DIGITAL WATCHDOG
Complete Surveillance Solutions

Quick Start Guide

Blackjack E-RACK™

Powered by DW Spectrum™

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

Blackjack™ E-RACK — Up to 128 2.1MP Cameras (1080p True HD Resolution)

DW-BJE2U	DW-BJER2U	DW-BJER3U	DW-BJER4U

DW-BJER4U

DW-BJE2U

DW-BJER3U

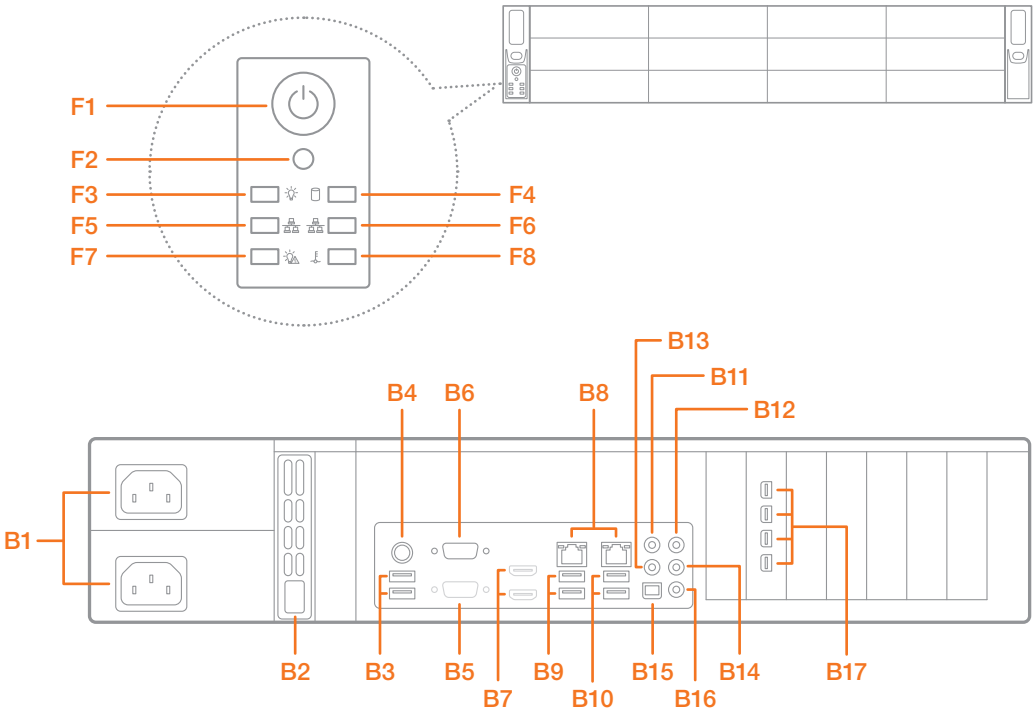
DW-BJER2U

Username: **admin**	Password: **admin**

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

Blackjack E-RACK™
Powered by DW Spectrum™

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

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	Center / LFE Out
B12	Line In
B13	Surround Out
B14	Line Out
B15	SPDIF Out
B16	Mic In
B17	Mini Display Ports

Default Login Information

Username: **admin**	Password: **admin**

NOTE **VGA and HD outputs are DISABLED on the back of the NVR. For local monitoring connection, please use the 4x mini display ports on the right side of the hardware (B17). Use the mini DP to DVI and DVI to HDMI convertors included in the E-Rack's accessory box.**

SPECIFICATIONS E-RACK

	DW-BJE2U (8 Bay)	DW-BJER2U (12 Bay)	DW-BJER3U (16 Bay)	DW-BJER4U (24 Bay)	DW-BJER4U (36 Bay)
# of Cameras	128				
Recording Performance	600 Mbps				
CPU	Intel® Core™ i7 (3rd Generation)				
Memory	16GB (8 x 2 Dual Channel)				
Network	2x 10/100/1000Gps RJ54 Network Ports				
Network Requirements	IEEE 802.3ab 1000BASE-T Gigabit Ethernet (Cameras and servers in the network must be completely isolated)				
Video	ATI				
Video Port	4x Mini Display Ports				
OS	Windows® 7 64 Bit or Linux® Ubuntu® 14.04 Options				
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	RAID 6	RAID 6/60	
HDD*	60G SSD (OS) 4TB ~ 32TB	60G SSD (OS) 16TB ~ 48TB	60G SSD (OS) 24TB ~ 96TB	60G SSD (OS) 24TB ~ 144TB	60G SSD (OS) 150TB ~ 216TB
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	80 lbs

* The actual size will differ, depending on the RAID configuration. The actual size HDD with RAID6 = the total size of the HDD - 2HDD size.

SETTING UP THE E-RACK

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

- E-Rack Server
- Accessory CD (Including Manual)
- Keyboard and USB Mouse
- Power Cable
- QSG
- OS Recovery USB (Emergency Recovery)

NOTE Monitor is not included.

STEP 2:

1. Connect a monitor, USB mouse, and network cables (not included).
2. Connect the server to an appropriate power supply.
3. In the server's login screen, enter username and password (admin | admin).

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 E-Rack:

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

OR

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

Windows 7

WINDOWS-BASED SOFTWARE MANUAL LAUNCH

To launch the DW Spectrum™ Software on the Windows-Based E-Rack:

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

OR

OPTION 2: Go to 'Start' on the bottom left and select DW Spectrum™ from the Start Menu.

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:

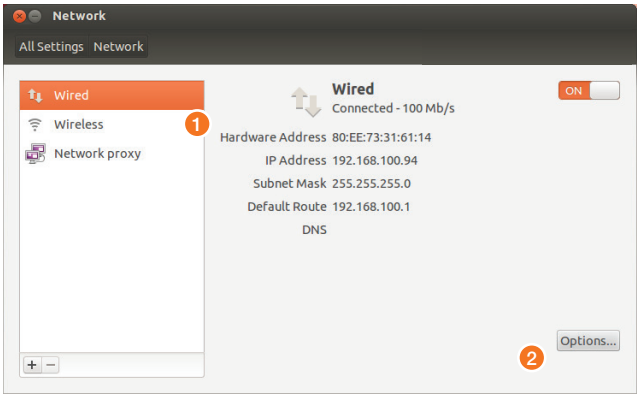
Server IP : 127.0.0.1
USER : admin
PW : admin

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

Linux OS

STEP 5: Network Configuration - Linux System

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



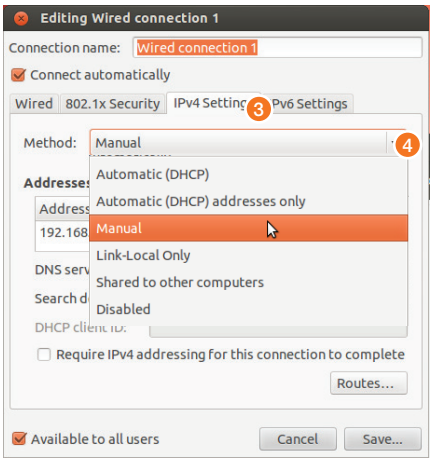
NOTE The Blackjack E-Rack's network settings are set by default to DHCP.

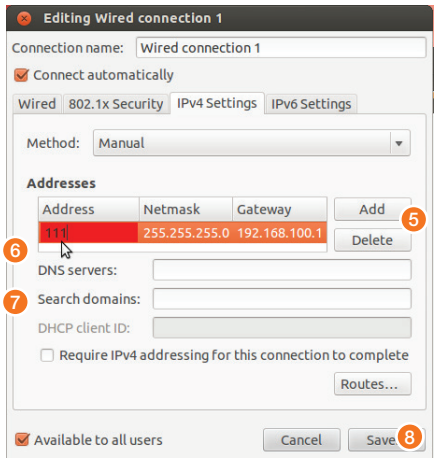
To change the server's network settings to Static IP, follow the instructions below.

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.

9. In the Network Settings main page, make sure the Wired Status is marked as "**Connected**".





Windows 7

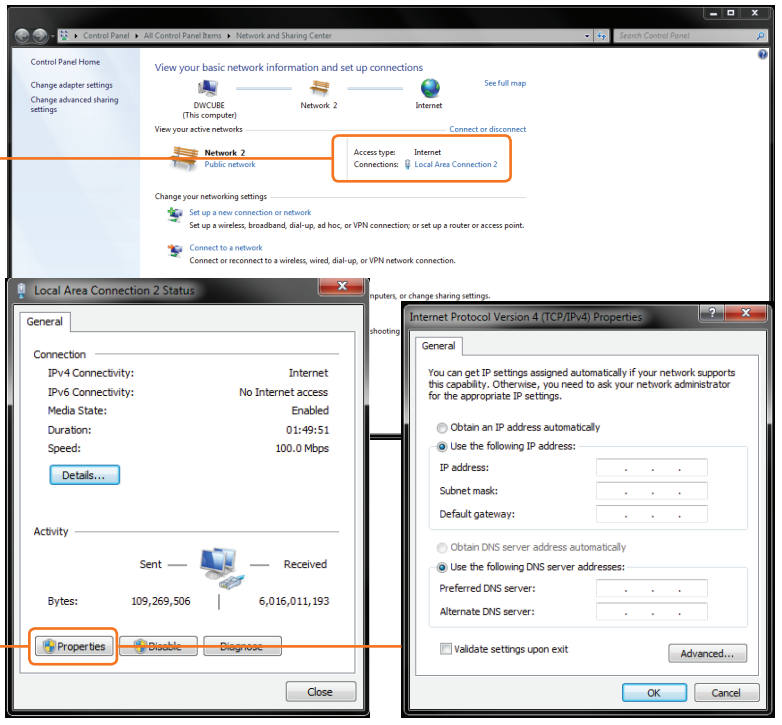
STEP 5: Network Configuration - Windows System

The E-Rack supports dual network cards so you may setup one for external connection and one for internal connection to the cameras to balance the bandwidth. To change the server's network settings to static:

1. Go to '**Start**' and select '**Network**' from the Windows Start menu.
2. All connected network cards will appear in this page.
3. Click Local Area Connection and select '**Properties**' from the new popup window.
4. Double-Click the '**Internet Protocol Version 4**' option.
5. Check the box next to '**Use the following IP address**'
6. Enter the new IP Address, Netmask, and Gateway according to network requirements.

NOTE Contact your Network Administrator and ISP for proper setup.

7. Add a DNS server address.
8. Click '**OK**' to save the settings or '**Cancel**' to return to the Network setup page.



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

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

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

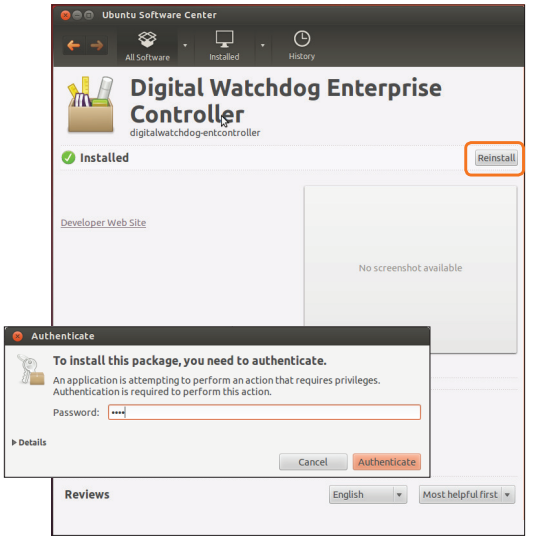
To download the software, go to **www.digital-watchdog.com**, and search for '**DW Spectrum**' to access the product page, documentation and software downloads.

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.

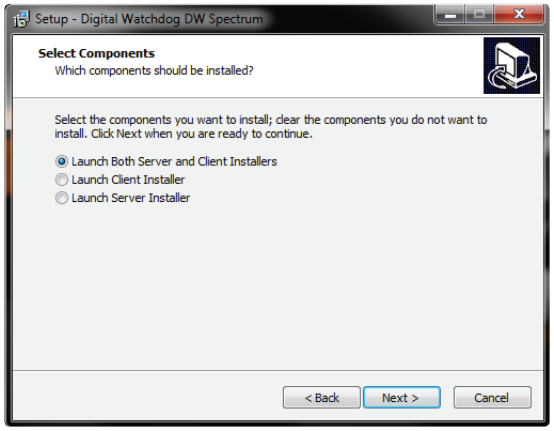


Windows 7

UPGRADING THE DW SPECTRUM IPVMS SOFTWARE ON WINDOWS E-RACK MODELS

To install the DW Spectrum™ full software package:

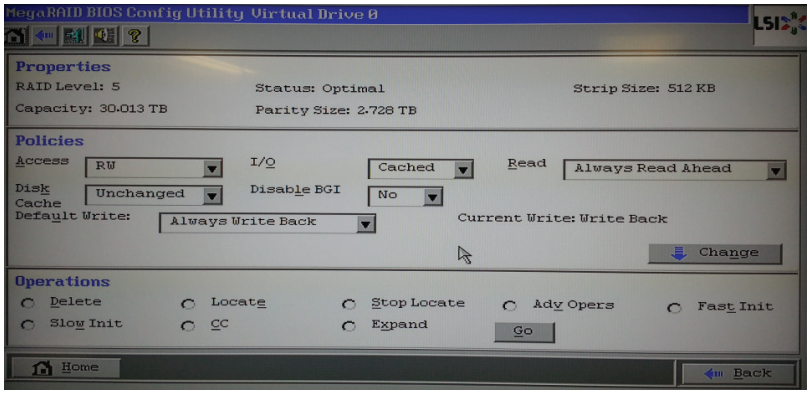
1. Go to **www.digital-watchdog.com** and download the latest software version.
2. Double-click on the installation file to run the installation wizard.
3. Select the installation option:
   a. Launch Both Server and Client Installers.
   b. Launch Client Installer only.
   c. Launch Server Installer only.
4. Follow the installation wizard's instructions to complete the installation.



RAID INFORMATION

To access the E-Rack's RAID configuration (Not available in DW-BJE2U models):

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



Blackjack E-RACK™
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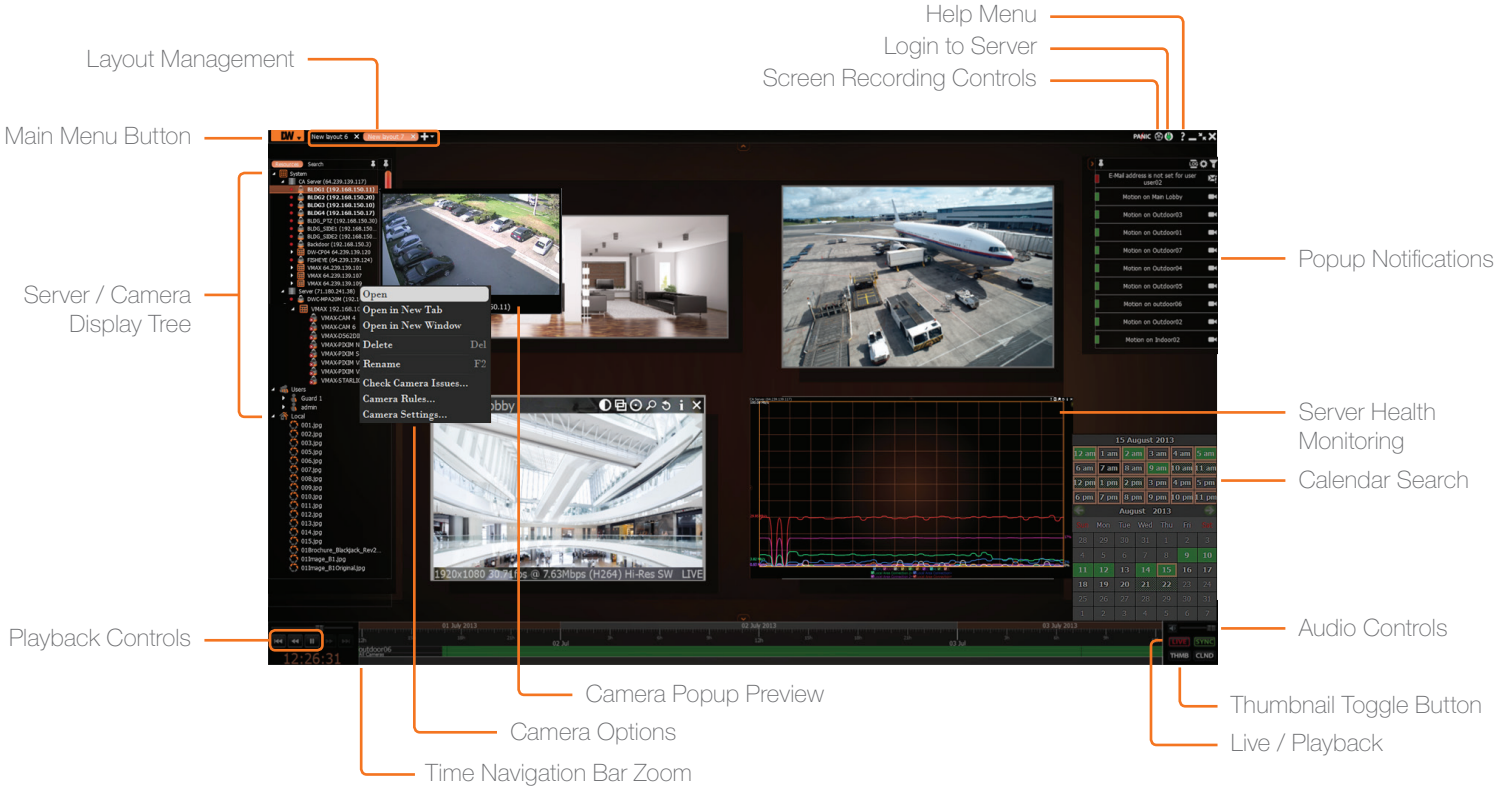
USER INTERFACE OVERVIEW



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—

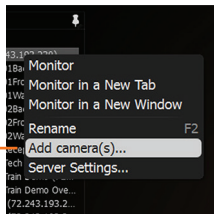
1. Go to **DW Menu Button** > **System Administrator** > **Licenses**.
2. Select '**Automatic Activation via Internet**' from the drop-down options.
3. Input your sixteen-digit license key.
4. Press '**Activate License**'. The system will notify you if the activation was successful.
5. If your licenses have been registered successfully, they will appear under the Active Licenses table.

OPTION 2: If you do NOT have internet access—

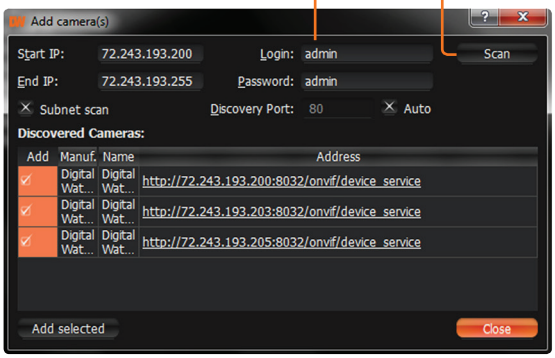
1. Go to **DW Menu Button** > **System Administrator** > **Licenses**.
2. Select '**Manual Activation**' from the drop-down options.
3. Copy your hardware ID. This information will be filled out automatically by your server.
4. E-mail your Hardware ID and your License Key to **licenses@dwcc.tv**. Please 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

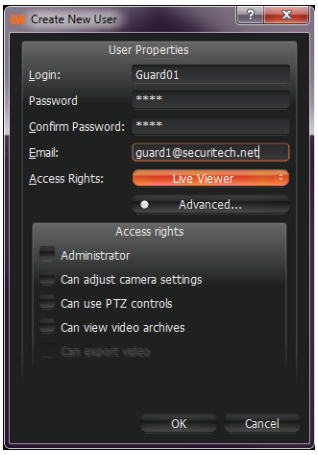


1. Enter the camera's IP address, URL, or RTSP information
2. Check to select a range
3. Enter log-in information
4. Click on the Scan button
5. Cameras will populate the list automatically
6. Click to add all selected cameras

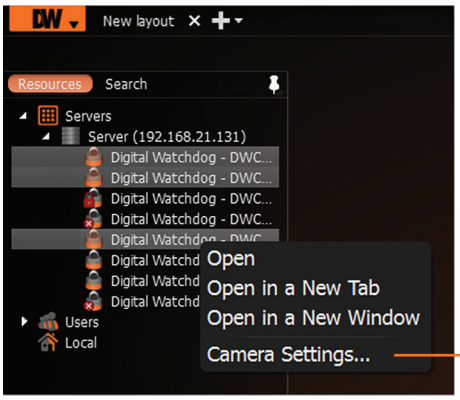


USER ACCOUNTS

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



RECORDING SCHEDULE



Select cameras and go to "Camera Settings"

Recording Menu

Motion Menu

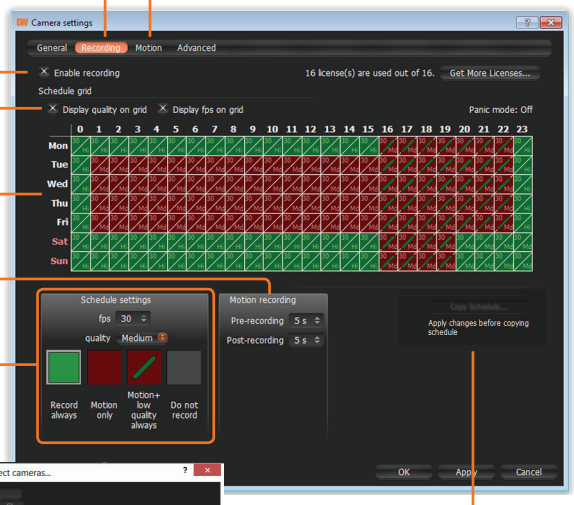
Enable Cameras to Record

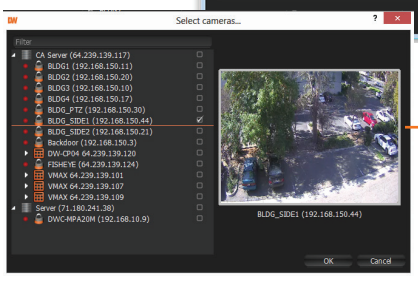
Select All

Click & Drag

Pre & Post Recording (3 is recommended)

Recording Type





Copy Recording Settings to multiple cameras

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 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, Ubuntu 12.04 LTS or Newer

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.

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DW DIGITAL WATCHDOG®
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