

Blackjack Ai

DW-BJAiP80TR	DW-BJAiP100TR	DW-BJAiP120TR



Default Login Information for DW Spectrum

Username: **admin**

Password: admin12345

Default login information for the server's OS

Username: dwuser Password: Dw5pectrum

		WHAT'S	IN THE BOX			
P-Rack™ server	1	Keyboard and mouse	a a a a a a a a a a a a a a a a a a a	1 set	Rail kit	1 set
Quick start guide	1	Power cable		1 set	Mini-DP to True HD Adapter	1

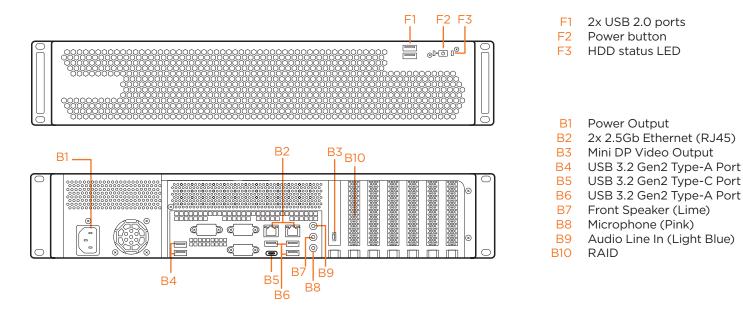
NOTE: Download all your support materials and tools in one place.

- 1. Go to: http://www.digital-watchdog.com/support-download/.
- 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® IPVMS full manual for more information on features and functionality.

Blackjack^A

HARDWARE OVERVIEW



Default login information for DW Spectrum

Default Login Information for the server's OS

Username: dwuser

Username: **admin**

Password: admin12345

	Password:	Dw5pectrum
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SPECIFICATIONS

	PART NUMBER	DW-BJAiPxxT
Included DW Spectrum IP licenses		4 (DW-SPECTRUMLSC004)
Included DW Ai Server Licenses		4 channel(DW-DWAiSLSC004)
Form factor		2U Rackmount
Operating system		Windows 11 IoT
OS on SSD		480GB SSD
CPU		Intel Core i7 processor
Memory		32GB
Ethernet port		2x 2.5B Ethernet ports (RJ45)
	Max video storage rate (Mbps)	320 Mbps
	Max # of analytic streams (secondary)	Up to 64
Custom	Maximum HDD	6 x SATA HDD
System	Storage Options	120TB RAID5
	RAID	RAID5
	USB interface	Yes
Video-out	Outputs	1x mini DP, for system configuration
Video-out	Graphics Card	NVIDIA RTX A2000 12GB
Pre-loaded VMS software		DW Spectrum
DW Spectrum Client supported OS		Cross-platform - Windows, Linux Ubuntu and Mac
Preloaded Analytic software		DW Ai Server
Ai Configuration Tool supported OS	5	Cross-platform - Windows and Linux Ubuntu
Mobile apps		iOS and Android
Keyboard and mouse		Included
Rail kit		Included
Power supply		400W**
Operating temperature (room)		41°F-104°F (5°C-40°C)
Operating humidity		20-90% RH
Dimension (WxDxH)		17.3" x 21.9" x 3.5" (439.3 x 557.1 x 88.9 mm)
Other certification		NDAA, TAA
Warranty		5 year limited

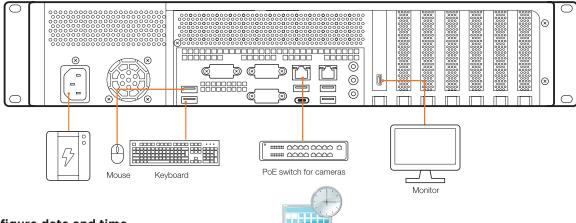
SETTING UP THE SERVER

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 (B2 on the diagram). Configure the camera's network first, then configure the server's local network.

NOTE See page 2 for detailed back panel breakdown for each model.

- 2. Connect the server to an appropriate power source. A UPS system rated for 1000VA or higher per PSU is recommended.
- 3. Connecting the power cable to a live power source may turn on the server automatically. If the server does not turn on automatically, press the power button on the front of the server (F1 on the diagram).



STEP 2: Configure date and time

- 1. Double-click on the **Date and Time** icon on the desktop.
- 2. The default time zone is UTC-08:00 Pacific Time. Click **Change time zone...** to change to the correct time zone.



- 3. Click **OK** after selecting the correct time zone.
- Click Change date and time... to update the date and time if they are incorrect. Change date and time...
 NOTE: Verify the time zone before updating the date and time. Time may show 2 or 3 hours off due to an incorrect time zone.

Change date and time...



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5. Press OK after adjusting to the correct date and/or time. Press OK to close the date and time when done.

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	N/A	
DNS servers	N/A	

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

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

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



- 1. Double-click on **Network Connections** on the desktop.
- 2. Right-click Ethernet (connected) and click Properties.

😰 Network Connections



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

	General Alternate Configuration
This connection uses the following items:	You can get IP settings assigned automatically if your networl this capability. Otherwise, you need to ask your network adm for the appropriate IP settings.
✓ ✓	Qbtain an IP address automatically Use the following IP address:
	IP address: Sybnet mask:
Internet Protocol Driver Internet Protocol Version 6 (TCP/IPv6)	Default gateway: Obtain DNS server address automatically:
< >	Use the following DNS server addresses:
Install Uninstall Properties	Alternate DNS server:

Internet Protocol Version 4 (TCP/IPv4) Properties

Internet Protocol Version 4 (TCP/IPv4) Properties

- 4. Click the Use the following IP address: radio button Use the following DNS server addresses: will be selected automatically.
- 5. Enter the IP address, subnet mask, and preferred and alternate DNS server addresses for the local network.
- 6. Click **OK** to close the window, and again for the properties window.

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.

Local Network

- 7. Right-click on the Ethernet (Network cable unplugged) and click Properties.
- 8. Select Internet Protocol Version 4 (TCP/IPv4) and click Properties.

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		O Obtain an IP address autom	atically
the encountries where the following denses		 Uge the following IP address 	3:
is connection uses the following items:		IP address:	192 . 168 . 10 . 10
Client for Microsoft Networks	^	Subnet mask:	255 . 255 . 255 . 0
		Default gateway:	
		Obtain DNS server address	automatically
Internet Protocol Version 4 (TCP/IPv4)		Use the following DNS serve	r addresses:
Microsoft Network Adapter Multiplexor Protocol		Preferred DNS server:	
 Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) 		Alternate DNS server:	
	>	Validate settings upon exit	Ad <u>v</u> anced
Install Uninstall Propert	ies		OK Cancel

- 9. Click the Use the following IP address: radio button Use the following DNS server addresses: will be selected automatically.
- 10. Enter the IP address and subnet mask of the camera network. Leave the default gateway and preferred and alternate DNS server fields blank.
- 11. Click **OK** to close the window, and again for the properties window.
- 12. Connect a network cable to Ethernet port B2 (2.5G LAN) on the rear panel diagram to activate the local network connection.
- 13. Close the network connections window.

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Ethernet Network Realtek PCIe GbE Family Controller	ntroll		

NOTE If you are not connecting to the Blackjack^{*} from 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



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.

SETTING UP THE DW SPECTRUM MEDIA SERVER

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

STEP 1: Login from the Blackjack' server



- 1. Open the DW Spectrum client.
- 2. Click on the pre-configured server.
- 3. If it does not log in automatically, enter the default password and click Connect.

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STEP 2: To rename the server

- 1. Right-click on the server name in the resource list on the left side and click Server Settings...
- 2. Enter the new server name in the name field and click OK.

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		8	Max camera on this server: 256 C Server Location 10 0 C	
			Server Location ID: 0	
			Failover Priority	
		8		

STEP 3: To check for updates

- 1. Click the main menu icon in the upper-left corner of the DW Spectrum window, and click System Administration...
- 2. Click the **Updates** tab. If the system needs to be updated, click on the **Update** button.

Quick Start Guide

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to Another Server	. Ctrl+Shift+C
nnect from Server	Ctrl+Shift+D
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pen	>
art Screen Recording	Alt+R
an screen Recording	AILTN
ystem Administration	Ctrl+Alt+A
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_ocal Settings	
Audit Trail	
Bookmark Log	Ctrl+B

* If the latest version is already installed, the message "The latest version is already installed" will be visible at the top.

3. Click **OK** when the update is complete.

	Ready to update to	
Specific Build V 🔯 Advanced settings	6.0. X.XXXXX	DW DW Spectrum Client ? ×
6.0. X.XXXXX	Release notes	
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*Support for Raspberry OS 10 mill be discontinued in the next major release (6.1). Domitoid <u> </u>	Hestall update Cancel	ок

STEP 4: Activate licenses

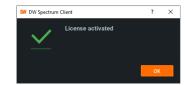
NOTE: An active Internet connection is required.

- 1. Click the main menu icon in the upper-left corner of the DW Spectrum window, and click System Administration...
- 2. Click the Licenses tab. Enter the license key and click Activate License.

General	User Management	Updates L	licenses	Email	Security	DW Cloud	Time Sync	Routing	Plugins	Advanced
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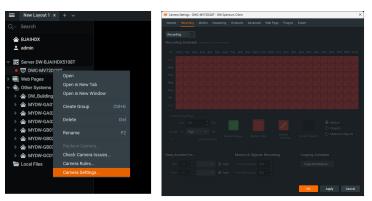
* Click Activate Free License to use a free, four-channel license for 30 days.

3. Click **OK** when all necessary license keys are activated.



STEP 5: Configure recording

- 1. Right-click a camera in the resource list on the left side and click **Camera Settings...**
- 2. Click the **Recording** tab.



- 3. Click the **Recording** toggle to activate recording for that camera.
- 4. Set quality, FPS, and recording type.



5. Click and drag over the recording schedule to apply the settings to any number of days and times.



* Click All to apply the recording settings to the entire schedule.



Recording Schedule

12am 1am 2am

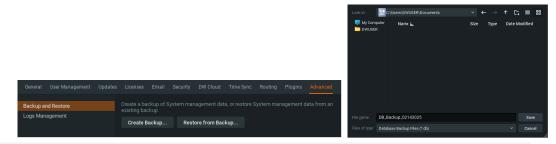
6. Click OK when the necessary recording schedule is set. A red circle will appear next to the camera in the resource list.

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1 a	admin	
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à 0	Other Systems	
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NOTE: A Recording License is required to allow a camera to record to the archive.

STEP 6: Backup database

- 1. Click the main menu icon in the upper-left corner of the DW Spectrum window, and click System Administration...
- 2. Click the Advanced tab. Click Create Backup...
- 3. Select the location to save the database, and enter a name for the backup file. Click Save.
- * Creating a database backup to external storage before and after every update is strongly recommended.



NOTE: More information and instructions are available in the DW Spectrum user manual.

SETTING UP THE DW AI SERVER CONFIGURATION TOOL

While some camera settings can be configured through the DW Spectrum Client, the DW Ai Server Configuration Tool can be used to provide a complete analytic user experience during the configuration process of the DW Ai Server.

STEP 1: Logging in with the DW Ai Server Configuration Tool

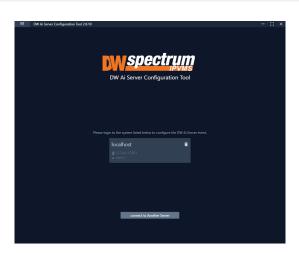
To begin setting up the DW Ai Server Configuration Tool

1. Launch the DW Ai Server Configuration Tool. There is an application shortcut on the desktop.



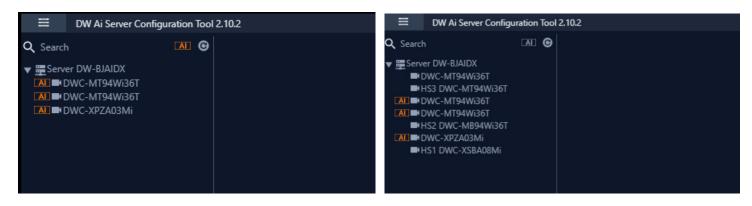
Select the DW Ai Server you want to connect with and log in with the local 'admin' user profile.

NOTE: If connecting the DW Ai Server Configuration Tool to the DW Spectrum Server is hindered by the message "Unauthorized. Please check the access credentials and try again," after changing the user password, enable the Digest Authentication setting of the user profile in the DW Spectrum Client.



2. Once logged in and connected to the DW Ai Server through the DW Ai Server Configuration Tool, a list will show all added cameras in the left-side panel.

To view all cameras, including the cameras without DW Ai server plugin enabled, click "Ai" to view all cameras.



- Search: This search box can be used to filter the camera list based on the entered device name.
- Ai (toggle): The Ai button toggles the camera list between showing all cameras on the DW Spectrum System or just the cameras that have the plug-in enabled. This toggle appears at the top of the camera list beside the search bar. While enabled, the toggle will appear in orange.

Blackjack'Ai

- Refresh: This button refreshes the list of cameras from DW Spectrum when it is clicked.
- Device List: A list of DW MEGApix Ai and standard IP devices are listed in the Resource Tree organized by server. While the DWAi toggle is active, only Ai devices will be listed.

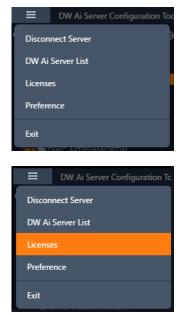
Select the Main Menu to display the menu options:

- Disconnect Server: Disconnects the current session with your DW Spectrum Server.
- DW Ai Server List: Displays a list of the DW Ai Server(s) that your DW Spectrum system is configured to use.
- Licenses: Displays a list of the licenses available from the DW Ai Servers.
- Preference: Displays a list of the DW Ai Server Configuration Tool's advanced options.

STEP 2: DW Ai Server Licenses

A license is required to use the analytic features of a DW Ai Server. Licenses can be managed through the DW Ai Server Configuration Tool program.

Select "Licenses" from the Main Menu in the DW Ai Server Configuration Tool to view the licenses.



Active Licenses

The Active Licenses list shows all licenses of the DW Ai Server and how the licenses are currently allocated.

Server				License Key	
		Channels	Channels		
Server #1	DW AI Server			0G09-5409-06PX	

New Licenses

In the New Licenses area of the menu, server tabs (Server #) are created for each DW Ai Server. Select a server tab to view the license activation interface.

• Type Specifies the activation method that will be used for your license activation request.

o Internet Activation: Select to enter the license activation key to add additional DW Ai licenses.

• License Key: Enter the alphanumeric DW Ai license key, then click "Activate" to add a license. An Internet connection is needed for the DW Ai Server to use this feature.

New License	5
Server #1 Type	Internet Activation O Manaual Activation
1,100	
License Key	A1B2-C3D4-E5F6 Activate
	Close

o **Manual Activation:** Select to copy the server's HW GUID and manually add a DW Ai license. This option is intended for use if the DW Ai Server does not have access to the Internet.

• **HWGUID:** This is the system's unique code. Copy the HWGUID and submit a request for a manual activation code to <u>licenses@digital-watchdog.com</u>. The email should include the server's HWGUID and the license key that you are trying to activate.

- Copy to clipboard: Copies the HWGUID to the clipboard.
- License Key: Type or paste the activation code into the space provided, then click "Activate."

Server #1	
Туре	O Internet Activation O Manaual Activation
HWGUID	667662F3AAD8E802E92AA5FE705D428872614C3DFF5F6382466607E8484CC883
License Key	Activate

STEP 3: Enable Tab - DW Ai Server Plugin

To set up analytics on the DW Ai Server, select a camera from the left-side panel. The Enable tab shows the status of the plug-in for the selected camera. From here, you can check your license status and select the preferred deep-learning feature.

- DW Ai Server Plugin: Toggle to enable/disable the plug-in for the selected camera.
- **Tracker Engine:** Defines the tracking engine that will be used for analytics. The tracker engine will need to 'learn the scene' to determine the background from moving foreground objects. While initially learning the scene, a message will be displayed in the live view, and no objects will be tracked during this time.
 - o **DL Object Tracker:** When selected, the analytic engine will use the GPU to detect, categorize and track objects as they move through the camera's detection areas.
- When set to use Object Tracker, the objects can be classified using either deep learning models or by using properties extracted from an object in a calibrated scene. If the Deep Learning Filter is not used, camera calibration is required to detect the object class.
 - o **DL People Tracker:** When selected, the tracker uses the GPU to detect and track people as they move through the camera's detection areas.
- Apply: Apply changes to the selected camera.

≡ DW Ai Server Configu	uration Tool	2.10.2			- [] ×
Q Search		Enable	HS1 DWC-XSBA08Mi	Resolution	704 x 480
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AL HS3 DWC-MT94Wi36T AL DWC-MT94Wi36T		Counters	DW Ai Server Plugin		License Status
DWC-MT94Wi36T		Tamper	Plugin for DW Ai Server		License Status
A DWC-XPZA03Mi		Advanced			
			Tracker Engine		
			Tracking Engine OL Object Tracker ODL People		
			Apply		

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



TROUBLESHOOTING TIPS

Problem	Possible solutions
A camera or other device is not automatically discovered.	 The device must be on the same local network as the media server. The device must be compatible with DW Spectrum. Refer to the full list of supported cameras on digital-watchdog.com Update the device with the latest firmware. Ensure ONVIF is enabled on the device. Add the camera manually. Reboot the server after installation. Allow up to 2 minutes for the server to detect all supported devices.
Slow video	 The same camera(s) could be accessed by multiple clients simultaneously. Check network speed.
Device appears disconnected	 Ensure the username and password are correct in device settings. Click the ping button in device settings to ensure the camera is connected to the network. Reboot or restore the device to the factory default if its web page is available. Update the device with the latest firmware. The device must be on the same local network as the media server. Ensure ONVIF is enabled on the device. The user may not have the necessary permissions to view that device.
Cannot view archived video	 Ensure there is an active network connection between the client and server. The user may not have the necessary permissions to view archive from that device. The camera may be set to a recording mode that did not record video for the selected time and environment. Check the log on the media server to ensure the device did not unexpectedly disconnect.
"Unauthorized" message on device	 Ensure the username and password are correct in the device's settings. Reboot the camera.

DW SPECTRUM SYSTEM REQUIREMENTS

Recommended specs for the full client

	Minimum	Recommended
Processor	Intel® i5 8th gen processor (or higher)	Intel® Core i7® 8th gen processor (or higher)
System RAM	8GB RAM	16GB RAM
Video card	Integrated Intel® graphics	GeForce® GTX 1650 or better
Network interface	2 x 1 Gbps	2 x 1 Gbps
OS Drive	256GB HDD	Dedicated 256GB SSD or larger
OS supported	Microsoft Windows OS (supported by both DW Spectrum® Server •Windows 10 •Windows 11 •Windows Server 2016 •Windows Server 2019 •Windows Server 2022 **NOTE: DW Spectrum for Windows can be installed as a software Ubuntu (Debian-based Linux) OS (supported by both DW Spectru •Ubuntu 18.04 LTS "Bionic Beaver" •Ubuntu 20.04 LTS: "Focal Fossa" •Ubuntu 22.04 LTS: "Focal Fossa" •Ubuntu 22.04 LTS: "Jammy Jellyfish" **NOTE: DW Spectrum for Ubuntu is only available for separate inst Macintosh OS (supported only by the DW Spectrum Client. DW Sp •macOS 11.0, 11.1, 11.2 "Big Sur" •macOS 12 "Monterey" •macOS 12 "Monterey" **NOTE: DW Spectrum for macOS is only supported by the DW Sp	bundle, or the Server and Client software can be installed separately. m Server and Client). callations (not bundled). ectrum Server is not available for macOS).

* Except Storage Server version

Important: OS not listed will be not be supported by DW® Tech Support.

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