Blackjack® E-RACK

Servers Powered by DW Spectrum® IPVMS

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

Blackjack® E-Rack™ — Up to 600Mbps

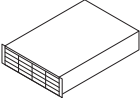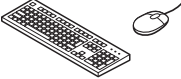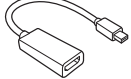| DW-BJER2U	DW-BJER3U	DW-BJER4U

DW-BJER4U

DW-BJER2U

DW-BJER3U

Default Login Information for DW Spectrum® IPVMS

Username: **admin**	Password: **admin12345**

Default login information for the server's OS

| Username: **dwuser**	Password: **Dw5pectrum**

WHAT'S IN THE BOX							
E-Rack™ server		1	Keyboard and mouse	1 set	miniDP to true HD output adapter		1
Quick start guide		1	Power cable	2 set	Rail kit		1 set

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 setup.
See the DW Spectrum® full manual for more information on features and functionality.

Blackjack® E-RACK
Servers Powered by DW Spectrum® IPVMS

BLACKJACK® E-RACK™ HARDWARE
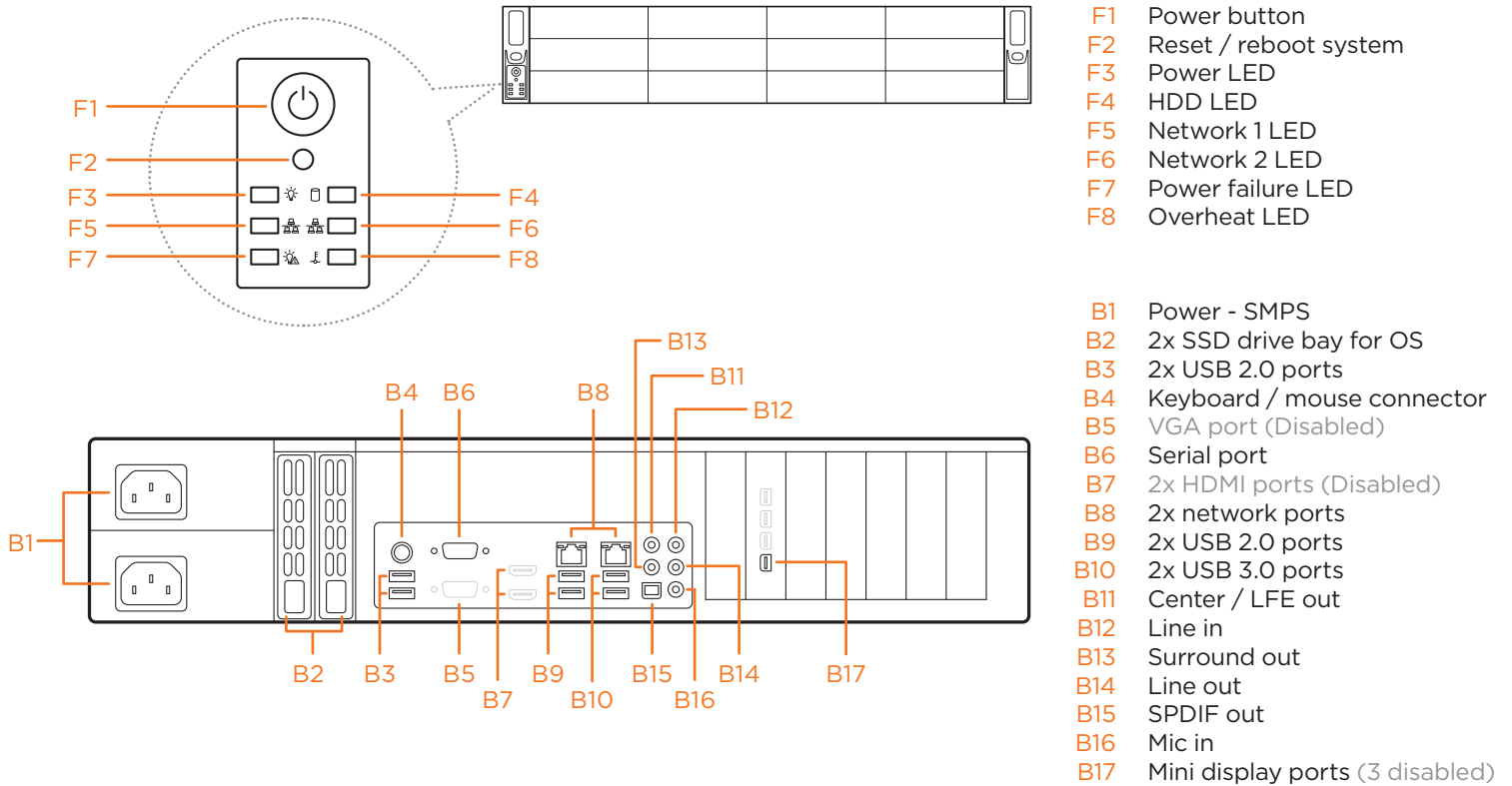
F1	Power button
F2	Reset / reboot system
F3	Power LED
F4	HDD LED
F5	Network 1 LED
F6	Network 2 LED
F7	Power failure LED
F8	Overheat LED

B1	Power - SMPS
B2	2x 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 (3 disabled)

Default Login Information for DW Spectrum® IPVMS

Username: **admin**	Password: **admin12345**

Default login information for the server's OS

Username: **dwuser**	Password: **Dw5pectrum**

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

SPECIFICATIONS

MODEL		Blackjack E-Rack 2U - 12 bay	Blackjack E-Rack 3U - 16 bay	Blackjack E-Rack 4U - 24 bay	Blackjack E-Rack 4U - 36 bay
Included IP licenses		8			
Form factor		Rack-mount			
Operating system	Windows® 10 IoT	DW-BJER2UXXT	DW-BJER3UXXT	DW-BJER4UXXT	
	Linux® Ubuntu® 18.04 LTS	DW-BJER2UXXT-LX	DW-BJER3UXXT-LX	DW-BJER4UXXT-LX	
	OS on SSD	2x SSDs (1 RAID mirrored)			
CPU		Intel® Core™ i7® processor			
Memory		16GB			
NIC		2x Gigabit Ethernet (RJ45)			
System	Max video storage rate (Mbps)	600 Mbps			
Storage	Maximum hard drives	12 x HDD	16 x HDD	24 x HDD	34 x HDD
	Maximum storage	110TB RAID5	150TB RAID5	230TB RAID5	310TB RAID5
Video-out	Outputs	Mini Display port			
	Video card	NVIDIA Quadro P620			
Keyboard and mouse		Included			
Rail-kit		Included			
Power		Dual 920W**, redundant power supply			Dual 1280W**, Redundant Power Supply
Operating temperature and humidity		41°F-104°F / 20-90% RH			
Dimension (WxDxH)		17.2" x 25.5" x 3.5"	17.2" x 25.5" x 5.25"	17.2" x 25.5" x 7"	
Warranty		5 year limited			

* For 10TB HDD – RAID5 Configuration reduces raw storage size by the equivalent of one (1) HDD size
** UPS recommended
Specifications and components mentioned are subject to change without notice.
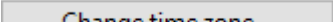
SETTING UP THE SERVER

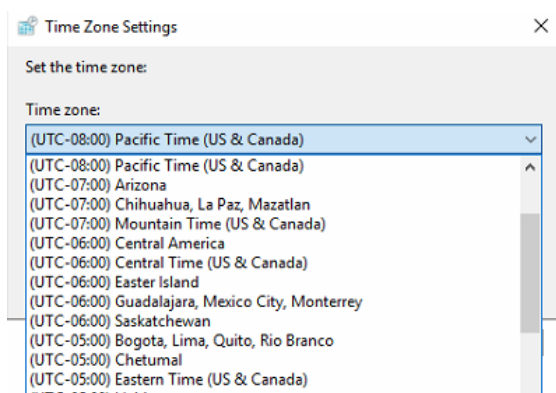**STEP 1:** **Connect external devices, power and network.**

    1. Connect a monitor, USB keyboard, USB mouse and network cable to one of the Ethernet ports (B8 on the diagram). Configure the camera's network first, then configure the server's local network.

    2. Connect the server to an appropriate power source. It is recommend to use UPS system.

       * 3000VA or higher is recommended.

    3. Power up the server if the server does not turn on automatically by pressing the power button on the front of the server. (F2 on the diagram).

       * Connecting the power cable to the live power source may turn on the server automatically.

PoE switch for cameras
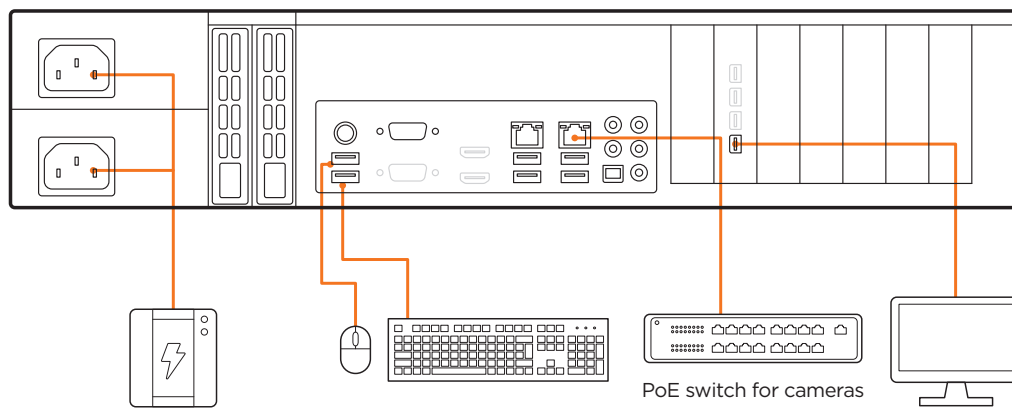
STEP 2: **Configure date and time**

Windows®

    1. Double-click on the date and time icon on the desktop.

    2. Change time zone if it is not correct   Change time zone...   (default is UTC-08:00 Pacific Time).

Time Zone Settings ✕

Set the time zone:

Time zone:

(UTC-08:00) Pacific Time (US & Canada) ⌄

(UTC-08:00) Pacific Time (US & Canada)
(UTC-07:00) Arizona
(UTC-07:00) Chihuahua, La Paz, Mazatlan
(UTC-07:00) Mountain Time (US & Canada)
(UTC-06:00) Central America
(UTC-06:00) Central Time (US & Canada)
(UTC-06:00) Easter Island
(UTC-06:00) Guadalajara, Mexico City, Monterrey
(UTC-06:00) Saskatchewan
(UTC-05:00) Bogota, Lima, Quito, Rio Branco
(UTC-05:00) Chetumal
(UTC-05:00) Eastern Time (US & Canada)

    Press OK after selecting the correct time zone.

    Click "Change date and time..." to update the date and time if they are not correct.   Change date and time...
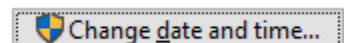
    * Verify the time zone before updating the date and time. Time may show 2 or 3 hours off due to incorrect time zone.
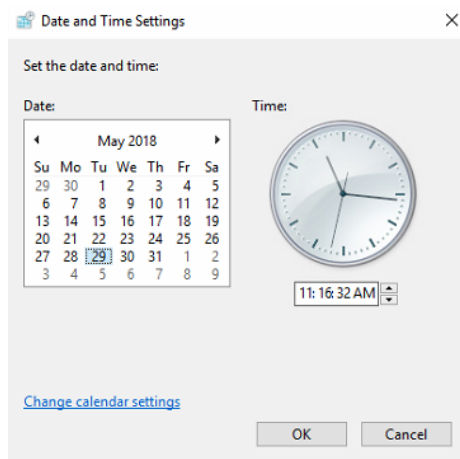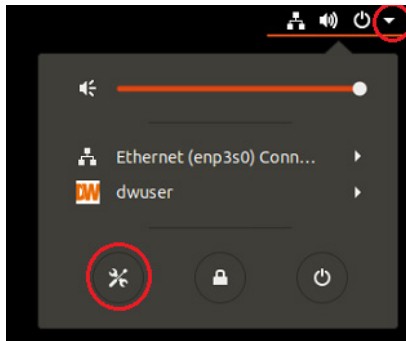
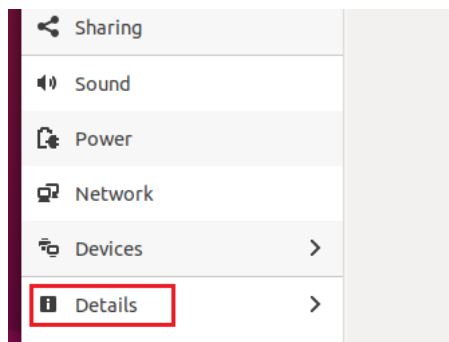Press OK after adjusting to the correct date and/or time.

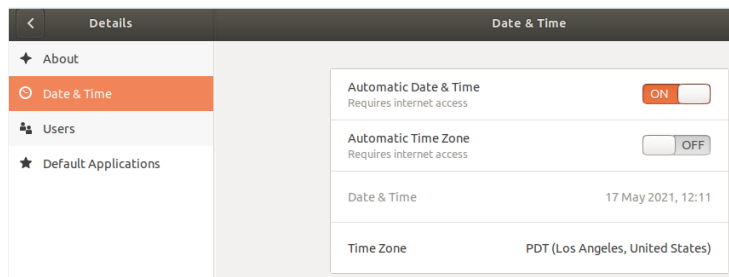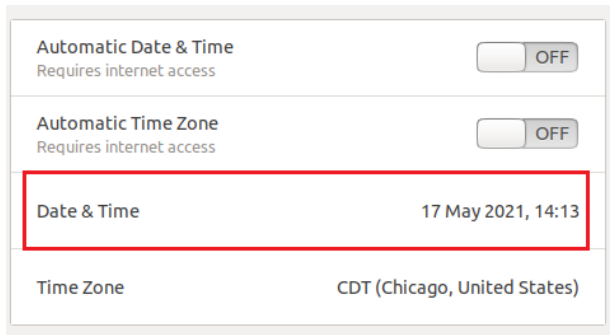4. Press OK to close the date and time when done.

Linux®

1. Open Settings

2. Click Details
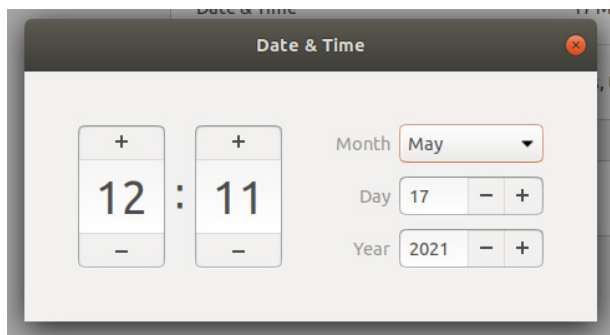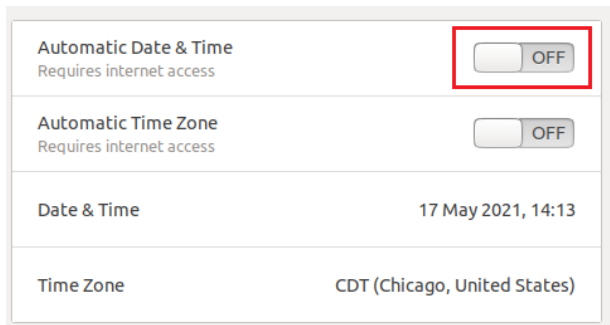

3. Click Date &Time

4. Turn OFF Automatic Date & Time and Automatic Time Zone

5. Click Date & Time and set correct date and time

6. Click Time Zone and set to correct Time zone. (type one of the largest cities in the time zone)

7. Close Settings.

STEP 3: **Configure network**

Please have the following information ready before starting the network configuration.

	Camera network	Local network (LAN)
IP address		
Subnet mask / Netmask		
Default gateway / Gateway	Not applicable	
DNS servers	Not applicable	

* Camera network and local network cannot be on the same network.

NOTE The Blackjack® server's network settings are set to DHCP as default.

NOTE If you are not sure what information to enter, contact your Network Administrator or Internet Service Provider for the information.

Windows®

1. Double click on the "Network Connections" on the desktop.

2. Right click on "Ethernet with cable connected" and click "Properties".
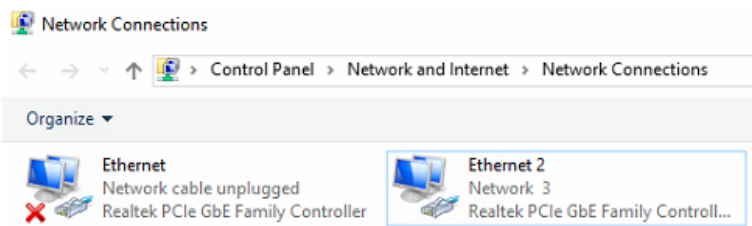
3. Select "Internet Protocol Version 4 (TCP/IPv4)" and click "Properties".
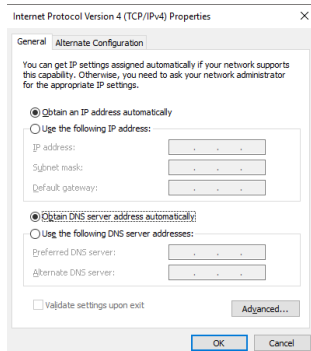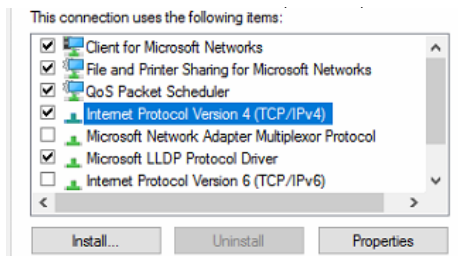
4. Select "Use the following IP address" (Use the following DNS server addresses will be selected automatically).

5. Enter IP address and Subnet mask of the camera network. (Do not enter anything for the default gateway, preferred DNS server and alternate DNS server.

NOTE It must be the same network as the cameras and must not be the same network as the local network. Contact your network administrator for more information.
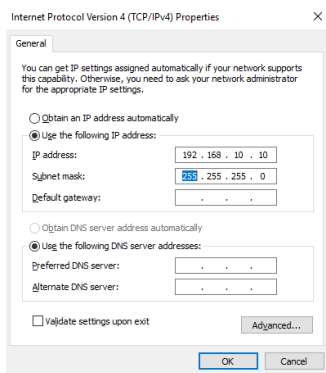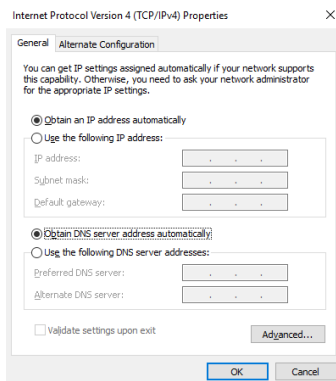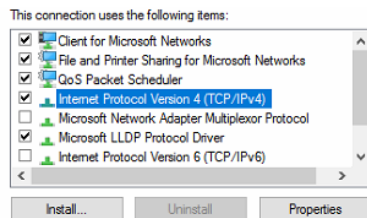
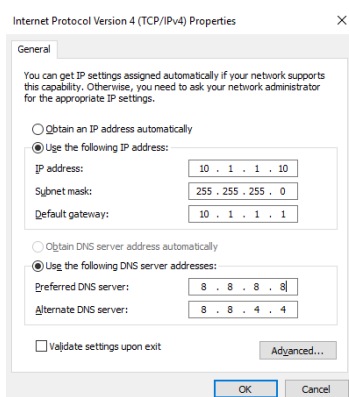6. Click OK to close then click close to go back to network connections.

Local Network

7. Right click on the other Ethernet, the one with network cable unplugged, and click "Properties".

8. Select "Internet Protocol Version 4 (TCP/IPv4)" and click "Properties".

9. Select "Use the following IP address" (Use the following DNS server addresses will be selected automatically).

10. Enter IP address and subnet mask of the camera network.

11. Click OK to close then click close to go back to network connections.

12. Connect a network cable to the Ethernet port B8 on the diagram (page 2) to the switch on the local network.
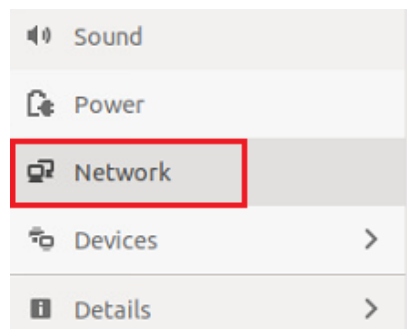
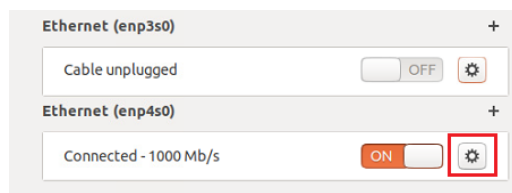13. Close the network connections dialog.
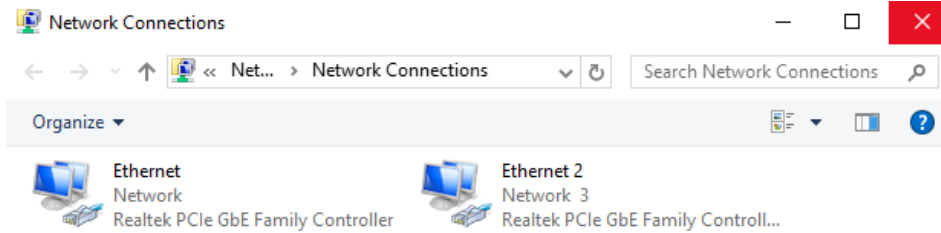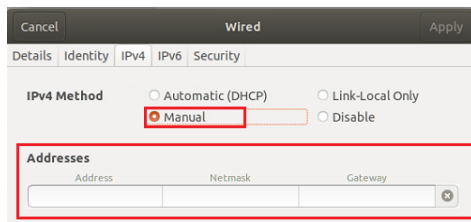

Linux®

1. Open Settings
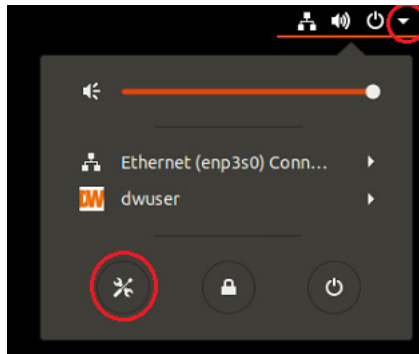
2. Open Network
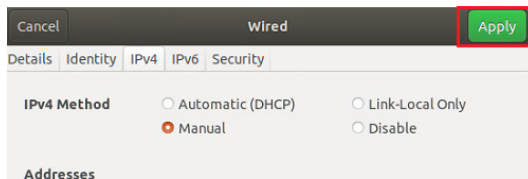

3. Click Setting of the Ethernet that is Connected

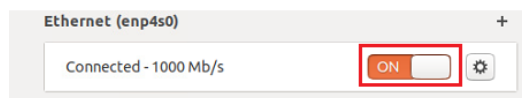4. Change to Manual then enter Address, Netmask , Gateway.

* Do not enter Gateway information if there is no Gateway in this network.
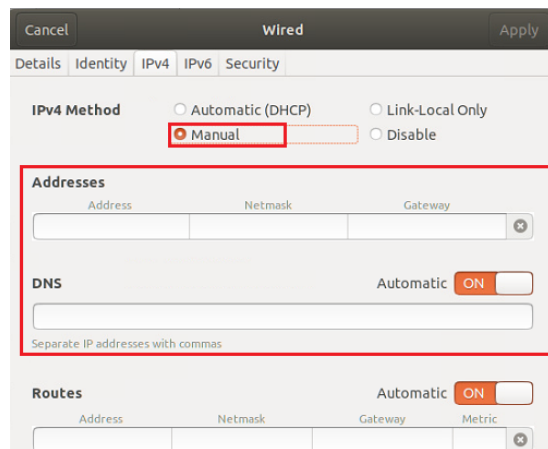

5. Click Apply to save

6. Restart the connection by switching OFF then turn ON.
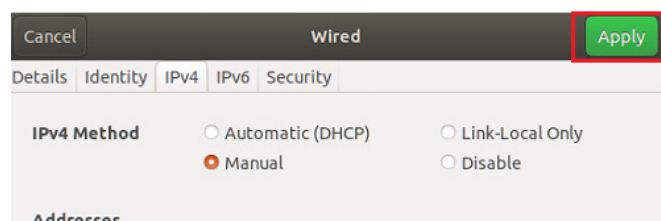

7. Click Settings of the Ethernet not connected.

8. Change to Manual then enter Address, Netmask, Gateway then DNS.

9. Click Apply to save

10. Connect the network cable and verify the connection.

CONFIGURE CAMERAS USING DW® IP FINDER™

Refer to the camera's QSG to configure any DW® IP camera's IP address using DW® IP finder™.

DW Spectrum® IPVMS client

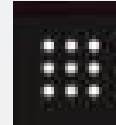### LINUX-BASED SOFTWARE MANUAL LAUNCH

To launch the DW Spectrum® software on the Linux-based E-RACK

Linux OS

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-BASED SOFTWARE MANUAL LAUNCH

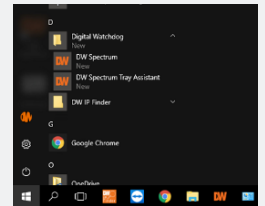To launch the DW Spectrum® software on the Windows-based E-RACK:

Windows

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

OR

OPTION 2: Go to 'Start' on the bottom left and select DW Spectrum® in the Digital Watchdog folder
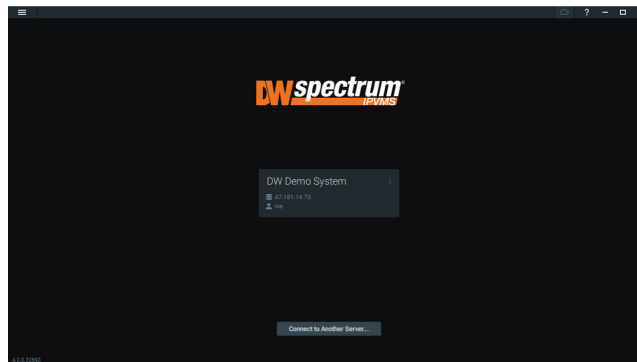
SETTING UP DW SPECTRUM® MEDIA SERVER

Login : **admin**
Password : **admin12345**

Blackjack E-RACK
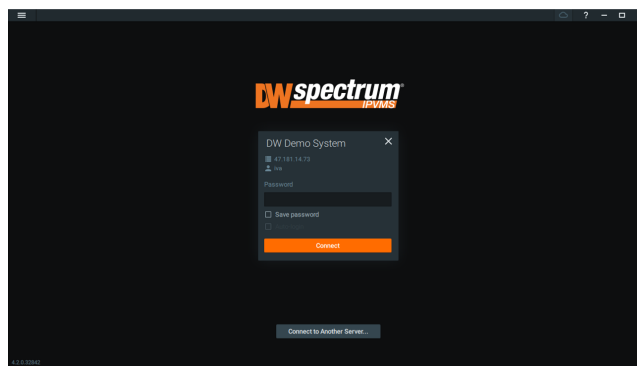
Servers Powered by DW Spectrum® IPVMS

STEP 1:   **Initial run from the Blackjack® server**

1. Open the DW Spectrum® client by double click on the DW Spectrum® icon.

2. Click on the pre-configured server.

3. Enter the password and click connect.
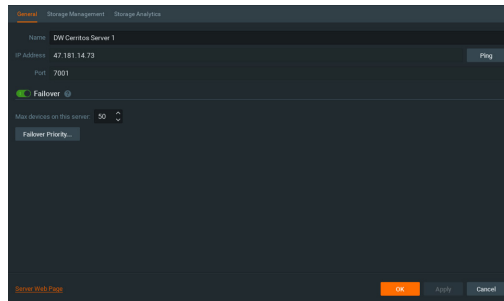   * Default password: admin12345 (case sensitive).

STEP 2:   **To rename the server**

1. Right-click on the server name listed on the resources then click server settings.
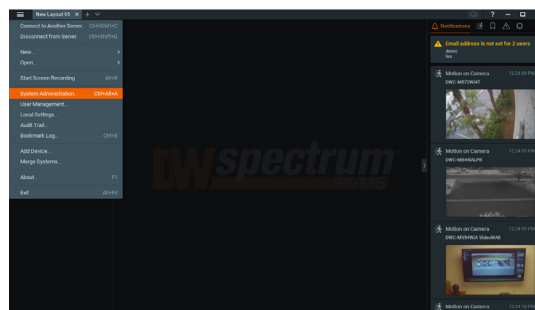
2. Go to the general tab and enter the new server name in the name field. Click OK.
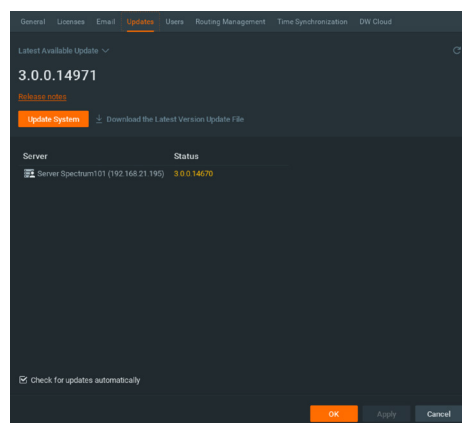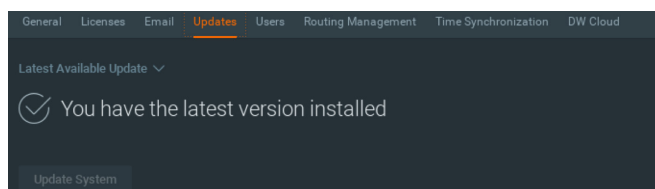

To check for updates

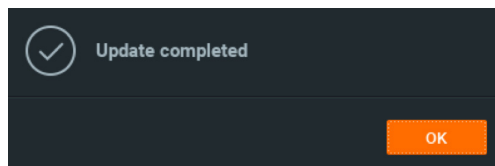1. Click on the menu then click "System Administration".

2. Go to the updates tab. If the system requires updating, click on the update system button.

* If you are on the latest version, it will say "You have the latest version installed" and the Update System button will be disabled.
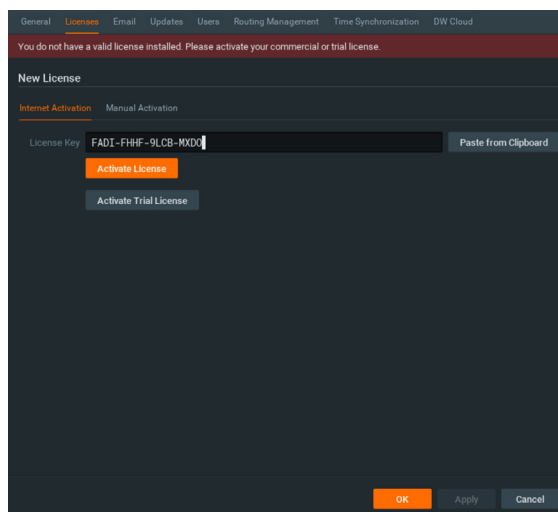
3. Click OK when the update is completed.

STEP 4: **Enter and activate licenses**

1. Go to the system administration window and click on the license tab.

2. Enter the license key and click "Activate License". An Internet connection is required.

   * Click on "Activate Trial License" if you have not purchased a valid license key.

3. Click OK to when the license key is activated.
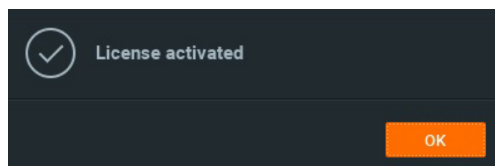
STEP 5: **Configure recording**

1. Right-click on a camera in the resource tree to setup recording. Click on camera settings from the context menu.
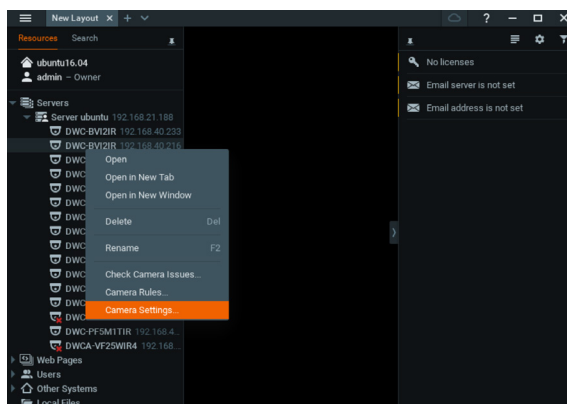
2. Go to the recordings tab.
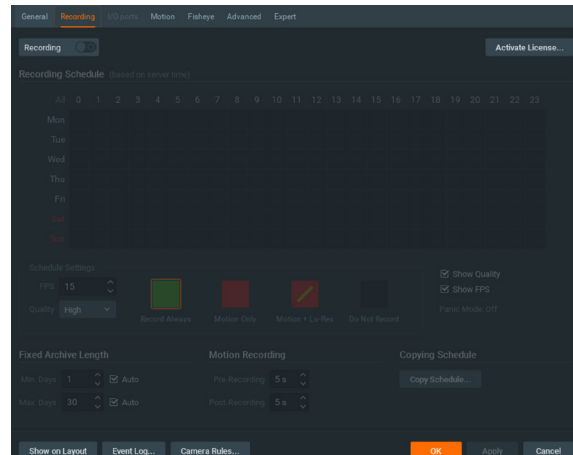
3. Click to turn on recording.

4. Configure the camera's schedule settings for quality, FPS and recording type.

5. Click and drag the mouse over the recording schedule to apply the settings to multiple days and times.

* Click "All" to apply the recording settings to the entire schedule.
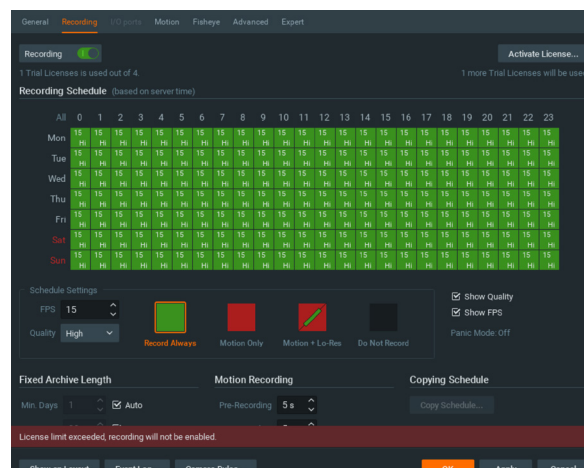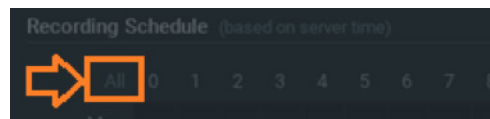
6. A red dot will appear next to the camera in the resource tree once recording is started.
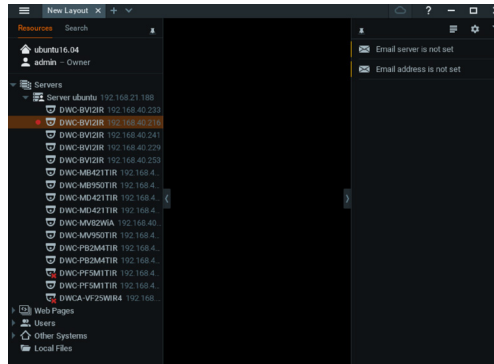
STEP 6:   Backup database

1. Go to the system administration window and click on the general tab.
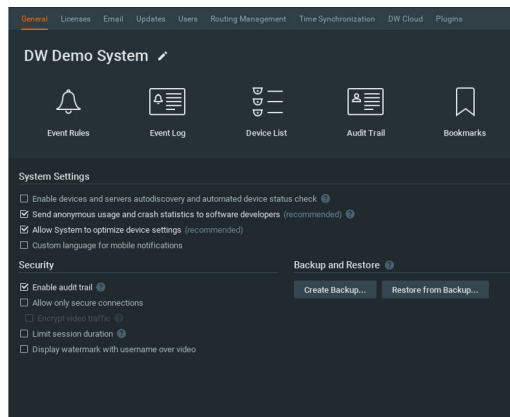
2. Click "Create Backup...".

3. Navigate to the folder you want to save the database and enter a name for the backup file. Click save.
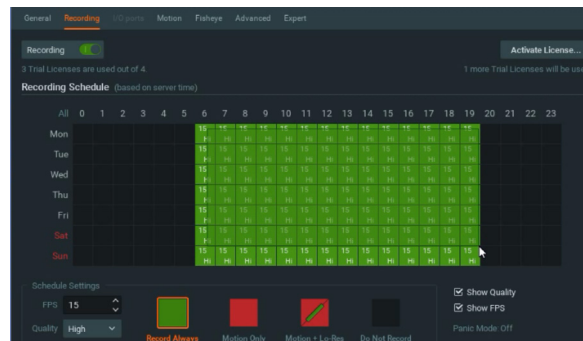
   * It is strongly recommend to backup your data to an external storage media as well.
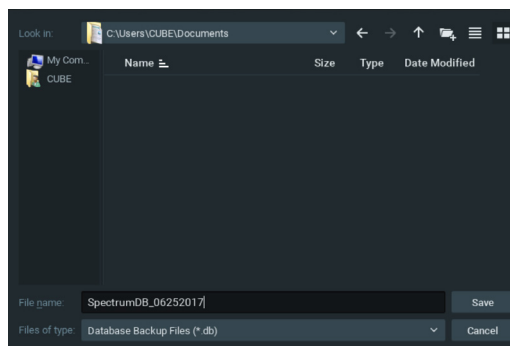
> **NOTE:** More information and instructions are available in the DW Spectrum® IPVMS user manual.

> **NOTE:** This products is covered by one or more claims of the HEVC Patents listed at patentlist.accessadvance.com.

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 2 minutes 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 and 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 cannot 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.

DW SPECTRUM SYSTEM REQUIREMENTS

Recommended specs for the full client

	Single-monitor DW Spectrum workstation	Dual-monitor DW Spectrum workstation	Quad-monitor DW Spectrum workstation
Processor	Intel i5 8th gen or AMD Ryzen 5 3000 Quad-Core or better	Intel i7 8th gen or AMD Ryzen 7 3000 Quad-Core or better	Intel i9 or AMD Ryzen 9 Quad-Core or better
Video card	Intel HD Graphics onboard GPU or better	Intel HD Graphics onboard GPU or better	GeForce GTX 1650 or better
RAM	8 GB DDR3 1600 MHz or better	16 GB DDR3 1600 MHz or better	32 GB or better
NIC	1Gbps or better	2 x 1 Gbit or better	2 x 1 Gbit or better
Storage	Dedicated SSD or NVME disk for the OS, 128 GB or larger	Dedicated SSD or NVME disk for the OS, 128 GB or larger	Dedicated SSD or NVME disk for the OS, 128 GB or larger
OS supported	Microsoft Windows OS • Windows 8 – Released: October 2012 | EoS: 01/2023 • Windows 8.1 – Released: October 2013 | EoS: 01/2023 • Windows 10 – Released: July 2015 • Windows Server 2012 – Released: August 2012 | EoS: 10/2023 • Windows Server 2012 R2 – Released: October 2013 | EoS: 10/2023 • Windows Server 2016 – Released: October 2016 | EoS: 01/2027 • Windows Server 2019 – Released: October 2018 | EoS: 01/2029		
	Ubuntu (Debian-based Linux) OS Ubuntu 16.04 LTS "Xenial Xerus" – Released: April 2016 | EoS: 04/2024 Ubuntu 18.04 LTS "Bionic Beaver" – Released: April 2018 | EoS: 04/2028		
	Macintosh OS • macOS 10.14 "Mojave" – Released: September 2018 • macOS 10.15 "Catalina" – Released: October 2019 • macOS 11.0, 11.1, 11.2 "Big Sur" – Released: November 2020 **NOTE: DW Spectrum IPVMS for macOS is only supported by the DW Spectrum Client.		

* Except Storage Server version
 Important: OS not listed will be not be supported by DW® Tech Support

Tel: +1 (866) 446-3595
Fax: (813) 888-9262

DW DIGITAL WATCHDOG®
Complete Surveillance Solutions

www.digital-watchdog.com
sales@digital-watchdog.com