

# Video Management Anywhere, Anytime.



Complete Scalable Video Management



## Built for Users.™

### Apps for every operating system. **Cloud-enabled.**

DW Spectrum® IPVMS supports all major operating systems with the ability to link any system to DW Cloud™ for fast, reliable remote access.

### Automated. Intuitive. **Built for Users.**

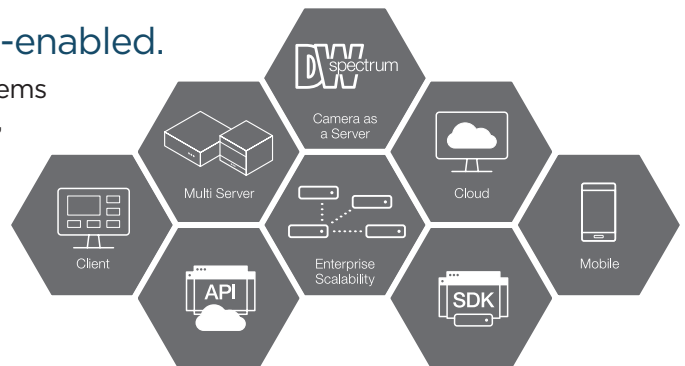
Installs in seconds configures in minutes. Instantly usable for novices, operators, integrators, or developers.

### **Auto-discover devices** from hundreds of manufacturers.

Discover and manage thousands of compatible video, audio and I/O devices. Set up a new system or replace any existing VMS in minutes.

### Open for developers. **Integrate anything.**

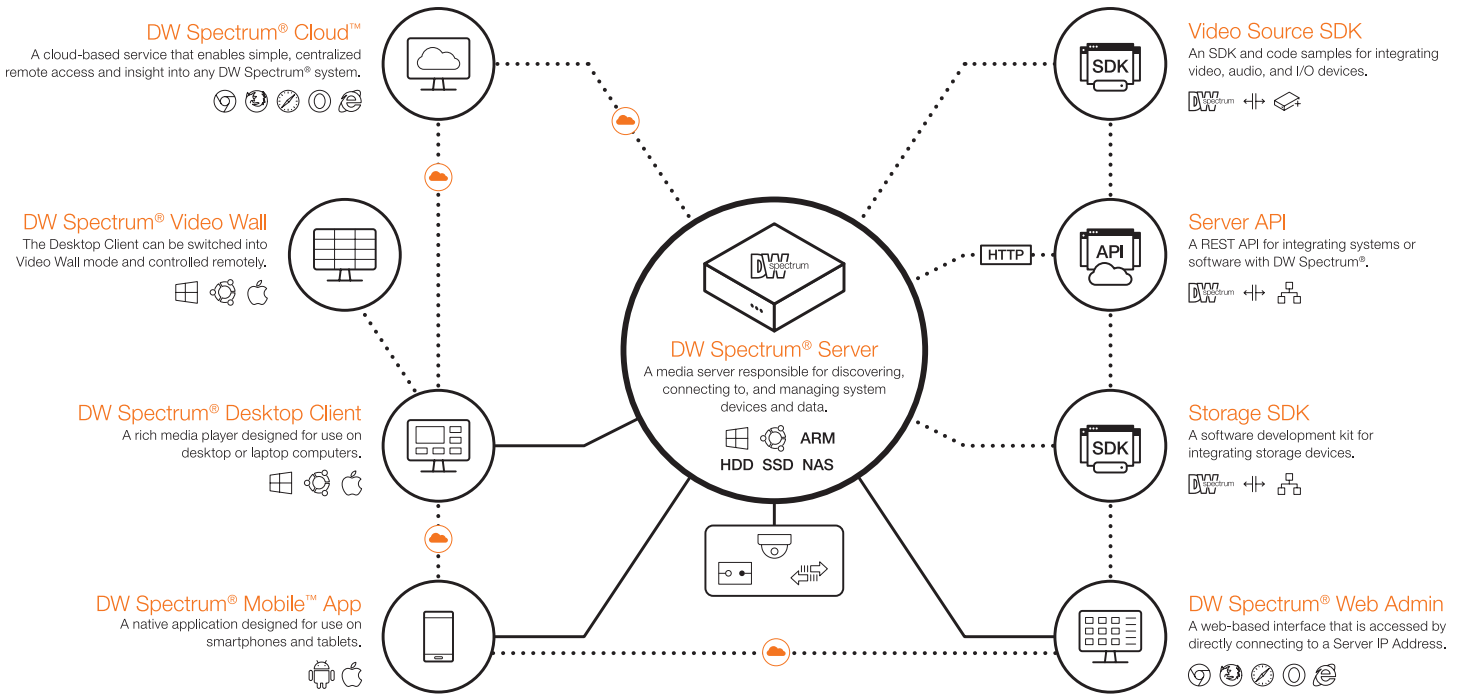
With an open Restful API, a suite of SDK's, and integrator-friendly tools like a built-in API generator DW Spectrum® IPVMS users can quickly integrate any 3rd party device or system.



Simple. Reliable. Customizable.

DW Spectrum® IPVMS is an endlessly customizable IP Video Management platform that gives users the ability to create tailored networked video solutions for any type of project, for use by anyone, on any device.

## 1 Open architecture / cross platform.



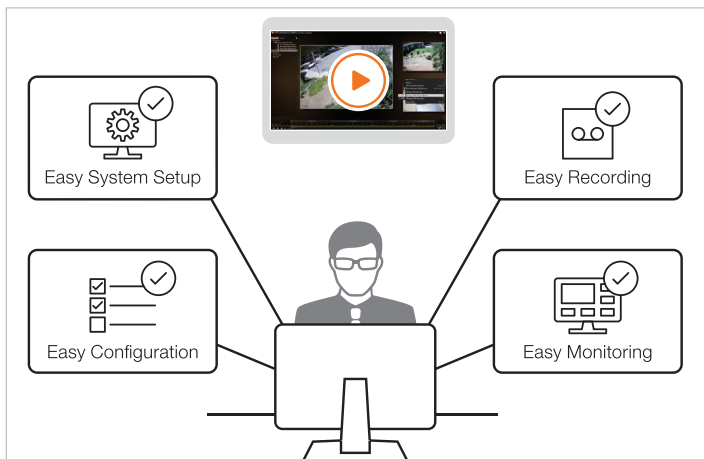
### Open Architecture

- Now with DW Cloud™, connect from anywhere to share access instantly.
- Now with even more device support.
- Support of thousands of devices including cameras, encoders and I/O modules from leading manufacturers.
- Support cameras at every resolution.
- Built-in API allowing managed video to be accessed and reviewed by any willing 3<sup>rd</sup> party device.

### Cross-Platform

- DW Spectrum's recording engine runs on Windows® and Linux® Operating Systems.
- Client software is Windows, Linux, or Mac® compatible.
- Mobile apps are iOS® and Android® compatible.
- Web client is compatible with Google Chrome®, Firefox®, Safari® and Internet Explorer®.

## 2 Interface is dramatically easier to use.



### Highly refined GUI

#### Viewing Video

- Seamless transitions.
- Customizable camera layouts.
- Zoom, create regions of interest and enhance images.

#### Searching Video

- Fastest video search in the industry.
- Users can bookmark specific video segments.

#### Downloading Video

- Multiple download options.
- Storage backup.

#### System Programming

- Intelligent high definition multi-streaming video management with no user programming required.
- Server and system programming from a single interface.

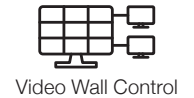
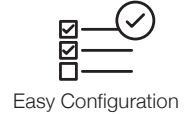
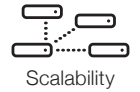
#### Advanced Features

- Interactive mapping, alarms, events/notifications, universal fisheye de-warping from a single interface.
- External alarm events can be delivered right from the IP camera or via network I/O modules.



### 3 Advance features are standard.

- Custom User Role Management: create custom roles and share groups of hardware and layouts.
- Multi-Server and Centralized Management
- Health Monitor: provides real-time insight of camera and server status.
- Video Storage Analytic: insight into storage requirements each camera is using in real-time and forecasts the impact of additional storage.
- Minimize Video Recording Loss: includes failover to protect video recordings from hardware failures and network interruptions.
- LDAP/Active Directory integration for ecosystem-wide user management is standard.
- Video Wall users can create and remotely manage remote monitors with just a few clicks.



### 4 Cloud connectivity

Use the power of DW Cloud to access, manage, and control your surveillance system from anywhere. With cloud-based flexibility, ensure secure, remote connectivity for real-time surveillance without geographical limitations.



### 5 Future-proof infrastructure

Designed to grow with your needs, DW Spectrum features a hive architecture that ensures your surveillance network is ready to expand, accommodating increasing data and device requirements seamlessly.



















### 6 AI-driven solution.

Bring any camera or IoT device from a constant-growing database of 3rd party technology partners to ensure a versatile and flexible surveillance system that meets your unique needs.



## You choose your devices.

Enhance your surveillance system and get more from your investment with a solution that helps you make data-driven decisions in all aspects of your business.

 Server	 Client	 Cloud	 Mobile
A media server responsible for discovering, connecting to, and managing system devices and data.	A rich media player with a flexible GRID interface designed for connection to and managing DW Spectrum systems.	A cloud-based service that enables simple, centralized remote access and insight into any DW Spectrum system.	A mobile app designed for viewing DW Spectrum system video and events while on the go.
<b>SERVER OS SUPPORT:</b>	<b>DESKTOP OS SUPPORT:</b>	<b>SUPPORTED BROWSERS:</b>	<b>MOBILE OS SUPPORT:</b>
 	  	    	 



# Discover. Manage. Control. Integrate.

The DW Spectrum IPVMS media server application is a lightweight, powerful media server responsible for discovering, connecting to, and managing DW Spectrum IPVMS system devices and data. The application is pre-loaded on all Blackjack® servers.

## Blackjack®

Servers Powered by DW Spectrum® IPVMS



**NDAA/TAA**  
COMPLIANT PRODUCT

Designed and Commissioned in the U.S.A.



Pre-loaded Blackjack servers

SUPPORTED OPERATING SYSTEM: Windows® Linux®

DISCOVER	MANAGE	VIEW	INTEGRATE
IP Cameras (ONVIF, Custom)	IP Cameras / NVRs / DVRs	Live Video (adaptive)	HTTP Generic Events
RTSP / HTTP Streams	Advanced Routing	Recorded Video (adaptive)	HTTP Request-as-an-Action
I/O Devices	Storage (HDD/NAS/DAS)	Server Health	Server API
Samba NAS	Events and Rules Engine	Log Files	Storage SDK
Virtual Camera	Failover	Audit Trail	Video Source SDK
H.265 on ONVIF Cameras	Transcoding	Storage Status	Any Device or System
Webcam Support	Failover on Storage Failure	Dual-Stream RTSP	C2P Integration
Camera Replacement	System Update	Layout-as-an-Action	Metadata SDK
	Archive Encryption	Health Monitoring Dashboard	Plugins
	ZFT Support	Intel Quick Sync Video	
	Remote Log Download	SSL/TLS Connections	
	ONVIF Profile Selection	Session-Based Authentication	



**SCALABILITY**

# OF CLIENTS PER SERVER: THOUSANDS

# OF CLIENTS PER SYSTEM: UNLIMITED

# OF STREAMS PER SERVER: 128

# OF SERVERS IN A SERVER SYSTEM: 10\*

\* 10 is recommended maximum. Depends on server configuration and network environment.

Contact support for more info.

**SUPPORTED OPERATING SYSTEMS****WINDOWS**

- i. Windows 10
- ii. Windows Server 2012
- iii. Windows Server 2012 R2
- iv. Windows Server 2016
- v. Windows Server 2019
- vi. Windows Server 2022

**LINUX**

- i. Ubuntu 18.04 LTS "Bionic Beaver"
- ii. Ubuntu 20.04 LTS: "Focal Fossa"
- iii. Ubuntu 22.04 LTS: "Focal Fossa"

**BLACKJACK<sup>®</sup> SERVER WEB ADMIN****SUPPORTED MEDIA STREAMING**

LIVE STREAMS (Viewed in DW Spectrum<sup>®</sup> Desktop)

VIDEO: H.265 H.264 MJPEG

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

LIVE STREAMS (Available to pull from DW Spectrum<sup>®</sup> IPVMS media server to 3<sup>rd</sup> party)

VIDEO: H.265 H.264 MJPEG WebM

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

PROTOCOLS: RTSP MJPEG WebM HLS

AUTOMATIC CAMERA FAILOVER: -1 min. configurable

TRANSCODING: Supported (for web, client, mobile, API)

DATABASE: SQLITE + proprietary archive index

SINGLE SIGN-ON: LDAP/active directory

SECURITY: OPEN SSL, SALTED MD5 HASH, TLS/SSL, HTTPS

DEV TOOLS: Server API (HTTP), video source SDK, storage SDK

NAS: ISCSI





# Dramatically easier to use with almost immediate video load.

A rich media player with a flexible grid interface, unmatched speed and responsiveness, instant event notifications, an embedded browser, and a user experience, unlike any other video management software.



















































Video Wall users can create and remotely manage remote monitors with just a few clicks.

## One App. Many Features.

DW Spectrum® IPVMS client combines performance, ease-of-use, and a 'let the user decide how best to use the software' approach into a single cross-platform lightweight app capable of running any server.

SUPPORTED OPERATING SYSTEM:  Windows®  Linux®  MacOS

USABILITY	MEDIA	CONFIGURATION	SEARCH
 Drag and Drop	 IP Cameras / Encoders / DVRs	 Events and Rules Engine	 Smart Motion Search
 Consolidated Notifications	 RTSP / HTTP Streams	 User Management	 Keyword Search
 Flex Timeline	 I/O Devices	 IP Cameras / Encoders	 Calendar Search
 Customizable Layouts	 Web Pages	 Server Management	 Time-Slice Search
 Digital Maps	 Videos	 I/O Device Management	 Bookmarks
 Adaptive Scaling	 Images	 Storage Management	 Audit Trail
 Minimum Grid Size on Layouts	 Secure Export	 Add Device	
 Resource Panel	 Chromium Browser In-Client	 Custom Watermark over Video	
 Launch Desktop Client with CLI	 Native Support for DW® Ai™	 Video Wall Failover	
 Notifications Panel	 Fisheye Dewarping Precision	 Independent Desktop Client Updates	
 Two-Factor Authentication	 Video Preview Thumbnail	 Session-Based and Multi-Factor Authentication	
 OS SSL / TLS for Internet Connections	 Audio-Video Mapping	 Restore Previous Session	
 Client Javascript API	 Custom Resource Groups	 ONVIF Profile Selection	
 Cloud Layouts	 Web Page Proxy		
	 Remote Log Download		



**MAXIMUM # OF GRID ITEMS**

64 BIT OS: 64 Items (e.g. 64 live streams)

32 BIT OS: 24 Items (e.g. 24 live streams)

**SUPPORTED OPERATING SYSTEMS****WINDOWS**

- i. Windows 10
- ii. Windows Server 2012
- iii. Windows Server 2012 R2
- iv. Windows Server 2016
- v. Windows Server 2019
- vi. Windows Server 2022

**LINUX**

- i. Ubuntu 18.04 LTS “Bionic Beaver”
- ii. Ubuntu 20.04 LTS: “Focal Fossa”
- iii. Ubuntu 22.04 LTS: “Focal Fossa”

**MAC**

- i. • macOS 10.15 “Catalina”
- ii. • macOS 11.0, 11.1, 11.2 “Big Sur”
- iii. • macOS 12 “Monterey”
- iv. • macOS 13 “Monterey”

**HARDWARE REQUIREMENTS****CLOUD CONNECT**

HARD DRIVE: HDD

RAM: 2GB

CPU: Quad-Core Intel 7 CPU or higher

GRAPHICS: Intel HD Graphics 3000 w/  
Open GL2.1 support

NETWORKING: 1GB NIC

**PERFORMANCE SPECS**

HARD DRIVE: Performance SSD

RAM: 16 GB RAM

CPU: Intel Core i5

GRAPHICS: NVIDIA GeForce GTX 1050  
(Open GL2.1 support is required)

NETWORKING: 1GB NIC

**DW SPECTRUM® CLIENT APPLICATION****SUPPORTED MEDIA PLAYBACK ON GRID****LIVE STREAMS**

CODECS: H.265 H.264 MJPEG

**OFFLINE MEDIA**

VIDEOS: AVI MKV MP4 MOV TS M2TS MPEG MPG FLV WMV 3GP

IMAGES: JPG PNG GIF BMP TIFF

**CONNECTED DEVICES**

I/O DEVICES: Status and triggers

SERVERS: Server health monitoring

**BROWSER**

WEB PAGES: Responsive websites / progressive web apps

**VIEWING MODES**

MEDIA PLAYER: View, edit, and export offline videos and images

CONNECTED: View, configure, and manage any  
DW Spectrum® IPVMS System

VIDEO WALL: Put DW Spectrum® Desktop into Video Wall mode to  
control remotely

SHOWREEL: Fully customizable timed viewing tour of any GRID  
media

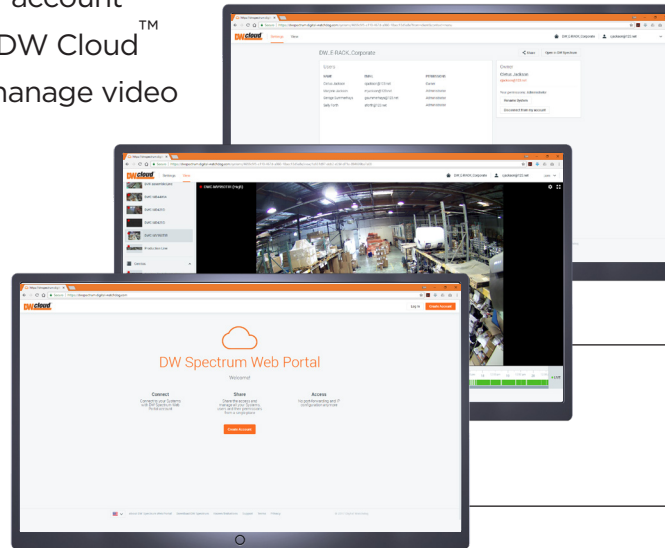
# DW Cloud™ Simplifies Everything.

The DW Cloud™ service makes connecting to and managing DW Spectrum® IPVMS system(s) simple. Set up in seconds. Connect from anywhere. Share with an unlimited number of users.

## Quick setup

1. Create a DW Cloud™ account
2. Link your system to DW Cloud™
3. Connect, view and manage video anywhere, anytime.

## Browser-based user interface



Manage users

View live or recorded video

























Quickly connect to any system



## Connect. View. Manage. Scale.

DW Cloud™ is a public cloud application hosted on Amazon AWS that enables simple remote connectivity, streaming and management of one or an unlimited number of DW Spectrum® IPVMS systems.

SUPPORTED BROWSERS:  chrome  Microsoft Edge  Opera  Firefox  Safari

CONNECT	VIEW	MANAGE	SCALABILITY / INTEGRATION
 NAT Traversal	 Live Video (adaptive)	 <b>NEW</b> Server Settings	 Unlimited # of Systems
 Data Proxy via AWS	 Recorded Video (adaptive)	 <b>NEW</b> User Settings	 Unlimited # of Users
 Simple Credentials	 Camera Details	 Cloud Connections	 Unlimited # of Devices
 Encrypted Communications	 Keyword Search	 Email Notifications	 Cloud API
 Wi / LAN / WAN	 Calendar Search	 Cloud System Merge	
 4G / LTE / Data	 Flex Timeline	 Health Monitoring Dashboard	
		 License Management	
		 Camera Settings	



## SCALABILITY

# OF CONNECTED SYSTEMS: UNLIMITED

# OF USERS: UNLIMITED

## DW CLOUD™ SERVICES

### CLOUD CONNECT



Connect any DW Spectrum® IPVMS System to DW Cloud™ for simple remote connectivity from anywhere using NAT Traversal and Cloud Data Proxy technology.



Add an unlimited number of users to a single DW Cloud™ system.

Share access to your DW Cloud™ system in seconds using only email addresses.

Create custom roles to simply and quickly assign access to multiple DW Cloud™ connected systems.

## DEVELOPER TOOLS

CLOUD API: AVAILABLE UPON REQUEST

## DW CLOUD™ BROWSER & DEVICES INTERFACE



## DW CLOUD™ FEATURES

### CONNECTIVITY

**NAT TRAVERSAL:** Connect directly to proxied Blackjack® servers

**CLOUD DATA PROXY:** Connect via AWS cloud proxy service

### INTERFACE TABS

**SYSTEMS:** View connected system tiles

**SETTINGS:** View users, rename systems, disconnect systems

**VIEW:** USE DW Cloud™ to view live or recorded video

## SECURITY

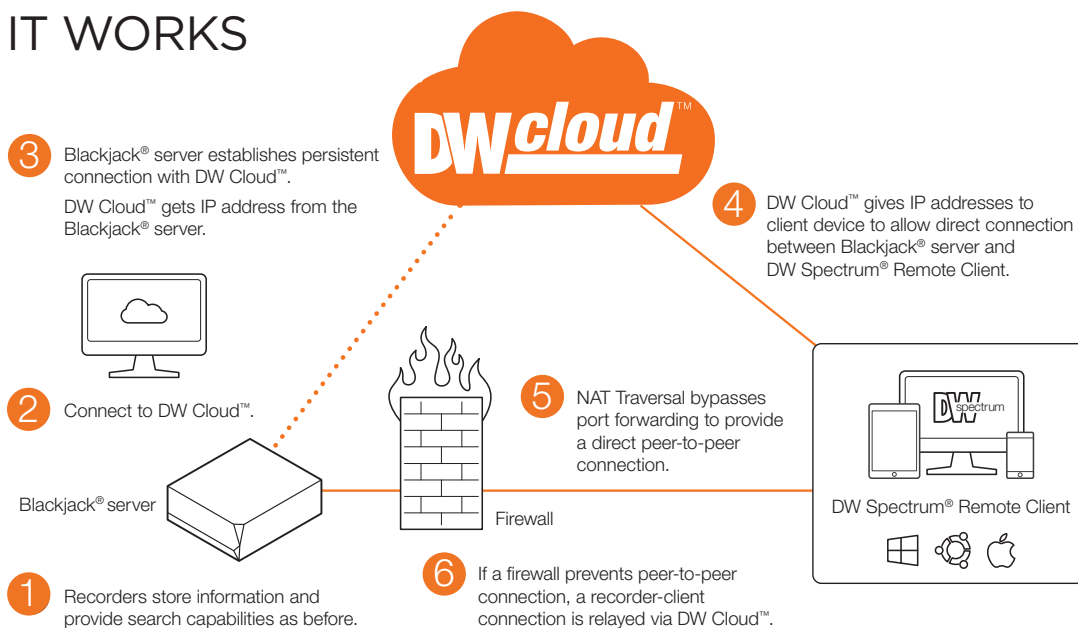
**SECURE PASSWORD RECOVERY:** Via email

**HTTPS:** Open SSL, encrypted server/client/cloud connections

**EMAIL:** (transport layer security)

**PASSWORDS:** Complex, multi-level hash

## HOW IT WORKS



# Smartphone or tablet. Smart video.

DW Spectrum Mobile for iOS and Android smartphones and tablets provides fast, dependable mobile access to any DW Spectrum IPVMS system.



View, playback and capture still images from a surveillance system on your smartphone and tablet.

## Connect. View. Search. Control.

DW Spectrum Mobile - with a custom-developed media player - is a low-latency, user-friendly mobile application for iOS and Android devices that allows users to connect to, view, search, and control IP cameras over wifi or data networks.

SUPPORTED OPERATING SYSTEM:



CONNECT	VIEW	SEARCH	CONTROL
Wifi	Live Video (adaptive)	Keyword Search	Fisheye Dewarping
Data 4G/LTE	Recorded Video (adaptive)	Calendar Search	Advanced PTZ / Standard PTZ
	Layouts	Flex Timeline	Push Notifications
	Available Systems		

COMPATIBLE DEVICES

SMARTPHONES:

64 Items (e.g. 64 live streams)

iOS 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

ANDROID



- Android 5.0 "Lollipop"
- Android 6.0 "Marshmallow"
- Android 7.0, 7.1 "Nougat"
- Android 8.0, 8.1 "Oreo"
- Android 9.0 "Pie"
- Android 10.0
- Android 11.0

iOS



- iOS 10
- iOS 11
- iOS 12
- iOS 13
- iOS 14



DW SPECTRUM MOBILE



SUPPORTED MEDIA PLAYBACK

STREAMS

CODECS: H.265 H.264 HLS

FEATURES

REMOTE CONNECT: Login using local or DW Cloud™ credentials

LIVE THUMBNAILS: Thumbnails refresh in real-time

KEYWORD SEARCH: Search for cameras or layouts by name

CALENDAR SEARCH: Search by date and time

ADVANCED PTZ: Point, pan, zoom, tilt controls, move to presets

FISHEYE DEWARPING: Dewarp fisheye images

ADAPTIVE SCALING: Hi / low resolution switching transcoding

LAYOUTS: View thumbnails of system layouts

QUICK SYSTEM SWITCH: Quickly switch between multiple DW Spectrum IPVMS systems

# Company Overview

DW® empowers our customers as the industry-leading single source of value-driven complete solutions for all video surveillance applications.

## History

- Founded 1987
- Rapid expansion in the Americas and Asia-Pacific.
- Protecting 60% of the Top 20 global brands.
- 12 consecutive years of strong revenue growth.
- Engineered in the USA and Korea.
- Manufactured in USA, Korea and Vietnam.



### Contact us:



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