Userful™

Stunning Video Walls Made Easy

Userful turns a standard PC into a flexible and powerful video wall controller that delivers visually stunning video wall displays over the network with unparalleled simplicity and ease, at an affordable price.

With Userful you can:

- Deliver any layout including one of a kind artistic or mosaic-style video walls
- With up to 8k source content in real time on up to 100 displays per video wall
- All easily managed from a browser or smart phone
- Using virtually unlimited simultaneous internal and external content sources
- ...on preset zones across a single video wall
- ...or onto a mix of video walls and digital signs
- All controlled in real time through Userful's API or via a remote control interface staff can use to invoke zone and content presets Administrators create

How it Works

1 Pick the types of video walls you need.

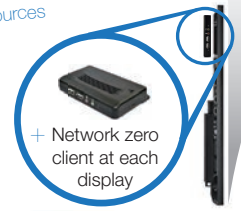
Control room · Grid video walls · Artistic video walls · Preset zones mixing multiple content sources

2 Set up and manage easily.

Install Userful software on a standard PC

1 PC/server for up to 100 video wall displays

+ Standard Ethernet switch



+ Network zero client at each display

Manage all of your video walls easily through a browser

3 Add virtually unlimited content inputs from just about any source.

External content sources

Real Time Camera Feed · Live TV · Laptop or PC · Network Streaming · Satellite TV · Media Player · USB Key · Multiple HDMI & SDI Inputs · DVD · Gaming

Local content sources

CMS Player Software · Video Play List · Interactive Desktop · Full Screen Browser · Virtual Desktop · Virtual Desktop · Virtual Desktop · Desktop Applications · Image Slideshow

In a broad variety of formats

3D · Flash · HTML5 · WebGL · VNC · RDP · RTP · RTSP

Dozens of popular video formats including H264 and H265

Key Features

High availability
Install an optional failover server to ensure continuous system availability.

Mirror feature
Synchronize content across multiple displays or video walls allowing the same content to play at exactly the same time.

Content management
The solution integrates natively with multiple leading CMSs and can display content from any CMS using HDMI capture.

HDMI capture
Optionally add one or more HDMI capture cards, allowing input of just about any source content.

REST API
A platform to programmatically interact with Userful allowing customers to trigger changes to content, zones and more.

Create and Manage Stunning Video Walls

- Deliver any layout including one of a kind artistic or mosaic-style video walls with up to 8k source content in real time on up to 100 displays per video wall.
- Use virtually unlimited simultaneous internal and external content sources on preset zones across a single video wall or onto a mix of video walls and digital signs.
- Manage the solution easily from a browser or smart phone.

Video Walls Made Easy and Affordable

- Single install setup turns a standard Intel Core i7 PC into a video wall server appliance that supports 4k video walls of up to 40 displays. A high-end PC can support 8k content and video walls of up to 100 displays.
- Get up and running quicker with reduced dependence on specialized technical expertise and expensive proprietary hardware.
- The integrated intuitive browser-based video wall builder enables just about anyone to set up and configure a video wall with drag and drop ease.

Interactive Viewer
Any tablet or smart phone can control the mouse and keyboard of the video wall making interactivity with a Userful video wall easy.

Preset zone support
Display simultaneous content streams on specified displays within the video wall and change on the fly as needed.

Preset switcher
Use a phone or tablet for one-touch switches between multiple content sources and video wall layouts preset by the video wall administrator.

Increased life span
Zero client player devices have no moving parts or operating system, making them long-lasting, even for demanding or harsh environments, including high heat, grease, dust, steam, and outdoor elements.

Other types of display
Support stand alone digital signs, touch kiosks, or desktops all from the server that supports the video wall to create a complete digital display solution.

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Userful v9.0 Specifications

Hardware Specifications

Certified and Supported PC Models (Only supported models should be used for deployments)	Up to 9 video wall displays and a single 4K video source: • Lenovo IdeaCentre 300 i3-6100, 2x4GB RAM • HP ProDesk 400 i3-6100, 2x4GB RAM Nvidia Offloading Card not required Up to 100 video wall displays and 8k sources: • Contact Userful to purchase PC Up to 40 video wall displays and 6k sources: • HP EliteDesk 800 G2 series (Core i7) • Lenovo TS P310 i7-6700 workstation • RAM: 8GB for up to 9 displays; 16GB for up to 16 displays; 24GB for up to 25 displays; 32GB for up to 40 displays For more details, see Userful's system hardware guide available at support.userful.com
Onboard GPU's supported for GPU acceleration	• Intel Integrated GPU (with HD4000, HD5000 or HD530 graphics) • GPU Acceleration is important for proper performance
Cards supported for Nvidia Offloading Feature (Required for deployments over 9 displays and higher than 4k video source)	• GeForce GTX 1050Ti (recommended) • GeForce GTX 1060 (for demanding deployments) • GeForce GTX 1070 and 1080 (for most demanding deployments) Other CUDA may work. Test any other card in advance. Note: ensure the PC has sufficient PCI slots and power supply to support the card. In BIOS, default GPU should be set to Intel integrated GPU. You must select a motherboard that supports this feature (not all do). DO NOT plug any displays into the Nvidia Offloading Card.

Network Zero Client Player Devices	• No moving parts or operating system; expected lifespan of up to 10 years
	• Supported devices include:
	  • Centerm C75 (HDMI or VGA)
	  • ThinGlobal Minipoint Ethernet (HDMI or VGA)
	  • ViewSonic SC-U25 (VGA)
	  • ViewSonic VMA-25 (VGA)
	  • Atrust M320 (VGA)
	  • and more

Network Requirements	Up to 25 displays on a video wall OR up to 12 independent displays playing 1080p sources (up to 30 with smaller resolution): • 1gig NIC & 1gig uplink port on switch Larger deployments: • 10gig NIC & 10gig uplink port on switch Note that video walls of over 12 displays which use server-side scaling (as opposed to display side scaling) should also utilize a 10Gig uplink between host and switch. Any traffic shaping (packet shaping) features on the switch should be disabled in order to ensure the switch is not throttling or interfering with network packets and speed.
Network Bandwidth	Varies from 40mbps to 200mbps based on the type of session and source being played.
External Capture Card Supported	• Blackmagic Intensity Pro 4k: HDMI, 1080p @ 60fps / 2160p @ 30fps, YUV, RGB requires source player to be UHD4k • DeckLink Duo: SDI, 1080p @ 30fps / 1080i @ 60fps, RGB, YUV • DeckLink Quad: SDI, 1080p @ 30fps / 1080i @ 60fps, RGB, YUV • DeckLink Duo2: SDI, 1080p (Full HD) @ 60fps, RGB, YUV • DeckLink Quad2: SDI, 1080p (Full HD) @ 60fps, RGB, YUV • DeckLink Mini Recorder: HDMI / SD, 1080p (Full HD) @ 30fps, RGB, YUVI • DeckLink Mini Recorder 4K: HDMI / SDI, 1080p (Full HD) @ 60fps / 2160p (UHD) @ 30fps • Note: Add HDMI support to any of the above cards that use SDI with Blackmagic Micro Converter HDMI to SDI Note that while capture cards are not HDCP compliant, customers can use additional add-on devices to deliver protected source

Source and Playback

Scalability	Video walls of up to 40-100 displays from a single PC (up to 40 on standard PC, up to 100 on high-end PC)
Maximum Source Resolution	Up to 8k (7680x4320) on a high-end PC, 6k (6144x3072 pixels) on standard PC. Note: upscaling allows each display to play source at the display's native resolution.
Supported External Sources	Real time video camera feed, Live TV, Laptop or PC, Network Streaming, Media player, HDMI and SDI inputs, DVD, Gaming console
Supported Internal Source Options	Video playlist, Interactive Desktop, Full screen browser, Image slide show, Desktop applications, Windows, Android or Linux virtual desktop
CMS's Natively Supported	• Browser HTML5 based CMS • Rise Vision • PADS4 HTML5 Viewer • UIE Experience Manager • Display 5 • TDM Signage • Beabloo Player Consult Userful about integration of other CMS's; any CMS can play using external player and HDMI capture
Supported Formats/Containers	**Video Codecs** • FLAC, AAC, H.264, H.265, DV, MPEG2, Theora, Vorbis, VPX, XviD **Video Containers** • AVI, ASF, MKV, MPG, MP4, OGV, MOV **Image Formats** • .gif, .pbm, .pgm, .png, .ppm, .qif, .qti, .tif, .tiff, .jpe, .jpg, .jpeg, .qtif, .webp **Other Source Types** • Flash, HTML5, WebGL, 3d, RDP VNC, RTSP, RTP
Frame Rate	• 30 fps (Recommended) • 60 fps (Increases network bandwidth and is only recommended when a 10Gig NIC card and a switch with a 10Gig uplink port are used)

Virtual Desktop Support	Built in Hypervisor (VirtualBox) allows customers to upload master virtual machine file (.ova) and easily deploy and run virtual desktops onto the video wall or onto individual zones or displays.
Upscaling Options	Scaling can be done on the server side or on the display side or both. Server side scaling uses cubic lancos. Heavy scaling on the server side increases the number of pixels delivered through the network so may require 10gig NIC on PC and 10gig uplink port on the switch.
Sound Output	Admin can choose to output sound to: • The output jacks on the host PC. This limits sound to one audio source. • 3.5mm stereo audio output jack • The display directly (via HDMI cable) Admin can also designate which zero client device within each video wall or video wall zone outputs the sound for entire zone.
Keyboard, Mouse & USB Device Support	Connect keyboard and mouse (wired or wireless) and other USB devices can be connected to the designated zero client device for the video wall or video wall zone. Multiple keyboards can be connected to multiple zones (up to one per display). Other USB devices (other than USB storage keys) may work but are not officially supported. Note: Multimedia keys (e.g. volume control) on keyboards not supported.

Features

Remote Control Feature: Source Switcher	Non admin staff can change source on any video wall or display with a single touch on a tablet or phone from source switcher options enabled by Administrator.
Remote Control Feature: Preset Switcher	Administrators can preset options across all displays connected to one PC and either staff or administrators invoke presets with a single touch on smartphone or tablet. Change all source and zones across any video wall with a single touch.
Remote Control Feature: Interactive Viewer	Allows to control video wall or standalone station from UCC-UI, no need to connect mouse/keyboard in a video wall control station. This feature is applicable to only interactive session.
Session Management	Offers ability to authenticate for access to a desktop or limit time permitted on a desktop or kiosk session. Includes privacy protection for kiosk users.
Multiple Level User Permission System	Allows Admins to give other staff members limited access to Userful Control Center (allowing staff to control source without having access to admin level functions).
Mirror Feature	Add multiple displays to a mirror group to synchronize playback of a single source or session across multiple displays or video (same source plays at exactly the same time).
Zones	Display multiple simultaneous source streams on preconfigured groups of displays within the video wall. Save and change zone and source configuration.
API	The Userful REST API is a powerful set of tools to programmatically interact with Userful allowing administrators to trigger playlists, source and zone changes and more.
Support for Individual Digital Signs & Displays	Supports stand alone digital signs, touch kiosks, or desktops all from the server that supports the video wall to create a complete digital display solution. Note: number of simultaneous individual displays supported by a single PC is less than the total number of video wall displays supported from one PC.
Artistic Display Rotation	Artistic mode layout allows for any angle display rotation, even 1/10th of one degree, and ability to position and place displays of different size and aspect ratio anywhere on canvas and achieve pixel perfect alignment using an interactive calibration tool.
Automated Failover	Install an optional 2nd failover server to ensure continuous system availability. Settings are automatically shared between primary host and secondary failover server. Note: any local sources must be added manually to both servers and CMS subscription may be required for both servers.
Multiple Simultaneous Video Walls	Multiple video walls can be synchronized (play the same source) or independent (play different source)
Supported Languages	• English (en) • French (fr) • Italian (it) • German (de) • Spanish (es) • Brazilian Portuguese (pt_BR) • Russian • Turkish (tr) • Japanese (ja) • Traditional Chinese (zh_TW) • Simplified Chinese (zh_CN) • Korean (ko) • Vietnamese (vi) • Romanian (ro) • Persian (fa) • Ukranian (uk_UA) • Thai (th_TH) • Nepali (ne)

Setup and Configuration

Setup	• Simple network zero client player attached to each display • Intuitive drag and drop browser GUI interface accessible from any device • Add unlimited sources via GUI • Supports non-standard configurations — such as 1x4 or 1x9 video walls
Install Process & Media	• Downloadable ISO on DVD media or USB key. 20 min install process installs the full (Linux based) server appliance operating system.
Server Location	• Host PC can be located anywhere within the LAN, such as in a server room. • Host server can be upgraded or replaced without touching endpoint devices.
Displays	• Requires HDMI or VGA connection • Use any commercial or consumer display: LED, LCD, monitor, projector, rear projection display. Heterogenous mix of different sizes and aspect ratios and bezel widths is possible in artistic video walls.
Browser-based Control Center	• Solution is controlled entirely through the browser-based control panel. • Intuitive video wall builder with ability to configure the size, bezel, and position of individual displays. • Integrated LAN health and status monitoring. • Accessible from smartphones and tablets as well as PCs and Laptops.

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