

WEYTEC SMART VISUAL

The complete overview

The smartVISUAL solution transforms an entire display environment into a personal visual workplace with a boundless pixel area. The hardware- and network-based IP solution from WEYTEC displays PCs and video sources in freely scalable windows on screens and video walls.

WEYTEC smartVISUAL



Description

WEYTEC smartVISUAL integrates separate displays into a continuous visualization surface, across which operators can react and interact more efficiently.

All sources can be individually placed, scaled and moved around within a personal pixel surface. One can also use a single monitor for the simultaneous display of x-different sources. The modular architecture means that smartVISUAL solutions are fully expandable to a virtually unlimited number of sources and screens.

Highlights

- Boundless pixel area
- Developed for 24/7 operations
- Immediate access to and display of sources
- Supports up to 4k @ 60Hz
- More efficient workflows with complete overview
- Completely hardware-based solution without software installations on sources
- Independent of operating system
- Lowest latency and full performance
- Extremely low maintenance and service
- Decentralized system with no single point of failure
- Green IT: extremely low heat and noise emissions, CO2 neutral
- Compact model with small footprint
- Fully integrated in the WEYTEC distributionPLATFORM
- Users display their sources on any screen or video wall

Features

- Web-based user interface
- Video wall can be controlled from several workplaces
- Manual layouts with graphical editor as well as preset scenarios
- All sources freely placed, scaled and moved across any number of screens
- Supports screens in all resolutions up to 4k@60Hz
- Reaction to events (open, documented API)

Operation

- smartVISUAL can be operated from a smartTOUCH keyboard or any tablet or PC with a web interface
- Includes user rights management
- Switch easily and intuitively between layouts and presets
- Free source assignment, each source can be displayed at will
- Mouse switching

COMPONENTS

smartVISUAL Master

The smartVISUAL Master hardware is the master unit for the distributed video wall solution. It administers all the other nodes (decoder, encoder, transcoder, cameras etc.). It has a web-based user interface that allows users to manage and control the smartVISUAL receiver over the network. Because the user interface is completely web-based, it can be used from any device which can display web pages (PC, tablet, smartphone). There is no restriction on the number of users or nodes. An external PC / tablet is required to use the web interface.

A Master can manage real and virtual video walls with differing resolutions. The graphical editor is comfortable to work with and presents a live view of the video wall and its windows, including size, position and bezel correction. The Master manages all the sources and video and network settings. Additional Master units can be added to the solution and configured for redundancy with automatic swap over.



smartVISUAL Receiver, Single or Dual

The smartVISUAL receiver is a hardware unit for decoding and displaying network streams. It supports the display of video streams and remote desktop protocols, as well as all other sources that can be converted into a digital video format via converters. Up to 6 Full HD (1920x1080) H.264 or 6 WEYTEC ipREMOTE video streams can be decoded and displayed in parallel. The hardware supports the playback of 4k videos as well as lower resolution material.

The videos can be freely scaled and positioned across the screens. The video streams are automatically adapted to the source format. The smartVISUAL receiver comes with all necessary software licenses and is ready for operation.



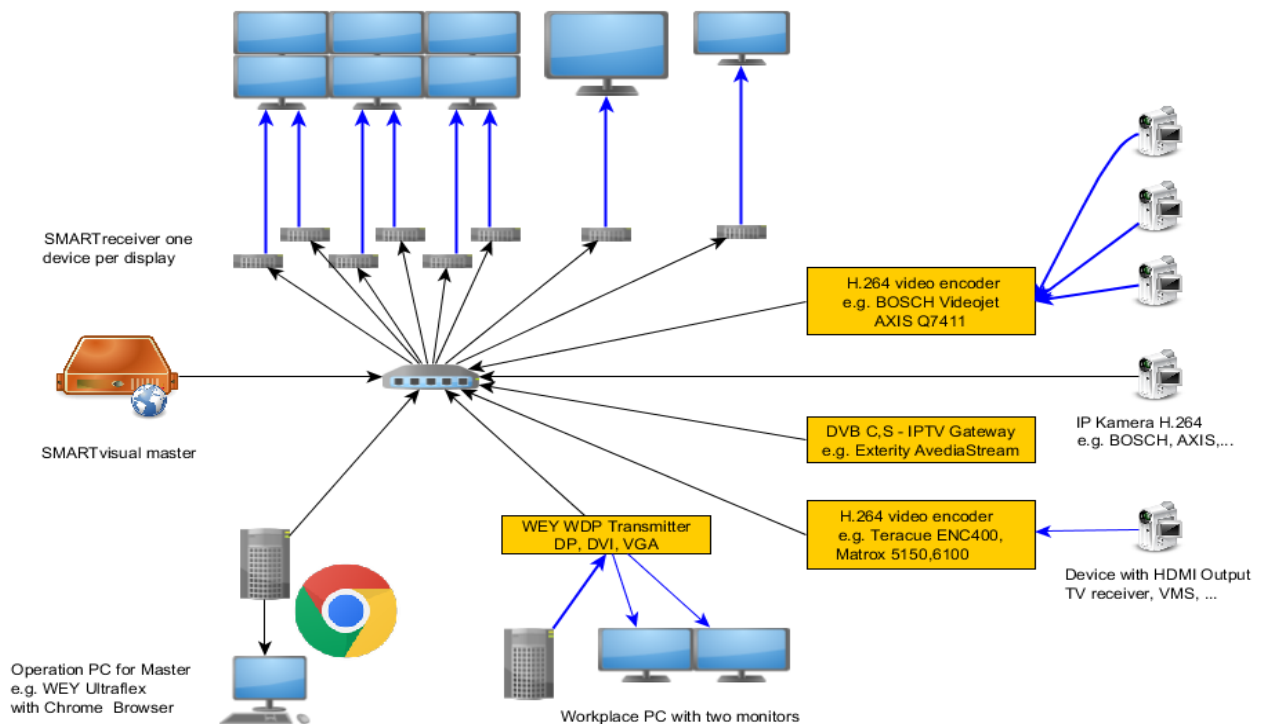
TECHNICAL SPECIFICATIONS

Article number	24120M1	24120R1
Abbildung		
Version	smartVISUAL Master	smartVISUAL Receiver
Dimensions		
Size B/T/H (mm)	180 x 128 x 40	
Weight (g)	460	
Features		
Processor	Intel® Celeron® N3160	Intel® Core™ i5 - 6442EQ
Main memory	4GB DDR3L RAM	8GB DDR4 RAM
Disk	Internal 32GB mSATA SSD	External 8GB USB stick
Operating system	Free BSD	Linux OS
Video resolution	-	1x DisplayPort Output support all common VESA graphic standards with resolutions up to WQUXGA /4k (3840x2160@60Hz)
Maximal parallel video streams Decoding with smartVISUAL receivers	-	24 Video streams in D1 quality 6 video streams in full HD (1920x1080) quality / 1x video stream UHD/4K quality / 6 WEY IP-Remote video streams
Audio output	-	Audio output via DisplayPort or analogue audio output, 3,5 mm jack
Network	Network ports: 2 x Ethernet 1 GB / RJ 45 redundant	
Power supplies	2 x 100-240V AC/12V 14.1A DC (2x redundant power supplies in 19" chassis)	
Power consumption	6 - 16Watt	25 - 35Watt
Ambient temperature	8 - 40°C	
MTBF	80,000 hours	
Source systems and protocols:		
Video streams from network encoders and standard IP cameras up to 4K can be freely positioned and scaled		
KVM-over-IP devices as well as VNC-based server solutions are full supported. .		
Supports multi-screen operations without restrictions on number. of sources (depends only on network infrastructure)		
Supports the following protocols: RTSP, RTP, MPEG-2, MPEG-4, H.264, Multicast, Unicast, WEYTEC Ethernet		
Interfaces:		
API interface to enable the full control of external systems		
Error messages can be transferred to other systems		



ARCHITECTURE OF THE SYSTEM

A distributed, network-based video wall or control room solution consists of different types of nodes that are connected via a standard Gigabit Ethernet network.



Example of a smartVISUAL configuration

ipREMOTE Transmitters or devices that generate IP streams (e.g. H.264 encoder) are used as image sources to encode digital or analog video signals. Depending on the type of source, different devices are used - e.g. KVM-over-IP devices for connecting remote computers. Network streams from cameras and other video encoders (IPTV) can also be integrated.

smartVISUAL receivers are used on the output side to decode the network streams and send images and sound signals to different display types and resolutions. The smartVISUAL receiver can freely scale all video signals.

The entire system is controlled and managed by master units. The smartVISUAL Master manages all smart-receivers and provides a web-based user interface. An operator station (e.g. WEYTEC ultraFLEX miniPC with browser) is necessary for this purpose. The user interface manages all sources as well as the video walls, layouts and window configurations.

The Master sends commands to the smartVISUAL receiver - e.g. place camera 4 on screen 3. The smartVISUAL receivers connect to the source, and capture and display the video and audio data. The Master is only active when switching or changing layouts and sources. If the Master fails in a system, all components continue to work and display the content, but the content cannot be changed. The video streams are not processed by the Master, but rather exclusively by the receivers.

In addition to a web interface, the Master also offers an API (programming interface), which makes it possible to control customer systems using third party devices. In this case, the operating PC is only necessary during setup and no longer required in ongoing operation.