Blackjack™ *S-RACK*

Servers Powered by DW Spectrum™ IPVMS

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

Blackjack™ S-RACK — Up to 16 2.1MP Cameras (1080p True HD Resolution)

| S-RACK					
DW-BJS1U3T-LX	DW-BJS1U6T-LX	DW-BJS1U9T-LX	DW-BJS1U12T-LX	DW-BJS1U18T-LX	DW-BJS1U24T-LX

DW-BJS1U3T-LX
DW-BJS1U6T-LX
DW-BJS1U9T-LX
DW-BJS1U12T-LX
DW-BJS1U18T-LX
DW-BJS1U24T-LX

NOTE Download All Your Support Materials and Tools in One Place

1. Go to: **http://www.digital-watchdog.com/support-download/**
2. Search your product by entering the part number in the '**Search by Product**' search bar. Results for applicable part numbers will populate automatically based on the part number you enter.
3. Click '**Search**'. All supported materials, including manuals, Quick Start Guides (QSG), software and firmware will appear in the results.

Attention: This document is intended to serve as a quick reference for initial set-up. See the DW Spectrum full manual for more information on features and functionality.
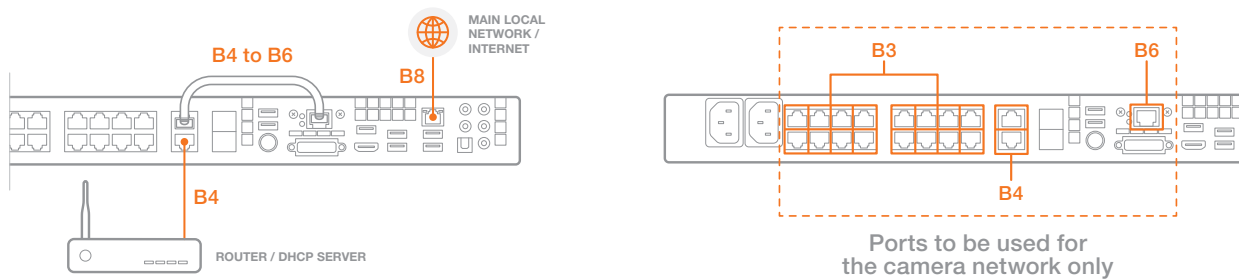
Blackjack™ S-RACK

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BLACKJACK S-RACK HARDWARE

Front

F2   F4

F1   F3
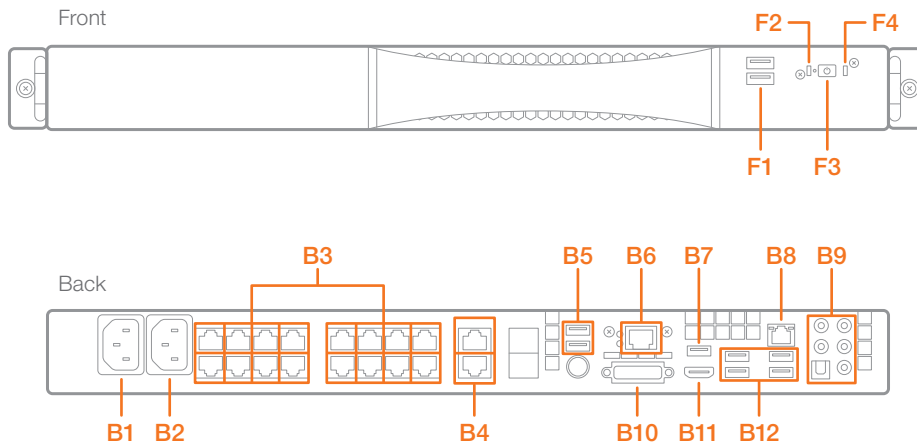
F1	USB 2.0 Ports
F2	Power Status LED
F3	Power Button
F4	HDD Status LED

Back

B3   B5   B6   B7   B8   B9

B1   B2   B4   B10   B11   B12

B1	System Power Port
B2	PoE Switch Power Port
B3	10/100Mbps PoE Ports (Max 15.4W per Port)
B4	1Gigabit Uplink Ports (Non-PoE Ports)
B5	USB 2.0 Ports
B6	NIC 1 (1Gigabit Ethernet Port)
B7	Display Port
B8	NIC 2 (1Gigabit Ethernet Port)
B9	Audio Ports
B10	DVI-D Output
B11	True HD Output
B12	USB 3.0 Ports

Network Cable Connection

MAIN LOCAL NETWORK / INTERNET

B4 to B6

B8

B4

ROUTER / DHCP SERVER

B3   B6

B4

Ports to be used for
the camera network only

1. Connect B8 to main local network and internet
2. Connect/Uplink B4 upper port and B6
3. Connect B4 lower port to router or DHCP server (No internet access through B4)

NOTE: B3, B4 and B6 ports should be used for the camera network only.

SPECIFICATIONS S-RACK

Model		Blackjack S-Rack 1U
Operating System		Linux® Ubuntu® 14.04
System	IP Cameras	Max 16 IP Cameras
	Communication Protocol	ONVIF®
	Max Throughput	80Mbps
	Recording Speed	1080p: 480fps
Max HDD Internal Bay		4 (1 x SSD for OS; 3 x HDD for Data)
Max Data Storage		24TB
Video-In		IP Megapixel Cameras
Video-Out	Monitor	True HD Output, DVI, Display Port
	Resolution	1080p
Recording Modes		Continuous, Motion, Motion + Low Res Always Recording
		Pre and Post Alarm Recording, Quick Backup
Playback & Search	Speed	x1, x2, x4, x8, x16
	Function	Intelli-Search Time Bar, Smart Motion Search, Calendar Search, Thumbnail Search, Panoramic Search

CPU		Intel® Quad Core N3150 Processor
Memory		4GB
Ethernet Ports	System	2 x Gigabit Ports
	PoE Switch	16 x 10/100Mbps PoE Ports + 2 x Gigabit Uplink Ports
Number of PoE Ports		16 (Class3; 15.4W per Ports)
Remote Software		DW Spectrum™ IPVMS Suite
Backup Device		Local Backup by USB, File Upload to NAS
Power	System	300W
	PoE Switch	Up to 270W
Operating Temperature and Humidity (Recommended for Installation Environment)		10°C – 35°C (50°F – 95°F)
Rail Kit		Optional
Dimensions (W x D x H)		438mm x 528mm x 41mm (17.25" x 20.8" x 1.625")
Certification & Compliance		UL, CE, FCC, RoHS

NOTE: Maximum supported IP Cameras must be equal to max throughput information.

SETTING UP THE S-RACK

STEP 1: When setting up the Blackjack S-Rack, make sure the following are in the box:

- S-Rack Server
- Keyboard and Mouse
- Power Cable (x2)
- QSG
- OS Recovery USB (Emergency Recovery)

> **NOTE** Monitor and network cables are not included.

STEP 2:
1. Connect a monitor, mouse, keyboard, power cables, and network cables (not included).
2. Connect the server to an appropriate power source. (UPS is strongly recommended)

STEP 3: Desktop View

The server's Network Setup Window and DW Spectrum™ software will launch automatically when the server boots up.
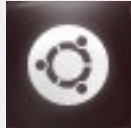To relaunch, double click on each of the desktop icons.

Linux OS

LINUX-BASED SOFTWARE MANUAL LAUNCH To launch the DW Spectrum™ Software on the Linux-Based S-Rack:

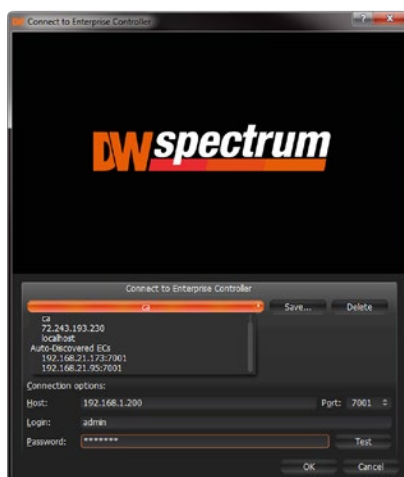**OPTION 1:** Double-click the DW Spectrum™ desktop icon.

OPTION 2: Go to the dashboard on the top left side. Search 'DW'. Click the DW icon.

OR

STEP 4: Logging to Server

The DW Spectrum™ client will automatically load the local server's credentials in the host information. Enter the server's username and password. By default, the server's credentials are:

> Server IP : 127.0.0.1
> USER : admin
> PW : admin

After logging in, all supported cameras on the network will automatically populate in the client's Display Tree.

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STEP 5: Network Configuration - Linux System

The S-Rack's Network Setup window will open automatically upon boot up.

Linux OS

NOTE The Blackjack S-Rack's network settings are set by default to DHCP.

To change the server's network settings to Static IP, follow the instructions below.

1. Go to Network Settings from the desktop button.
2. Select '**Wired**' from the list and click '**Options**' at the bottom of the window.
3. Click on the '**IPv4 Settings**' tab.
4. From the drop-down menu, select connection type: DHCP or Manual (static).
5. If '**Manual**' is selected, click '**Add**' next to Addresses.
6. Enter IP Address, Netmask, and Gateway according to network requirements. Contact your network administrator for more information.
7. Add a DNS server address.
8. Click '**Save**' to save the settings or '**Cancel**' to return to the Network setup page.

NOTE Contact your Network Administrator and ISP for proper setup.

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9. In the Network Settings main page, make sure the Wired Status is marked as "**Connected**".
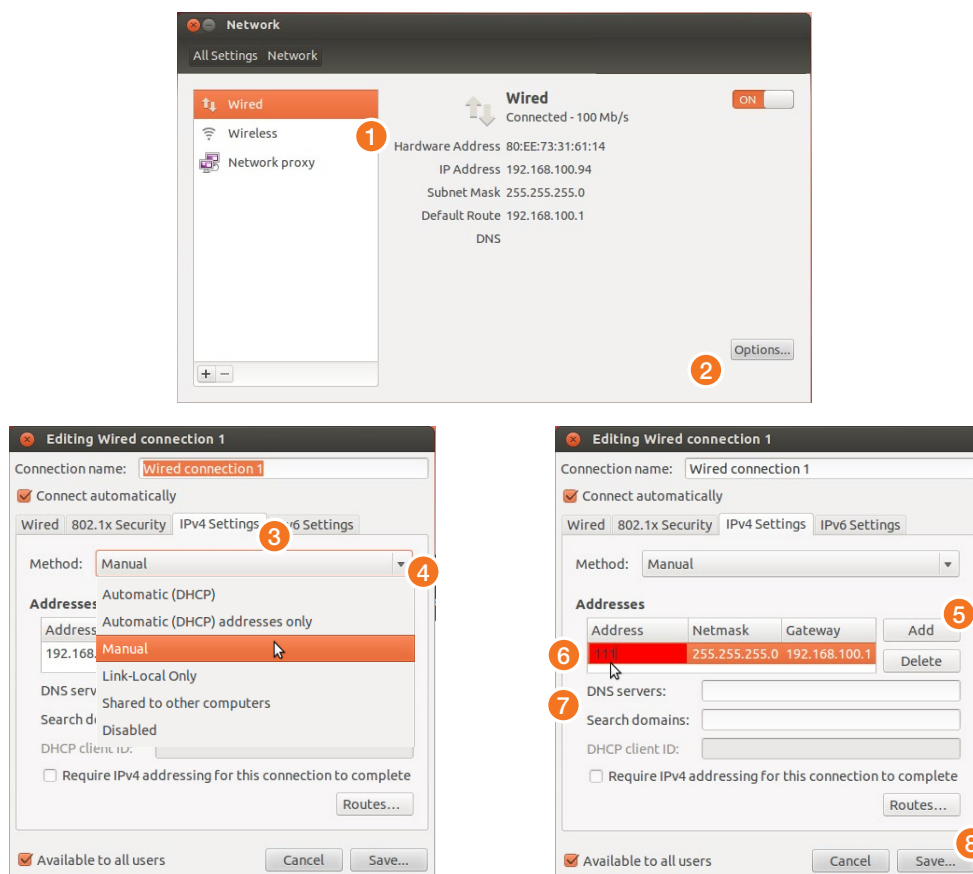
NOTE If you are not connecting to the Blackjack™ from within the same network, you may be required to perform port forwarding on your router to access the server. Contact your Network Administrator or Installer for additional information.

![Linux OS penguin logo] Linux OS

UPGRADING THE DW SPECTRUM IPVMS SOFTWARE ON LINUX S-RACK MODELS

When installing or upgrading the DW Spectrum™ software, each component of the software must be installed separately.

To download the software, go to **www.digital-watchdog.com**, and search for 'DW Spectrum' to access the product page, documentation and software downloads.

To install the software:

> **NOTE** Internet connection is necessary to complete the software installation properly.

1. Right-click the installation file and select "**Run using Ubuntu Software Center**".
2. Enter the admin password (Default: **admin**).
3. Enter the following information as requested:
   - Server Address: Enter '**localhost**' to use the current server's IP address.
   - Username & Password: Username and password for the server. Default: **admin** / **admin**.
   - Port: Main port associated with the server. Default port: **7001**.
4. Repeat for all other software components.

> **NOTE** When the upgrade process is complete, it is recommended to restart the server.
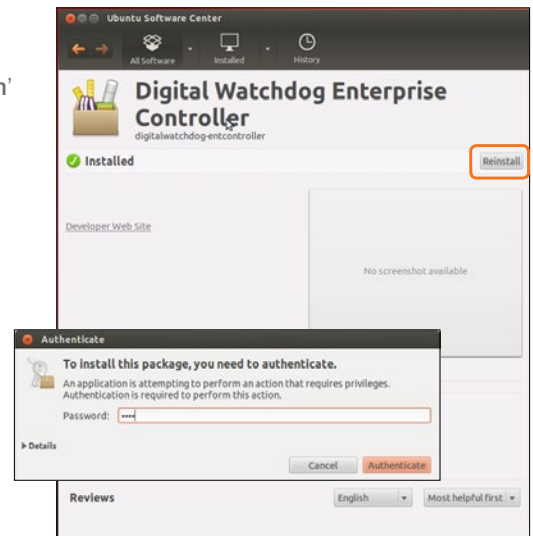
SOFTWARE REMOTE UPGRADE

DW Spectrum provides powerful and convenient way to upgrade the whole system in one click.
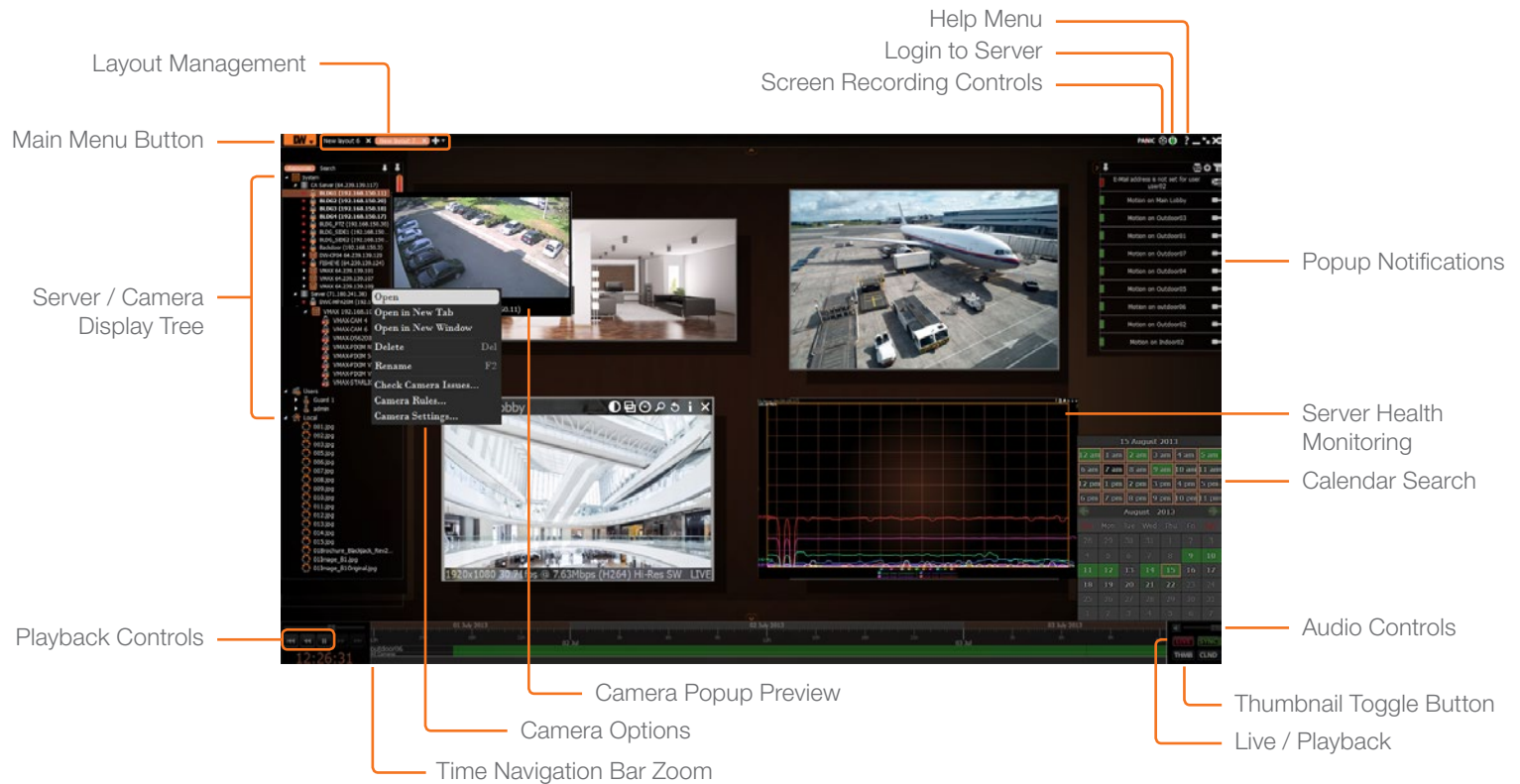
If a new version of DW Spectrum is released, the notification pops up. You can select to start the upgrade or cancel. You can also upgrade the software later by going to the **Main Menu** > **System Administration (CTRL+ALT+A)** > **Updates** tab.
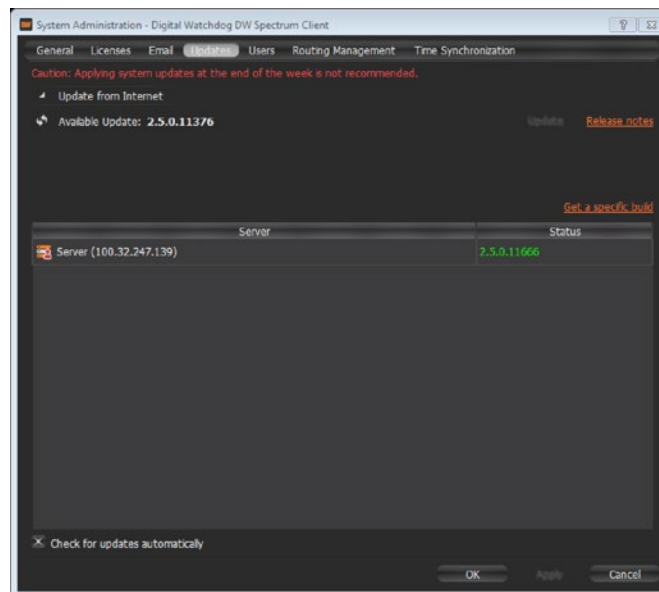
The latest available version is displayed next to **Available Update**.

- To upgrade to the latest version click **Update**. The update process will start and will apply to all servers found in the Servers list.
- To upgrade to a custom version, click '**Get a specific build**' and enter the build number followed by the password (provided in the release notes or by support team).

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USER INTERFACE OVERVIEW

Help Menu

Login to Server

Screen Recording Controls

Layout Management

Main Menu Button

Popup Notifications

Server / Camera Display Tree

Server Health Monitoring

Calendar Search

Playback Controls

Audio Controls

Camera Popup Preview

Thumbnail Toggle Button

Camera Options

Live / Playback

Time Navigation Bar Zoom

LICENSE REGISTRATION

The Blackjack Servers come with complimentary eight (8) recording licenses. In addition, any licenses purchased with the hardware will be found at the bottom of the Server's hardware, as a sixteen- digit code that needs to be activated.

OPTION 1:   If your server has internet access—

1. Go to **DW Menu Button** > **System Administrator** > **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.
5. If your licenses have been registered successfully, they will appear under the Active Licenses table.

OPTION 2:   If you do NOT have internet access—

1. Go to **DW Menu Button** > **System Administrator** > **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 **licenses@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**'.

MANUALLY ADDING CAMERAS

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

④ Click on the Scan button

③ Enter log-in information
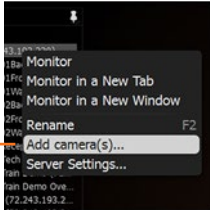
① Enter the camera's IP address, URL, or RTSP information

② Check to select a range

⑤ Cameras will populate the list automatically
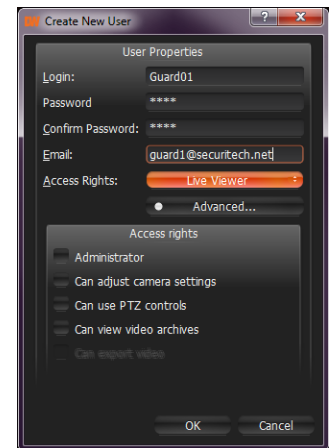
⑥ Click to add all selected cameras
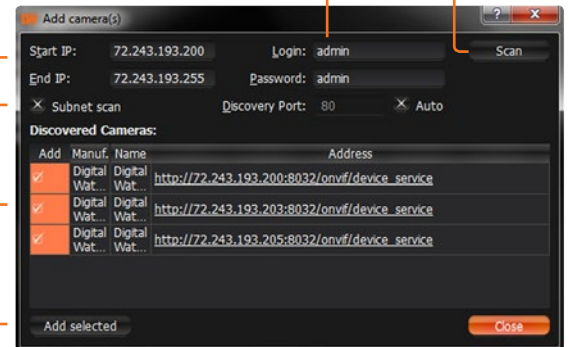
USER ACCOUNTS

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

RECORDING SCHEDULE

Recording Menu

Motion Menu

Enable Cameras to Record

Select All

Click & Drag

Pre & Post Recording (3 is recommended)
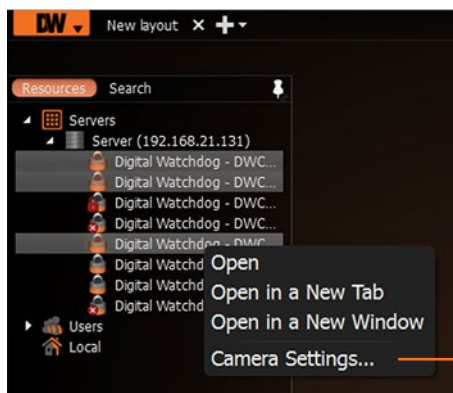
Recording Type

Select cameras and go to "Camera Settings"
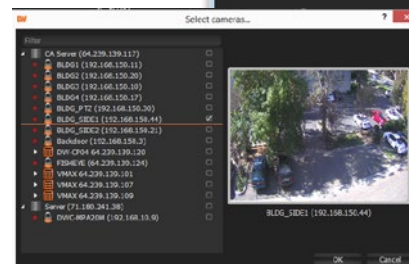
Copy Recording Settings to multiple cameras

7

TROUBLESHOOTING TIPS

Problem	Possible Solutions
My camera does not auto-discover	1. Is the camera in the same LAN network as the Media Server? 2. Is your camera 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 is enabled on your camera. 5. Try adding the camera manually. 6. Try rebooting the server after installation. Allow up to 30 seconds for the server to 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. 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.

SYSTEM REQUIREMENTS

Recommended Specs for the Full Client

Windows 7   Linux OS

Processor	Intel Core i3 Processor or Higher
Video Card	AMD/Intel/NVIDIA HD Graphic Chipset with Minimum 1GB Memory
Resolution	1920 x 1080
RAM	4GB
NIC	10 / 100 / 1000 Base-T Ethernet
OS	Windows 7® Windows 8®, Windows Server 2008®, Windows Server 2012®, Ubuntu® 12.04

Accessing DW Spectrum Log Files

From the DW Spectrum Client Software:

- Right-click on the Server's name and go to 'Server Logs'.

- You can adjust the number of entries in the log by changing 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.

Minimum Required UPS

- APC SMC1500
- APC SMT1500
- Tripp Lite SMART1500LCDXL
- CyberPower CPS1500AVR
- Any 1500VA or higher grade UPS*

* Always better to have higher grade UPS than minimum required

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DW DIGITAL WATCHDOG®
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