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.


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.

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 3rd 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.

   **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
3 Enterprise 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 with included Failover to protect video recordings from hardware failures and network interruptions.
- LDAP / Active Directory integration for enterprise wide user management is standard.
- Video Wall users can create and remotely manage remote monitors with just a few clicks.

4 Part of a complete end-to-end IP solution.

Although DW Spectrum® IPVMS is open to be deployed on a vast number of solutions. It is also part of DW's complete end-to-end IP solution. With BlackBerry® servers or VMAX® IP Plus™ NVRs and MEGApix® IP Cameras.

5 Lifetime upgrades included / no annual agreements.

While other companies require annual maintenance agreements, DW Spectrum® IPVMS system upgrades are always available free of charge.

6 Scalable from one to thousands of devices.

The unified user experience for applications requiring one or thousands of cameras, it is deployed at thousands of locations worldwide, making DW Spectrum® the industry's fastest growing VMS on the market today.

You choose your devices.

DW Spectrum® has applications for all major operating systems so our users are not limited by what device or operating system they choose to use on their desktops, mobile devices, rack mount servers, or even low-powered embedded devices.

<table>
<thead>
<tr>
<th>Server</th>
<th>Client</th>
<th>Cloud</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>A media server responsible for discovering, connecting to, and managing system devices and data.</td>
<td>A rich media player designed to view and manage a single DW Spectrum® system from a desktop or laptop PC.</td>
<td>A cloud-based service that enables simple, centralized remote access and insight into any DW Spectrum® system.</td>
<td>A mobile app designed for viewing DW Spectrum® system video and events while on-the-go.</td>
</tr>
</tbody>
</table>

**SERVER OS SUPPORT:**

- Windows

**DESKTOP OS SUPPORT:**

- Windows
- macOS
- Linux

**SUPPORTED BROWSERS:**

- Chrome
- Firefox
- Safari
- Opera

**MOBILE OS SUPPORT:**

- iOS
- Android

DWClarity.com

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.

Pre-loaded Blackjack® servers

SUPPORTED OPERATING SYSTEM: Windows® Linux®

<table>
<thead>
<tr>
<th>DISCOVER</th>
<th>MANAGE</th>
<th>VIEW</th>
<th>INTEGRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Cameras (ONVIF, Custom)</td>
<td>IP Cameras / NVRs / DVRs</td>
<td>Live Video (adaptive)</td>
<td>HTTP Generic Events</td>
</tr>
<tr>
<td>RTSP / HTTP Streams</td>
<td>Advanced Routing</td>
<td>Recorded Video (adaptive)</td>
<td>HTTP Request-as-an-Action</td>
</tr>
<tr>
<td>I/O Devices</td>
<td>Storage (HDD/NAS/DAS)</td>
<td>Server Health</td>
<td>Server API</td>
</tr>
<tr>
<td></td>
<td>Events &amp; Rules Engine</td>
<td>Log Files</td>
<td>Storage SDK</td>
</tr>
<tr>
<td></td>
<td>Failover</td>
<td>Audit Trail</td>
<td>Video Source SDK</td>
</tr>
<tr>
<td></td>
<td>Transcoding</td>
<td>Storage Status</td>
<td>Any Device or System</td>
</tr>
</tbody>
</table>

Designed and Commissioned in the U.S.A.
## SCALABILITY

- **# OF CLIENTS PER SERVER:** THOUSANDS
- **# OF CLIENTS PER SYSTEM:** UNLIMITED
- **# OF STREAMS PER SERVER:** 128
- **# OF SERVERS IN A SERVER SYSTEM:** 50 *

* 50 is a recommended maximum. Depends on server configuration and network environment. Contact support for more info.

## SUPPORTED OPERATING SYSTEMS

### WINDOWS

- Windows
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows 10 Enterprise

### LINUX

- Ubuntu Linux 14.04 LTS
- Ubuntu Linux 16.04 LTS

## SUPPORTED MEDIA STREAMING

### LIVE STREAMS (Viewed in DW Spectrum® Desktop)

- **VIDEO:** H.265 H.264 MJPEG
- **AUDIO:** AAC PCM (Mu-Law, A-law) g726 MP3

### LIVE STREAMS (Available to pull from DW Spectrum® IPVM media server to 3rd Party)

- **VIDEO:** H.265 H.264 MJPEG WebM
- **AUDIO:** AAC PCM (Mu-Law, A-law) g726 MP3
- **PROTOCOLS:** RTSP MJPEG WebM HLS

## OTHER

- **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
- **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.

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:

<table>
<thead>
<tr>
<th>USABILITY</th>
<th>MEDIA</th>
<th>CONFIGURATION</th>
<th>SEARCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drag &amp; Drop</td>
<td>IP Cameras / Encoders / DVRs</td>
<td>Events &amp; Rules Engine</td>
<td>Smart Motion Search</td>
</tr>
<tr>
<td>Consolidated Notifications</td>
<td>RTSP / HTTP Streams</td>
<td>User Management</td>
<td>Keyword Search</td>
</tr>
<tr>
<td>Flex Timeline</td>
<td>I/O Devices</td>
<td>Server Management</td>
<td>Calendar Search</td>
</tr>
<tr>
<td>Customizable Layouts</td>
<td>Web Pages</td>
<td>Storage Management</td>
<td>Time-Slice Search</td>
</tr>
<tr>
<td>Digital Maps</td>
<td>Videos</td>
<td>I/O Device Management</td>
<td>Bookmarks</td>
</tr>
<tr>
<td>Adaptive Scaling</td>
<td>Images</td>
<td></td>
<td>Audit Trail</td>
</tr>
</tbody>
</table>
## Maximum # of Grid Items

<table>
<thead>
<tr>
<th>64 Bit OS</th>
<th>64 Items (e.g. 64 live streams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 Bit OS</td>
<td>24 Items (e.g. 24 live streams)</td>
</tr>
</tbody>
</table>

## Supported Operating Systems

### Windows
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows 10 Enterprise

### Linux
- Ubuntu Linux 14.04 LTS
- Ubuntu Linux 16.04 LTS

### Mac
- OSX 10.11
- OSX 10.12

## Hardware Requirements

### Cloud Connect
- **HARD DRIVE:** HDD
- **RAM:** 2GB
- **CPU:** Quad Core Intel 7 CPU or higher
- **GRAPHICS:** Intel HD Graphics 3000
- **NETWORKING:** 1GB NIC

### Performance Specs
- **HARD DRIVE:** Performance SSD
- **RAM:** 16 GB RAM
- **CPU:** Intel Core i5
- **GRAPHICS:** NVIDIA GeForce GTX 1050
- **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

### VideoWall: Put DW Spectrum® Desktop into VideoWall 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, Firefox®, Opera, Safari

<table>
<thead>
<tr>
<th>CONNECT</th>
<th>VIEW</th>
<th>MANAGE</th>
<th>SCALABILITY / INTEGRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAT Traversal</td>
<td>Live Video (adaptive)</td>
<td>System Settings</td>
<td>Unlimited # of Systems</td>
</tr>
<tr>
<td>Data Proxy via AWS</td>
<td>Recorded Video (adaptive)</td>
<td>User Permissions</td>
<td>Unlimited # of Users</td>
</tr>
<tr>
<td>Simple Credentials</td>
<td>Camera Details</td>
<td>Cloud Connections</td>
<td>Unlimited # of Devices</td>
</tr>
<tr>
<td>Encrypted Communications</td>
<td>Keyword Search</td>
<td>Email Notifications</td>
<td>Cloud API</td>
</tr>
<tr>
<td>WiFi / LAN / WAN</td>
<td>Calendar Search</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4G / LTE / Data</td>
<td>Flex Timeline</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SCALABILITY**

# OF CONNECTED SYSTEMS: UNLIMITED  
# OF USERS: UNLIMITED

**DW CLOUD™ BROWSER & DEVICES INTERFACE**

**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.

**USER MANAGEMENT**

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™ 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 e-mail  
HTTPS: Open SSL, encrypted server/client/cloud connections  
EMAIL: (transport layer security)  
PASSWORDS: Complex, multi-level hash

**HOW IT WORKS**

1. Recorders store information and provide search capabilities as before.

2. Connect to DW Cloud™.

   DW Cloud™ gets IP address from the Blackjack® server.

4. DW Cloud™ gives IP addresses to client device to allow direct connection between Blackjack® server and DW Spectrum® Remote Client.

5. NAT Traversal bypasses port forwarding to provide a direct peer-to-peer connection.

6. If a firewall prevents peer-to-peer connection, a recorder-client connection is relayed via DW Cloud™.
Smart phone 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.


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:  

<table>
<thead>
<tr>
<th>CONNECT</th>
<th>VIEW</th>
<th>SEARCH</th>
<th>CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wifi</td>
<td>Live Video (adaptive)</td>
<td>Keyword Search</td>
<td>Fisheye Dewarping</td>
</tr>
<tr>
<td>Data 4G/LTE</td>
<td>Recorded Video (adaptive)</td>
<td>Calendar Search</td>
<td>Advanced PTZ / Standard PTZ</td>
</tr>
<tr>
<td></td>
<td>Layouts</td>
<td>Flex Timeline</td>
<td>2-Way Audio</td>
</tr>
<tr>
<td></td>
<td>Available Systems</td>
<td></td>
<td>Soft Trigger</td>
</tr>
</tbody>
</table>
COMPATIBLE DEVICES

SMART PHONES:
- 64 Items (e.g. 64 live streams)
- iOS 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

<table>
<thead>
<tr>
<th>ANDROID</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jelly Bean</td>
<td>4.1 - 4.3.1</td>
</tr>
<tr>
<td>Kit-Kat</td>
<td>4.4 - 4.4.4</td>
</tr>
<tr>
<td>Lollipop</td>
<td>5.0 - 5.1.1</td>
</tr>
<tr>
<td>Marshmallow</td>
<td>6.0 - 6.0.1</td>
</tr>
<tr>
<td>Nougat</td>
<td>7.0 - 7.1.2</td>
</tr>
<tr>
<td>Oreo</td>
<td>8.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>iOS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS 5</td>
<td>5.0 - 5.1.1</td>
</tr>
<tr>
<td>iOS 6</td>
<td>6.0 - 6.1.6</td>
</tr>
<tr>
<td>iOS 7</td>
<td>7.0 - 7.1.2</td>
</tr>
<tr>
<td>iOS 8</td>
<td>8.0 - 8.4.2</td>
</tr>
<tr>
<td>iOS 9</td>
<td>9.0 - 9.3.5</td>
</tr>
<tr>
<td>iOS 10</td>
<td>10.0 - 10.3.3</td>
</tr>
<tr>
<td>iOS 11</td>
<td>11.0</td>
</tr>
</tbody>
</table>

DW SPECTRUM MOBILE™

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
Support and Resources to Ensure Our Success.

Exceptional Pricing and Service for Our Best Customers.

The Digital Watchdog® Partner Integrator Program is dedicated to those who sell the complete line of DW® video surveillance solutions.

What's in it for me?

With your annual purchase commitment, you receive:

- Partner Pricing Program
- Project Registration Program
- Training and Certification
- Demo Equipment
- Product Roadmap Meetings
- Co-Marketing Collateral (MDF)
- Extended Warranty
- Enhanced Tech Support Experience


Contact Us:

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Tampa, Florida USA 33634
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