

# 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)



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

## CLIENT REQUIREMENTS

\* Monitor, keyboard and mouse must be purchased separately

### Recommended Specs for Client:

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:

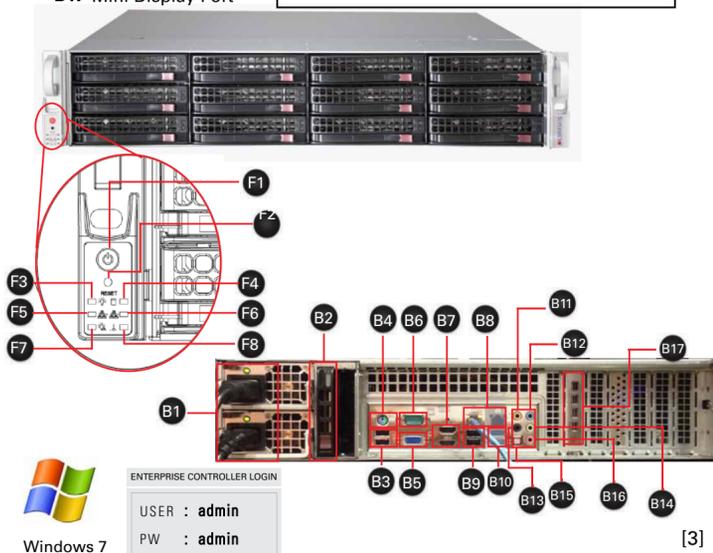
Web	Internet Explorer, Firefox, Opera, Chrome
Apps	Android OS, iOS Smart Phones and Tablets

- B1 Power - SMPS
- B2 SSD Drive Bay for OS
- B3 2x USB 2.0 Ports
- B4 Keyboard / Mouse Connector
- B5 VGA Port (Disabled\*)
- B6 Serial Port
- B7 2x HDMI Ports (Disabled\*)
- B8 2x Network Ports
- B9 2x USB 2.0 Ports
- B10 2x USB 3.0 Ports
- B11 SPDIF Out
- B12 Surround Out
- B13 Center / LFE Out
- B14 Mic Out
- B15 Line Out
- B16 Line In
- B17 Mini Display Port

## BLACKJACK E-RACK HARDWARE

- F1 Power Button
- F2 Reset - reboot system
- F3 Power LED
- F4 HDD LED
- F5 Network 1 LED
- F6 Network 2 LED
- F7 Power Failure LED
- F8 Overheat LED

\* Please use the Mini Display Ports located on the right side of the E-Rack's back hardware (B17) for monitor connections. Use the mini DP to DV/I and DVI to HDMI converters included in the E-Rack's accessory box.



Windows 7

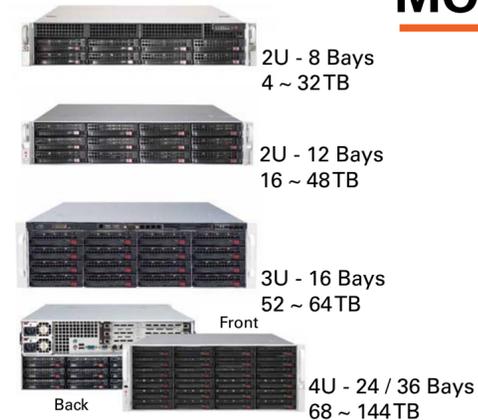
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## SPECIFICATIONS E-RACK

	DW-BJE2U	DW-BJR2U	DW-BJR3U	DW-BJR4U	DW-BJR4U
# of Cameras	16	32	48	64	64
Recording Performance	600 Mbps				
CPU	I7 (Intel 3rd Generation)				
Memory	8G (8x2 Dual Channel)				
Network	1Gbps x 2				
Video	ATI				
Video Port	VGA / HDMI x 2 / DP x 4				
OS	Win 7 64 Bit				
Power	600W	Dual Power (1000W)			
Operating Temperature	10°C - 35°C (50°F - 95°F)				
External Ports	1x Keyboard/ Mouse, 4x USB 2.0, 2x USB 3.0, 1x RS-232, HD Audio in & Out				
RAID	None	RAID 5			
HDD*	60G SSD (OS) 4 TB - 32 TB	60G SSD (OS) 16 TB - 48 TB	60G SSD (OS) 52 TB - 64 TB	60G SSD (OS) 68 TB - 96 TB	60G SSD (OS) 100 TB - 144 TB
Dimensions (in.)	25.5 (L) x 17.2 (W) x 3.5 (H)	25.5 (L) x 17.2 (W) x 3.5 (H)	25.5 (L) x 17.2 (W) x 5.2 (H)	26 (L) x 17.2 (W) x 7 (H)	27.5 (L) x 17.2 (W) x 7 (H)
Weight (without HDD)	50 lbs	52 lbs	75 lbs		80 lbs

\* The actual size will differ depends on the RAID configuration  
[ 4TB HDD - Actual Recording Size is 3.63TB / Total Recordable Size with RAID 5 = Total Size of Installed HDD minus 1 HDD Size Parity (3.63TB) ]

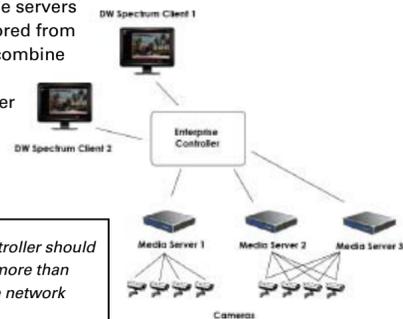
## AVAILABLE MODELS



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## MULTI-SERVER SETUP

For applications where multiple servers are used and are being monitored from a single master location, you combine those servers as secondary Media Servers under one server assigned as the master Enterprise controller.



DEFAULT PORTS

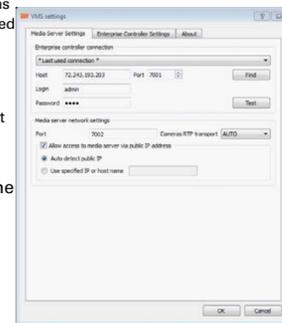
7001	Enterprise Controller
7002	Media Server
7004	Proxy

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

### Multi-Site VMS - Combining Servers Into 1 Enterprise Controller

- Select Your PRIMARY Enterprise Controller
- Find the IP and Port information
- Attach the Media Servers to the Enterprise Controller:

- Go to the PASSIVE Media Server (server you want to assign to the PRIMARY EC).
- Right-click on the DW Spectrum tool bar at the bottom right-hand corner of the desktop, and select 'Settings'.
- Enter the PRIMARY EC's Host address, ports, username and password. If the PASSIVE server is on the same network as the PRIMARY server, you can use the \*Last Used Connection\* drop down option to view all detected ECs in the network.
- Press 'Test' to make sure the connection is properly setup.
- Press 'OK'. System will prompt you to reboot the Media Server. Press 'OK' to continue.



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- Repeat for all other Media Servers in the same network.
- To login, enter the primary EC's IP address, port\*, and login information in your client software.

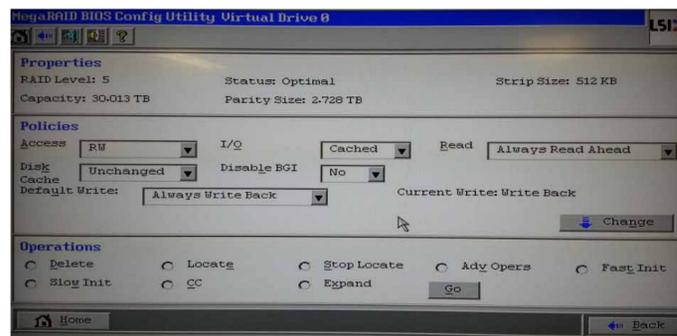
\*NOTE: To view your Security System from a remote network, the PRIMARY EC's ports need to be forwarded in the router. Contact your Network Admin or Internet Service Provider for more information.

## RAID INFORMATION

All E-Rack models except the DW-BJE2U hardware, come equipped with pre-installed RAID5 option.

To access the E-Rack's RAID configuration:

- During boot up, press [Ctrl] + [H]/
- The DW Spectrum Optimized Configuration will appear as seen below.
- For more information on the RAID Setup on the Blackjack E-Rack models, visit [www.lsi.com](http://www.lsi.com) and check WEBBIOS configuration.



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The client will auto-detect all Enterprise Controllers in the network

Otherwise, input IP address into the 'Host' box

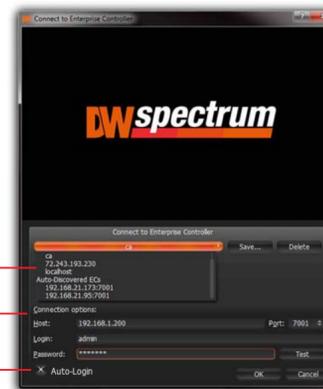
Use the following default ID & password

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



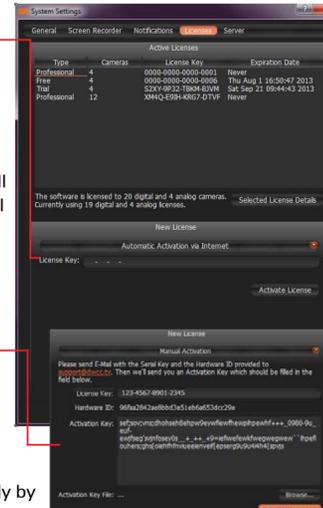
## LICENSE REGISTRATION

The Blackjack Servers come equipped with complimentary four (4) recording licenses.

In addition, any licenses purchased with the hardware will be found at the bottom of the E-Rack's hardware, as a sixteen- digit code that needs to be activated.

### If your server has internet access-

- Go to DW Menu Button > System Settings > Licenses.
- Select 'Automatic Activation via Internet' from the drop-down options.
- Input your sixteen-digit license key
- Press 'Activate License'. The system will notify you if the activation was successful or not.
- If your licenses have been registered successfully, they will appear under the Active Licenses table.



### If you do NOT have internet access-

- Go to DW Menu Button > System Settings > Licenses.
- Select 'Manual Activation' from the drop-down options.
- Copy your hardware ID. This information will be filled out automatically by your server.
- E-mail your Hardware ID and your License Key to [support@dwcc.tv](mailto:support@dwcc.tv). Please allow up to 48 hours for Digital Watchdog to reply.
- Once provided with an Activation Key, Enter this information without altering it in the Activation Key space and press 'Activate Licenses'.

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

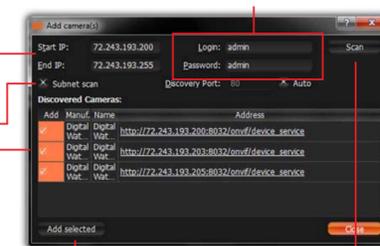
## MANUALLY ADDING CAMERAS

- Enter the camera's IP address, URL, or RTSP information
- Check to select a range

③ Enter log-in information

⑤ Cameras will populate the list automatically

⑥ Click to add all selected cameras



④ Click on the Scan button

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## USER INTERFACE OVERVIEW

- Help Menu
- Login to Server
- 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
- Playback Controls
- Server / Camera Display Tree
- Live / Playback
- Thumbnail Toggle Button
- Audio Controls
- Calendar Search

## ADVANCED CAMERA OPERATIONS

**IMPORTANT!** Before adjusting the camera's settings, check 'This is a Fisheye Camera' under Camera Settings > General. 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.

- 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.

## ADVANCED OPTIONS & SEARCH

**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.

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

## 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:

- Select one of the existing rules or press the 'Add' button to create a new rule.
- Modify the cameras or servers it applies to, and the action and target you want to take when the event occurs.
- For advanced settings, press 'Advanced..' at the top right corner. This includes additional e-mail and sound settings as well as rule schedule setup.

## 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

## 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

## DIAGNOSTICS LOGS

Start/ End Dates

Event Filter

Camera/ Server Filter

Action Filter

Clear All Filters

Open Event/ Alarm Rules Setup Page

Open Video from Event

Refresh Search Results

## MULTI-LEVEL MOTION MASKING

## ADVANCED MOTION DETECTION

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

Selected area for motion detection

Corresponding video for selected area

Motion tracing

The DW Spectrum Events Log allows you to monitor camera events, server errors, and network errors 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:

- Start and End Date – only events occurring during the set time are displayed.
- Event type – displays a specific type of events only.
- Camera – displays events for a specific camera.
- 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.

## USER ACCOUNTS

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

## TROUBLESHOOTING TIPS

Problem	Possible Solutions
My camera does not auto-discover	<ol style="list-style-type: none"> <li>Is the camera in the same LAN network as the Media Server?</li> <li>Is your camera fully compatible with DW Spectrum (refer to our website for full list of supported cameras)</li> <li>Is the camera updated to its latest firmware?</li> <li>If your camera is integrated with DW Spectrum via OnVIF, make sure OnVIF enabled on your camera.</li> <li>Try adding the camera manually.</li> <li>Try rebooting the server after installation. Please allow up to 30 seconds for the server map your network and detect all supported devices.</li> </ol>
Videos are slow	<ol style="list-style-type: none"> <li>Are you accessing the same cameras from multiple clients? (LAN &amp; WAN)</li> <li>Do you have a Gigabit network? Check your network speed.</li> </ol>
My camera appears disconnected	<ol style="list-style-type: none"> <li>Under camera settings, make sure the user name and password are correct.</li> <li>Under the camera settings, use the 'Ping' button to make sure the camera is connected to the network properly.</li> <li>If you can connect to the camera's web viewer, try rebooting the camera and/or restore it to factory default.</li> <li>Make sure your camera is using the latest firmware available. (Connectivity &amp; compatibility issues can be resolved in new camera firmware)</li> <li>Make sure that the camera is connected to the same network as the server.</li> <li>If you are connecting to a camera that is integrated with DW Spectrum via the OnVIF protocol (see list), make sure OnVIF is enabled.</li> <li>Make sure your user has permissions to view that specific camera.</li> </ol>
I can't get playback video from my camera	<ol style="list-style-type: none"> <li>Do you have network connection between client and server (in case server and client are not on the same machine)?</li> <li>Make sure your user has playback viewing permissions for the selected channel.</li> <li>Make sure the camera is set to a recording mode that would provide recorded video for the selected time and environment.</li> <li>On the server side, check the media server log to make sure the camera you are trying to watch has not been unexpectedly disconnected.</li> </ol>
I get an 'unauthorized' message on my camera	<ol style="list-style-type: none"> <li>Make sure the camera's user name and password are properly entered in the camera's general information under the camera settings menu.</li> <li>If necessary, try rebooting the camera to apply the camera's user name and password.</li> </ol>

## 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

## Accessing DW Spectrum Log Files

From the DW Spectrum Client Software:

- Right-click on the Server's name
- Choose Server Logs. The Media Server's Log will open in a web browser page.
- You can adjust the number of entries in the log by modifying the URL. To do so, change the value at the end of the URL stating 'lines=1000'. For example, 'lines=1' will reduce the log report to a single line of data. 'lines=400' will display 400 lines of data.

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