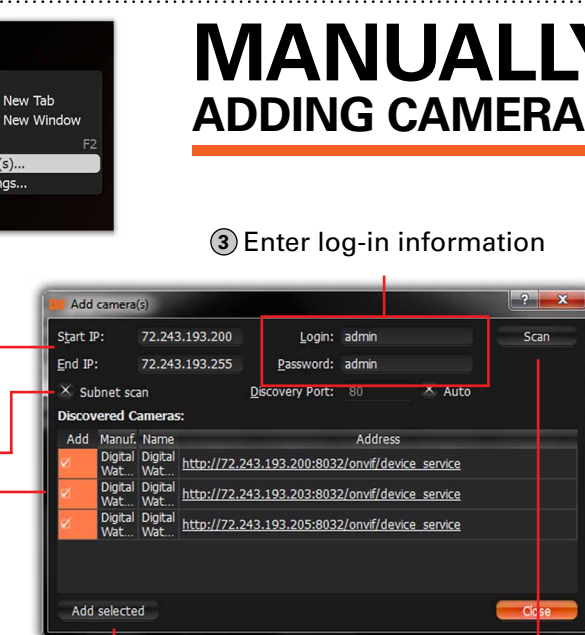① Enter the camera's IP address, URL, or RTSP information

② Check to select a range

③ Enter log-in information

④ Click on the Scan button

⑤ Cameras will populate the list automatically

⑥ Click to add all selected cameras

USER INTERFACE
OVERVIEW

Help Menu
Server Status
Screen Recording Controls
Panic Recording Controls (Record @ 30 fps)
Layout Management
Main Menu Button

Server Health Monitoring
Pop-up Notifications

Camera Popup Preview
Camera Options
Time Navigation Bar Zoom
Time Navigation Controls
Server / Camera Display Tree

Live / Playback
Thumbnail Toggle Button
Audio Controls
Calendar Search

DW Spectrum provides a dewarping feature to be able to view Hemispheric 360° Cameras. Clicking on the De-Warp button will display the camera in three display options: 90° view with digital PTZ, panoramic 180°, and panoramic 360°. To alternate between views, left click on the right side of the display image.

ADVANCED
CAMERA OPERATIONS

90° View with PTZ Control
180° View with PTZ Control
360° View with PTZ Control

ADVANCED
PTZ

Clicking on the PTZ icon on the top-right corner of the window will bring up buttons for control

To zoom the camera: Use the + / - buttons to zoom the camera in or out.
To move the camera: Click and hold the circle in the middle of the PTZ controller and move it to where you want the camera to move to. For precise movement, left click on the are of the display you want the camera to move to.
To move + zoom the camera: Hold Left Mouse Button and draw the rectangle to zoom into.
To zoom out: double click anywhere on the screen.
To save a preset: move the camera to the position, right-click and select PTZ > Save Current Position. DW Spectrum supports 9 Presets.

Calendar Search
is enabled by clicking on the [CLND] on the bottom-right corner of the layout screen.
Select a desired date in Calendar.
To select multiple dates, use CTRL.
Select a desired hour in the upper part Calendar. To select multiple hours, CTRL.

Alarm / Event Rules
allow you to setup unique rules and actions for events detected by the server such as motion detection, network loss, camera input trigger etc.
To configure Rules:
1. Select one of the existing rules or press the 'Add' button to create a new rule.
2. Modify the cameras or servers it applies to, and the action and target you want to take when the event occurs.
3. For advanced settings, press 'Advanced...' at the top right corner. This includes additional e-mail and sound settings as well as rule schedule setup.

ADVANCED
OPTIONS & SEARCH

Graphical HDD Health Monitoring
can be performed by dragging the server icon (▣) onto the layout view

TROUBLESHOOTING
TIPS

Problem	Possible Solutions
My camera does not auto-discover	1. Is the camera in the same LAN network as the Enterprise Controller?
	2. Is your camera fully compatible with DW Spectrum (refer to our website for full list of supported cameras)?
	3. Is the camera updated to its latest firmware?
	4. If your camera is integrated with DW Spectrum via OnVIF, make sure OnVIF enabled on your camera.
	5. Try adding the camera manually.
	6. Try rebooting the server after installation. Please allow up to 30 seconds for the server map your network and detect all supported devices.
Videos are slow	1. Are you accessing the same cameras from multiple clients? (LAN & WAN)
	2. Do you have a Gigabit network? Check your network speed.
My camera appears disconnected	1. Under camera settings, make sure the user name and password are correct.
	2. Under the camera settings, use the 'Ping' button to make sure the camera is connected to the network properly.
	3. If you can connect to the camera's web viewer, try rebooting the camera and/or restore it to factory default.
	4. Make sure your camera is using the latest firmware available. *(Connectivity & compatibility issues can be resolved in new camera firmware)*
	5. Make sure that the camera is connected to the same network as the server.
	6. If you are connecting to a camera that is integrated with DW Spectrum via the OnVIF protocol (see list), make sure OnVIF is enabled.
	7. Make sure your user has permissions to view that specific camera.
I can't get playback video from my camera	1. Do you have network connection between client and server (in case server and client are not on the same machine)?
	2. Make sure your user has playback viewing permissions for the selected channel.
	3. Make sure the camera is set to a recording mode that would provide recorded video for the selected time and environment.
	4. On the server side, check the media server log to make sure the camera you are trying to watch has not been unexpectedly disconnected.
I get an 'unauthorized' message on my camera	1. Make sure the camera's user name and password are properly entered in the camera's general information under the camera settings menu.
	2. If necessary, try rebooting the camera to apply the camera's user name and password.

Keyboard Shortcut Controls

Name	Hot keys	Description
New Layout	CTRL + t	Creates a new layout
Save Layout	CRTL + s	Saves the current layout
Close Layout	CRTL + w	Closes the current layout
Save Layout As	CTRL + ALT + s	Saves the current layout as a different name
Toggle Side Panel	F11	Shows / hides the side panel
Zoom In / Out	+ or -	Zooms in / out of the screen
Cell Spacing	CTRL + Wheel	Increases / decreases the cell spacing
Duplicate Item	CTRL + Drag	Duplicates any selected windows
Rotation	ALT + Drag	Rotates the target window
Coarse Rotation	CTRL + Rotate	Rotates the target window at 15° intervals
Panic Recording	CTRL + p	Starts / stops the panic record function
Screen Recording	ALT + r	Starts / stops the screen record function
Timeline Selection	[or]	Defines the start / end point of timeline selection
Toggle Recording Info	ALT + i	Shows / hides the recording information
Navigate Recording	z or x	Moves forward / backward between recorded chunks

CAMERA VIEW
WINDOW

Indicates Recording Type
🟢 Record Always
🔴 Motion Only
🟡 Motion + Low-Res Always
⚫ Not Recording

Camera Name
Resolution
FPS
Bit rate
Codec
Server Time

Start/ End Dates
Event Filter
Camera/ Server Filter

DIAGNOSTICS
LOGS

Action Filter
Clear All Filters
Open Video from Event
Open Evet/ Alarm Rules Setup Page
Refersh Search Results

The DW Spectrum Events Log allows you to monitor camera events, server erros, and network erros easy and fast. The results are based on the Alarm / Event Rules settings. If no Rules are active, only system issues will be saved.

You can filter the search results by:
1. Start and End Date – only events occurring during the set time are displayed.
2. Event type – displays a specific type of events only.
3. Camera – displays events for a specific camera.
4. Action type – specific events caused by certain types of actions are displayed

To select multiple rows from a table, drag the mouse, use CTRL + Click/Up/Down arrows, or Shift + Click/ Up/ Down arrows. Use CTRL + A to select all records.

To Export the log's data, select the desired rows, right-click and select Export.

RECORDING
SCHEDULE

Select cameras and go to "Camera Settings"

Enable Cameras to Record
Recording Menu
Motion Menu
Select All
Click & Drag
Pre & Post Recording (3 is recommended)
Recording Type

Copy Recording Settings to multiple cameras

MULTI-LEVEL
MOTION MASKING

ADVANCED MOTION
DETECTION

Selected area for motion detection
Corresponding video for selected area
Motion tracing

0 to 9 Sensitivity Settings (8 is default)

Select camera area by clicking & dragging to apply sensitivity settings

* Gray - Motion Mask
Areas marked gray will not capture motion

USER
ACCOUNTS

	ADMIN	CAMERA SETTINGS	PTZ CONTROLS	VIDEO ARCHIVES	EXPORT VIDEO	VIEW LIVE VIDEO
Administrator	●	●	●	●	●	●
Advanced		●	●	●	●	●
Viewer				●	●	●
Live Viewer						●