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meetwise DisplayDriver
Videowall Management Software

What is the meetwise DisplayDriver

The meetwise DisplayDriver is a software solution for displaying, configuring and managing views (windows) of multiple desktop and video sources on a video wall.

The software front and back ends are completely web based, so that it can be used with any client (PC applications, browser, tablet, smartphone) using open web standards and thus even can be integrated into third-party systems.

We are adapting the software and the user interface to each projects need. We believe that every customer and every projects has different need for control and workflow and only a customized solution can really suit the customer.

With the meetwise Display Driver you can position sources anywhere on the videowall independent of the operating system and the number of screens. meetwise Display Driver is working with multiple video and capture cards, so that a hardware and manufacturer independent usage is possible.

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What sources are supported?

Sources can be hardware digital or analog video signals, remote desktops (hardware and software), network video streams and video streams from hardware video capture devices.

What control scenarios are supported?

Due to the different expectations and usage scenarios of the video walls and their operators, the DisplayDriver is designed to be modular and flexible in every possible way. Predefined layouts can be loaded manually or called by events, views can be modified manually or by an automated processes.

Some customers only need to switch between a day and night layout while others are constantly working on a dynamic, interactive wall. Depending on the clients needs, function are en- or disabled to allow the operators to focus on their main task instead of being overwhelmed with unused features. This way we are providing every user the interface and function which are tailored to his needs.

With its open API, customers are able to write their own video wall control applications. The DisplayDriver can be completely controlled from the video controller (local), via Ethernet from Browsers or handheld devices or other customers specific control mechanisms like special keyboards, touchscreens and all other devices which are able to communicate via Ethernet.

Customer specific solutions like changes to the user interface, the API and everything in between, can be implemented and are adopted to the special needs of our customers. The flexible and modular architecture of the meetwise DisplayDriver allows for the quick adoption to new tasks even on location.

Virtual Wall Editor

The integrated Virtual Wall Manager is a browser-based web application that allows you to create and change layouts. With its live preview, you can remotely control your video wall at any time from any client and see what is currently shown on the wall. This requires no installation of software or apps. The use of Web standards such as HTML5 and Ajax allows a wide support of devices from PCs to smartphones.

A touch version of the Virtual Manager was designed specifically for tablets like the Android tablets or the Apple iPad. Apart from the graphic editor all windows can all be positioned by the pixel accuracy by a tabular numeric view.

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There are several views derived from this Editor available - ranging from the fully feature editor, over an all numeric view to an user interface which only allows the activation of predefined layouts. The right choice of tools is selected for your application and the tailored to your needs.

Special abilities for remote desktop viewing

The DisplayDriver is especially well suited to display multiple remote desktop sources on video walls and normal PCs. The capability to display one source in multiple views without the need for multiple connections is an additional stand alone feature.

It can seamlessly scale, rotate and crop the view of an remote desktop source using only limited resources. In combination with special keyboards with additional event keys or multi mouse software capabilties endless posibitlies of the interaction with a video wall are possible.
Remote desktops can be connected via Hardware or Software depeding on the setup of the application, the security and budget needs of the client.

We guide you in your way to select the right hardware and software for you application.

Platform independent

The Software is written in the JAVA programming language, which allows it to be used on Windows, Linux and Mac based display controllers. Please note that some video stream sources can only be handled under Windows systems installation due to codec and hardware limitations.

Your solution

Support for additional sources and customers specific control routines can be added and adapted to the customers needs.
Please get in contact with our solution provider partners, to discuss your personal needs and how these can be addressed with the DisplayDriver.

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Technical Details and Functions

meetwise Display Driver - list of general functions

- Freely positionable, croppable and scalable windows on all outputs
- unrestricted number of windows
- unrestricted number of clones
- Window title can be set freely
- Window display frame or frameless
- Change the window properties via API, web browser and locally available
- save and load of configurations / layouts on the server or in external files
- unrestricted number of configurations / layouts
- Tasks / Schedules - time-based actions, such as switching from sources every 10 seconds
- Overlays - text, free positioned, size, font, border, multiple instances
- Overlays - picture / logo, pixel graphics can be positioned anywhere in the window
- Overlays - framework, configurable framework for signaling events
- live preview of all the sources
- Local or remote PC control
- multilingual Interface
- User and usergroup Management,
- All properties available via open API to third party software
- DualLink Inputs and Windows for Matrox Mura Cards.
- New: Control and Display of Websites / Browser Windows.

The software can be upgraded and changed at any time to accommodate your needs.

meetwise Display Driver - Scripting Layer

The DisplayDriver has a support for a scripting language which allows to access the complete API functions via scripts, which can be created and changed during runtime. This allows and unprecedented freedom and flexibility of the usage. This function can be used by the client or other independent software companies to enhance the DisplayDriver with their own functionality and offer limitless possibilities in the usage.

Of course meetwise offers all development works too, but if you or the end user chooses do this with their own IT staff or partners, they are free and able to this at any time.

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meetwise Display Driver - API

All functions of the Display Driver are available via an open and documented API based on the REST HTTP protocol.

Thus third-party systems (eg SCADA) can control all functions of the video wall without using the web user interface of the display driver. Operators of the video wall do not have to learn any new software interface, but can continue to use their familiar work environment. This way a fast and efficient introduction of video wall system can be achieved.

The API can be used by the customer to implement their own functions directly into the Display Driver. For example, how to include external data, weather data, retrieve and trigger based on their own rules actions on the video wall. These rules may be modified by scripts at runtime and allows for a flexible use of the video wall for future scenarios.

Supported Video and Capture Cards

Matrox Mura MPX and Matrox PPX / VPX video controller boards

The video controller cards Matrox Mura MPX and Matrox PPX / VPX series are fully supported by the meetwise DisplayDriver.

These card offer Digital and analog video inputs and their uncompressed output at full frame rate on the video wall. These capture inputs can be displayed on the video wall in real time at full resolution and are freely scalable. Since the display is done via hardware overlay there is no visible delay.

These cards are therefore often used to display video images from cameras and surveillance systems and the hardware capturing of SCADA systems and visualization systems of all kinds which require realtime display. Since only the image signal is picked up, the solution is compatible with all PC systems (Windows, Mac OS, Linux, Unix, SUN...). Combined with our different remote control solutions multiple Sources can be displayed and be worked on on a video wall.

The cards themselves run on Windows 7 64bit operating system and are offering the support for very large rectangular desktops with lots of inputs.

- up to 56 outputs DVI-D singlelink max 1920x1200 @ 60 Hz
- up to 56 DVI-D, HDMI or VGA inputs max 1920x1200 @ 60 Hz
- up to 28 DVI-D Duallink Inputs
- video inputs up to 128 analog NTSC / PAL / SECAM
- up to 12 3G-SDI inputs

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meetwise reporter KVM over IP devices and VNC server

KVMoverIP devices like the meetwise reporter or devices from other manufactures (e.g. raritan, Adder) can be displayed on the video wall. Likewise, every VNC server software is supported

These hardware device allow for a 100% safe remote view or control of remote PCs. Since there is no software installed, and no resources of the source PC are using, these devices are ideally suited to equip existing hardware with it. They are often used on scenarios where source from other, secure network should be visible on a video wall without breaking the existing security measures.

- Hardware remote control of PC and older automation equipment
- remote control via USB or PS/2
- VGA / DVI capturing
- no software, no drivers on the source PC
- remote control possible without any change of the source PC
- 100% safe operation possible (e.g. it can be guaranteed that remote control is not possible)

Network streams

Network stream from many different sources can be viewed as free scalable to the video wall

- IP cameras (e.g. Axis,)
- Video network encoders (eg Verint ,Sequra, HaiVision, Axis)
- RTSP, RTP, MPEG-4, H264, multicast, unicast ...

External Hardware Streamdecoders are used to decode network streams (H2.64 /MPEG4,RTSP).

We are basically capable to capture all network video streams and VNC sources. But since all camera / encoder manufactures use different ways of communication, they can be very different in technical details. To make sure we can communicate with a certain system, please provide us with one camera / encoder so we can test these systems and validate them for future use.

Each decoder can handle 9 Streams in D1 resolution or 1 in HD resolution. You only need decoders for each concurrent visible stream at the wall.

Example: You have 10 FullHD Sources in your network. At the same time only two need to be shown on the wall - you need 2 decoders.

You have 200 D1 Streams in you network. 15 need to be visible at the same time. You need 2 decoders.

Each decoder needs one free mura input. So if you need 2 decoders the controller need to have to extra free inputs.

The decoders themselfes can be put in a 19" housing for usage in server rooms, but also can be used as standalone devices.

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Website / Browser windows

Just like the other sources you can manage and display webViews (browser windows). You can manage a list of source URLs and control the display and position of these windows. Additionally all browser windows are scriptable so you can control and automate the behaviour of the website like automated login and refresh procedures. You can even change the rendering and style of any website to adopt to a display better on a videowall.

Control of displays (Cubes, TFTs)

Most professional displays support the setting and reading of measured values and settings via network interfaces. These values can be acquired with the display driver and displayed (such as lamp hours, temperature) and depending on the model also can be written again (power on / off, brightness). This provides the users with a complete control of the video wall system from one user interface.
Particularly the cubes of the Mitsubishi 70 series are fully supported via the web interface the display driver. All feature of these cubes are available via the web interface of the DisplayDriver. Displays from NEC and selected Samsung Displays are supported too. On customers request other Displays can be supported too.

Additional Interfaces

We a generally able to control or read data from lots of external systems. This way you can e.g. control the lighting in your control room and the videowall from one interface.
Among others:
- TCP / IP REST Interfaces
- IHSE KVM Switches
- Crestron controls
- Moxa Controls
- ModBus Protocol
- serial protocols

have already been used in several projects. The core system is able to be expanded to interact with your clients control system. Please send us your technical specifaction so we can come up with a solution for you.

Questions?

If you have any additional question or would to request a demo please don't hesitate to contact us:

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