Bar-Type Signage Player D230

BAR-TYPE DIGITAL SIGNAGE PLAYER WITH BIOMETRIC FEATURES

The Shuttle D230 is a slim digital signage display with a powerful integrated ARM/Android-based computing engine. Thanks to its unique form factor, it is perfectly suitable for shelf-edge advertising in retail. All content can be transferred via LAN or Wi-F. A mobile app for smartphones and tablets makes configuration and content management very easy. The 23.1" screen can be split in 1-4 same-sized segments, and the integrated camera allows marketers to tailor targeted biometric ads aligned with gender and age.

ANDROID · FANLESS · 24/7 SUPPORT · Max. 40 °C · IP54 FRONT · ENERGY SAVING · Camera · MICRO SD CARDREADER · POWER OVER ETHERNET · WLAN-ac · VESA MOUNT · LTE OPTIONAL

CHASSIS
- Front Panel IP54 protected
- Robust housing (metal & plastic), black
- Dimensions: 603 x 75 x 29 mm (LWH)
- VESA mount supports 50, 75 & 100 mm
- Operating position: horizontal or vertical
- Operating temperature: 0~40 °C
- Passive cooling (fanless)

DISPLAY
- Resolution: 1920 x 158 pixels
- Active screen size: 586 x 48 mm (23.1")
- Contrast: 3000:1, Brightness: 400 nits
- Viewing angle: 178°/178° (hor./vert.)

OS & SOFTWARE
- Android operation system v7.1 "Nougat"
- Shuttle Digital Signage Software

ARM PROCESSOR & GRAPHICS
- Rockchip RK3399, up to 1.8 GHz
- Cores: 4x Cortex-A53, 2x Cortex-A72
- Mali-T860MP4 graphics engine

MEMORY
- RAM: 2 GB LPDDR4
- Flash: 16 GB eMMC

NETWORK
- RJ45 supports Fast Ethernet Network
- WLAN-ac/BT 5.0 1T1R (SparkLAN AP6256)
- Optional LTE:
  supports one M.2-3042 4G/LTE card and one Nano SIM card

OTHER CONNECTORS & COMPONENTS
- USB 2.0
- Audio Line-out (ALC5651-VB),
- Micro SD Card Reader
- DC-Input
- Camera (UXGA)
- Speaker (2 Watt)

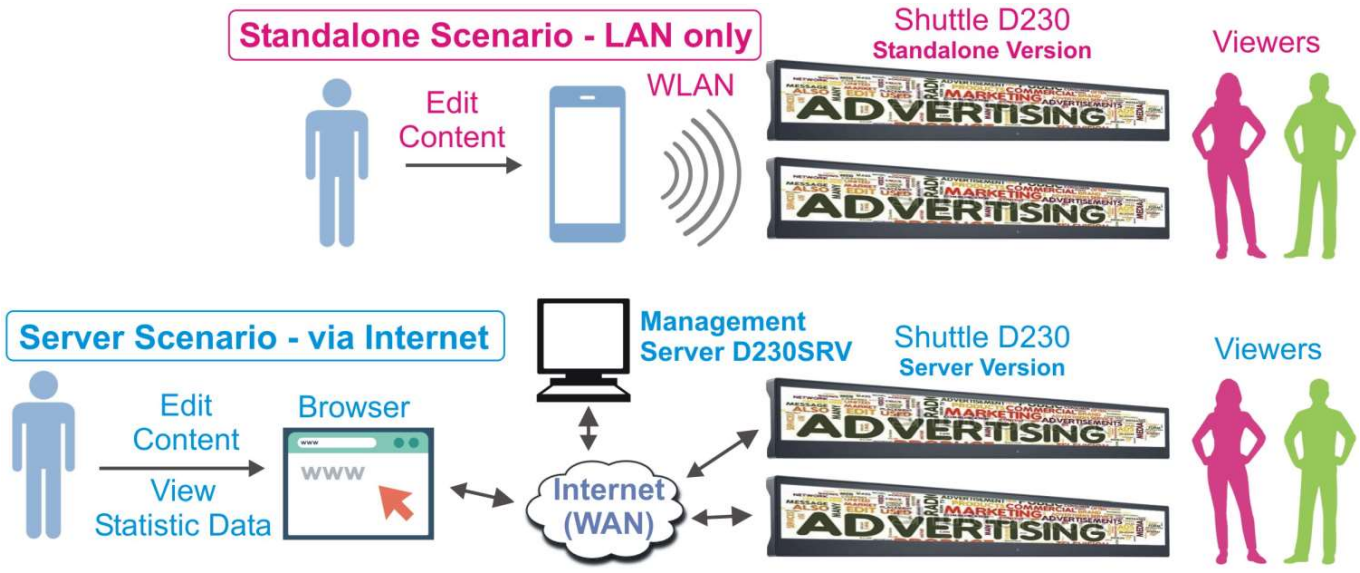
POWER SUPPLY
- External 24 W power adapter
- Input: 100~240 V AC, Output: 12V/2A
- Supports Power over Ethernet (PoE)

SHUTTLE D230 – STANDALONE AND SERVER VERSION

For an even more precise targeting, the D230 is also available as a server-based solution that can perform an analysis of customer behaviour (hot spot detection, Target Audience Analysis etc.) via network.

	D230 STANDALONE VERSION	D230 SERVER VERSION	MANAGEMENT SERVER D230SRV
Shuttle Order Number	DAD-D23001	DAD-D23011	PEV-D230SRV01
Name of the mobile App	"D230 Mobile"	"D230 Tool"	
Create Content	Mobile App supports Android v7.0+ and iOS v11.0+	Access via Web Browser interface	
Store content on D230 SD card	Yes (≥ Class 10 speed)	Yes (≥ Class 10 speed)	
Set "Identification Conditions" for each division	Only 1 set	1~3 sets conditions setting review	
Age for "Identification Conditions"	Young, Adult, Elderly	Every decade	
Text Marquee	Landscape layout	Landscape layout (Portrait layout for Japanese and Chinese only)	
Resume playback after error	–	Yes	
Group Devices	–	Yes	
Data Analysis (bar graph/pie chart)	–	Yes	
D230 OTA image update	(Update image via USB drive)	Yes	
D230 device Image	Standalone Firmware	Server Firmware	
Content management system for audience analysis	–	Yes (needs separate Management Server to enable user to push/edit content via web-interface).	
UPC/EAN bar code	887993601168	887993601212	4046047103621

Shuttle XPC slim DS10U5
Lüfterlos und geräuschlos
CPU: Intel Core i5-8265U
RAM: 16 GB DDR4-2400
SSD: 128GB M.2
Management-Server-Software for D230 under Linux CentOS 7
Pre-installed D230 licence: 1
Max. Possible Upgrade: 150



Special Features of the Server Version

The user pushes or edits the content on the **Management Server** and the **D230** checks the server for new content automatically. The **D230** allows multiple combinations of trigger conditions to perform gender/age recognition for different advertising targets. You can also analyse how often the advertising was watched and by which customer group. The **user management** allows the admin to define the permissions of a role or group accounts. The Web-UI supports the following languages: EN, FR, DE, RU, ES, TC, SC, JP.

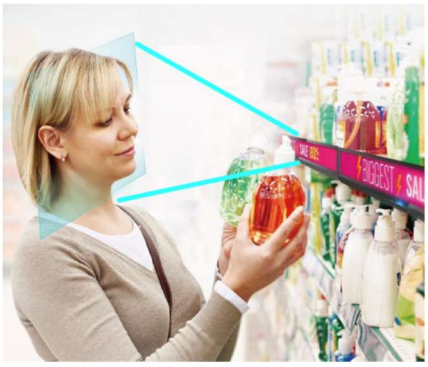
SHUTTLE D230 – SOFTWARE FEATURES

Pre-installed Player Software

The pre-installed D230 player software supports three display orientations and the screen can be divided in up to four independent divisions. Each division can show a series of up to 10 media contents (scrolling text, pictures or videos) in a specified order. Note: Scrolling text is only supported in landscape mode.

(1) LAYOUT	(2) DIVISIONS	(3) CONTENT TYPE
Portrait 90° · Landscape · Portrait 270°	1 — 1x 1920x158 1 2 — 2x 960x158 1 2 3 — 3x 640x158 1 2 3 4 — 4x 480x158	Scrolling Text Picture — JPG, PNG, GIF, BMP Video — MPEG4, 3GPP, MOV

Note: The player software can play four individual videos at the same time; it supports one 4k and three Full-HD videos simultaneously. Each video will automatically be downscaled to the allocated division of the screen.



Integrated Camera and Biometric Technology detect gender and age of viewers to play dedicated advertisement

The pre-installed software and the built-in high-resolution camera enables visual recognition for marketing purposes. Facial recognition technology determines the demographic metrics of passers-by (e.g. shoppers), and offers personalised marketing based on metrics such as gender and age.

Note: The user can also install an external camera via USB 2.0 port, if another position with different viewing angles is preferred.

Free D230 Mobile App (Standalone Version)

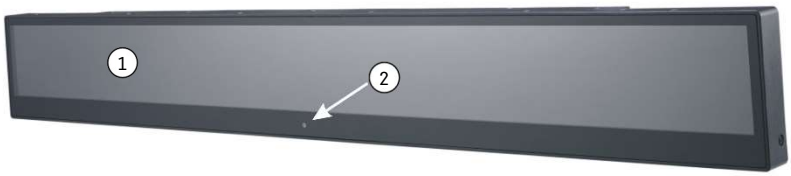
FREE AND EASY	The "D230 Mobile" app for smartphones and tablets makes configuration and content management very easy. This free app can be found on Google Play (supports Android 7.x or higher) or the App Store (supports iOS 11.x or higher).
FEATURES	Users can upload the same advertising content to multiple D230 devices at a time. It supports flexible content scheduling - different content can be selected to play at various times. Permission is password-controlled.
VIA WLAN	The app works via WLAN and can be used within the Local Area Network.

Content Management by Web Browser (Server Version)

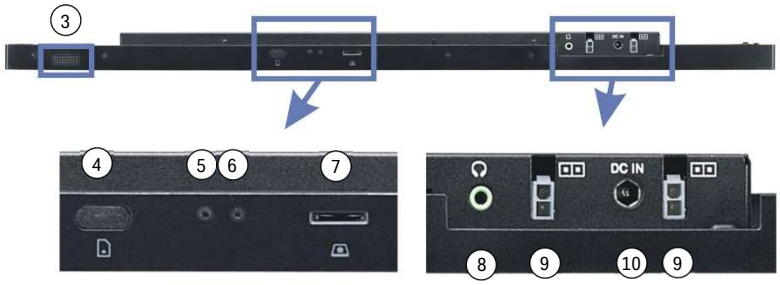
If the D230 runs on the Server Software Version, then you can also use a common Web Browser for Configuration and Content Management via Internet from any location. This requires another Server PC (or Virtual Machine) with Linux OS. The Web User Interface is very user-friendly and allows pictures, videos and text marquee to be combined to various projects according to the advertising goals. First of all, the mobile app is required for the network connection of each D230 device to be set up.

Outside View

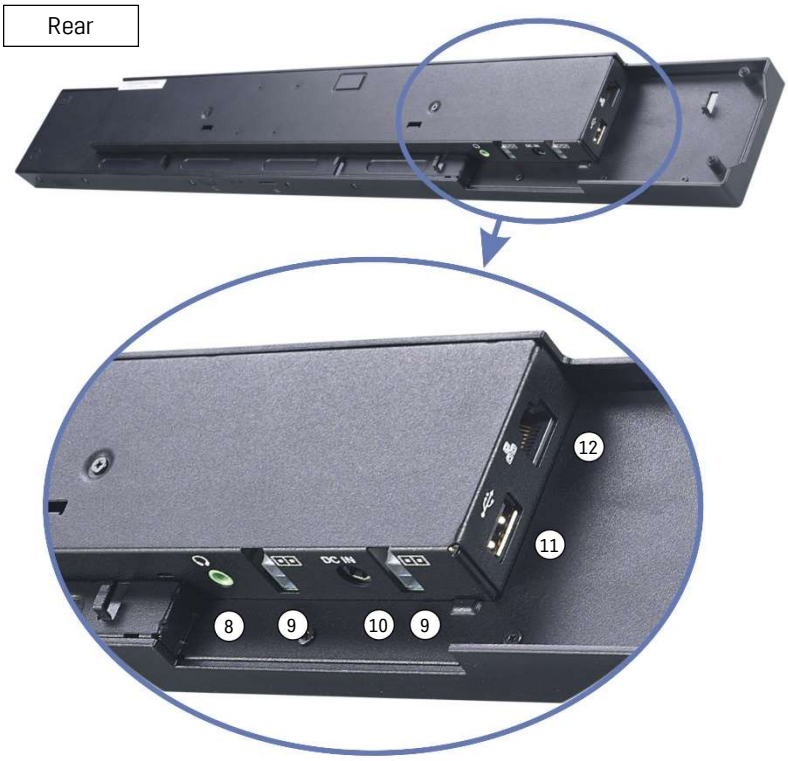
Front



Bottom

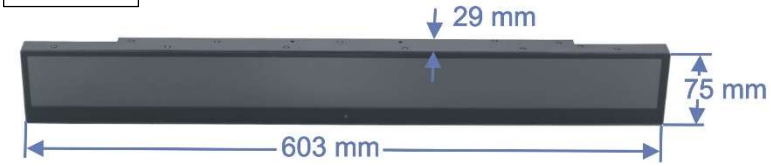


Rear



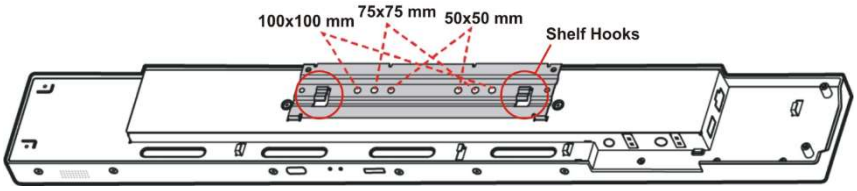
1. LCD Screen 1920 x 158 pixels
2. Camera
3. Speaker (2 Watt)
4. Slot for optional nano SIM card (rubber cover)
5. Factory Reset Button
6. Power Button
7. Micro SD Card Reader
8. Audio Line-Out
9. DC-Input (ATX 2-pin)
10. DC-Input (coaxial)
11. USB 2.0 Type A Port
12. RJ45 Network Port (Fast Ethernet)

Dimensions



SHUTTLE D230 – HARDWARE FEATURES

VESA and Shelf Hook mounting
The D230 supports 100x100 mm, 75x75 mm and 50x50 mm VESA standard, and it can also be fixed by its universal Shelf Hooks (distance: 140 mm).



D230 accessory kit

Concatenation

Use the optional **PD230 accessory kit** to concatenate two D230 devices. This kit includes an ATX power cable, two metal brackets and 4 screws. If the brackets are not used, the max. distance permitted between two D230 devices is 40 mm. Using only one power adapter means a maximum of five D230 devices can be powered.

Number of chained D230 devices	2-pin ATX cable (PD230 accessory)	Required power adapter specification
1	0	12V / 24W
2	1	19V / 65W
3	2	19V / 90W
4	3	19.5V / 180W
5	4	19.5V / 180W

Note: The PoE function is not available in a daisy chain wiring scheme.

Integrated WLAN and optional 4G/LTE

Device and content management allows updating a bunch of devices in no time. The mobile data option allows independent communication at locations where Wi-Fi or a local internet connection is not available.
The D230 incorporates an M.2-3042 Key B slot for the LTE module, a slot for a nano SIM card and two pre-installed LTE antennas.

Note: An LTE module and a nano SIM card are not included. The LTE option is only applicable with the D230 server version. The Quectel EM06-J/A/E LTE module is verified by Shuttle.

Top view – the location of the M.2 slot for the LTE adapter card

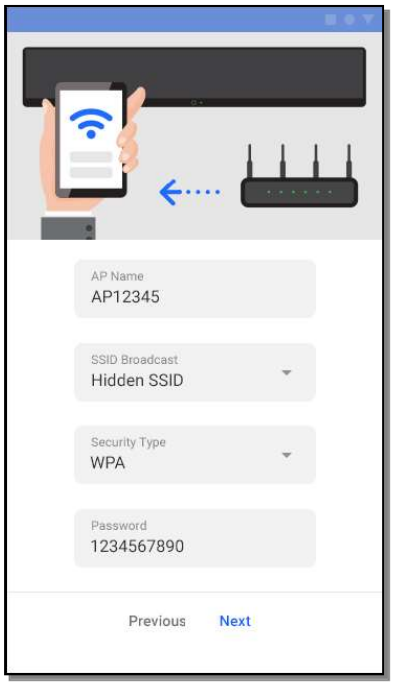
SHUTTLE D230 — SPECIFICATIONS

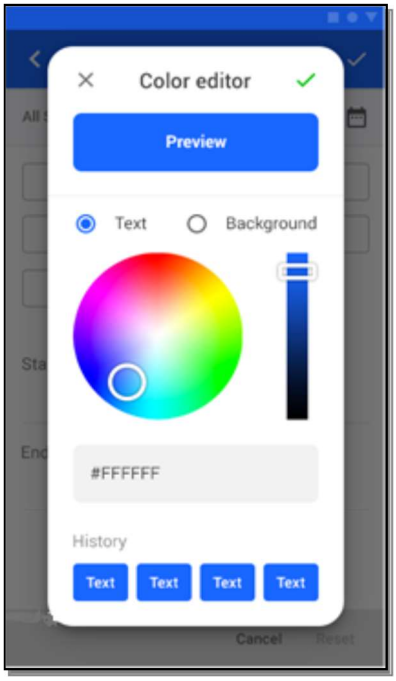
D230 VERSIONS	D230 Standalone Version (UPC code: 887993601168) D230 Server Version (UPC code: 887993601212)
FANLESS AND SILENT	Passive cooling, no fan noise at all Perfect to be used in noise-sensitive environments Fanless, dust-free and thus virtually maintenance-free
24/7 NONSTOP OPERATION	This device is approved for 24/7 permanent operation.
IP54-PROTECTED	The front panel is dust-protected and protected from splashing of water according to protection class IP54
CHASSIS	Robust housing made of metal and plastic, Black colour Dimensions: 603 x 75 x 29 mm (LWH) Supports 50x50, 75x75 and 100x100 mm VESA mount Operating positions: horizontal or vertical
DISPLAY	TFT LCD PID module with VA technology and LED backlight Model: InnoLux S231AJ1-LE1 Resolution: 1920 x 158 pixels Active screen size: 586 x 48 mm (23.1" diagonal) Colours: 16.7M (8-bit) Contrast: 3000:1 Brightness: 400 nits Response time: 9.5 ms typ. (grey to grey) Viewing angle: 178°/178° (hor./vert.) Output frame rate: 60 Hz Interface: 1ch-LVDS
OPERATING SYSTEM	Android operation system v7.1 "Nougat"
PRE-INSTALLED SOFTWARE	Shuttle Digital Signage Software (Standalone or Server version)
AVAILABLE APP FOR MOBILE DEVICES	Mobile App "D230 Mobile" (Standalone version) or "D230 Tool" (Server version) Available on Google Play, supports Android v7.0 and higher Available on the App Store, supports iOS v11.0 and higher
ARM PROCESSOR	SOC processor with ARM technology Model: Rockchip RK3399, Clock frequency: up to 1.8 GHz Dual-core ARM Cortex-A72 MPCore (performance-optimised) Quad-core ARM Cortex-A53 MPCore (power-optimised)
INTEGRATED GRAPHICS	GPU: Mali T860 MP4 graphics engine
ONBOARD MEMORY	RAM: 2 GB LPDDR4 Flash: 16 GB eMMC
CAMERA	Model GalaxyCore GC2375 2.0M pixel CMOS camera module (CCM) Resolution: 1600*1200, UXGA
AUDIO	Audio Codec: Realtek ALC5651-VB Speaker: 2 Watt (built-in) Line-out: Headphone amplifier with 20 mW/Channel at 16 Ohm
WIRED LAN NETWORK	RJ45 port supports Fast Ethernet Network (10/100 MBit/s) Ethernet Controller: Realtek RTL8152B (with USB 2.0 interface)
WIRELESS LAN NETWORK	SparkLAN AP6256 controller One internal antenna (1T1R) Supports IEEE 802.11 ac/a/b/g/n, 2.4 and 5 GHz band Supports Bluetooth 5.0
MOBILE NETWORK (OPTIONAL)	M.2-3042 Key B slot supports one 4G/LTE card SIM slot supports one Nano SIM card Two pre-installed internal LTE antennas with I-PEX MHF 4 connectors Note: An LTE module and a nano SIM card are not included. The LTE option is only applicable with the D230 server version. The Quectel EM06-J/A/E LTE module is verified by Shuttle.

CONNECTORS	Micro SD Card Reader LAN (RJ45) with PoE support USB 2.0 (Type A) Audio Line-out 3.5 mm 1x DC-Input axial 5.5 / 2.5 mm 2x DC-Input ATX 2-pin
POWER ADAPTER	External 24 W power adapter (fanless) Input: 100~240 V AC Output: 12 V / 2 A, max. 24 W DC Connectors: 5.5 / 2.5 mm (outer/inner diameter)
PoE SUPPORT	Supports Power over Ethernet (PoE), Input: 48 V / 0.5 A
ENVIRONMENTAL CRITERIA	Operating temperature: 0~40 °C Humidity: 10~90 %
CERTIFICATION AND COMPLIANCE	EMI: CE, FCC, BSMI, RCM, VCCI, RED Safety: CB, BSMI, ETL, IP54 (front) Other compliances: RoHS, ErP Lot3, Energy Star

APPENDIX

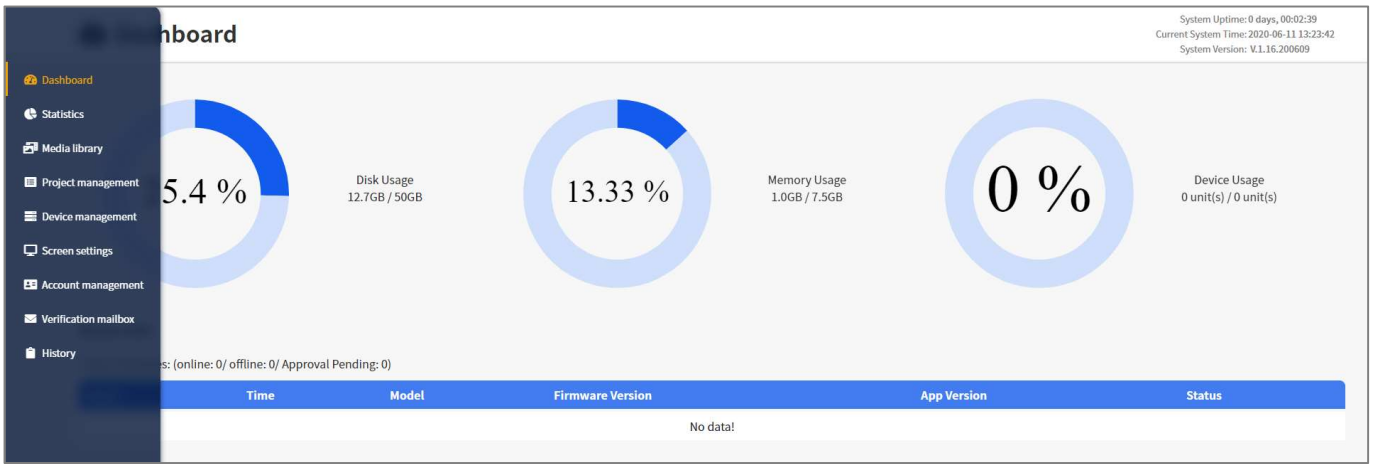
Screenshots of the Standalone App

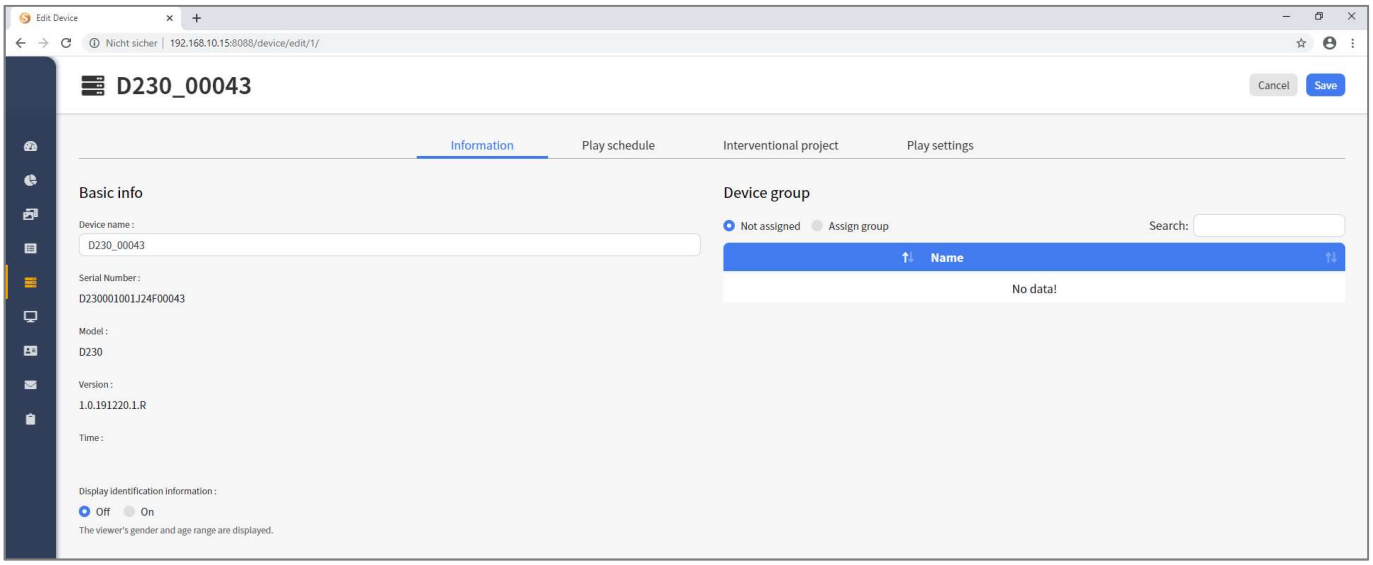


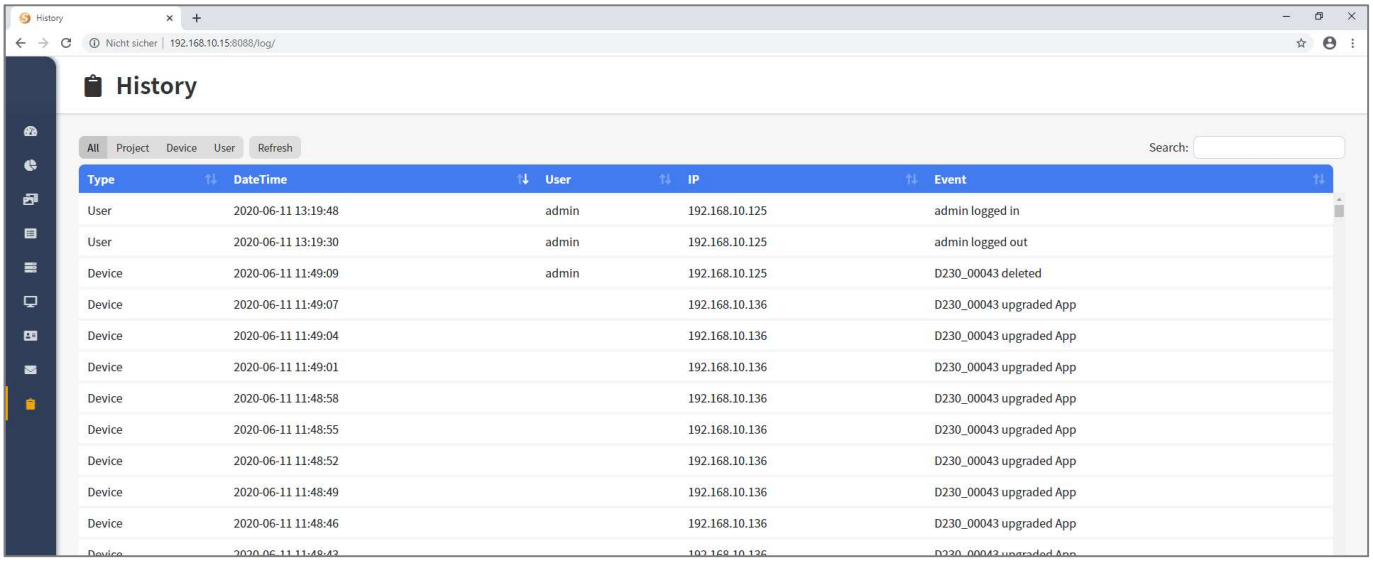


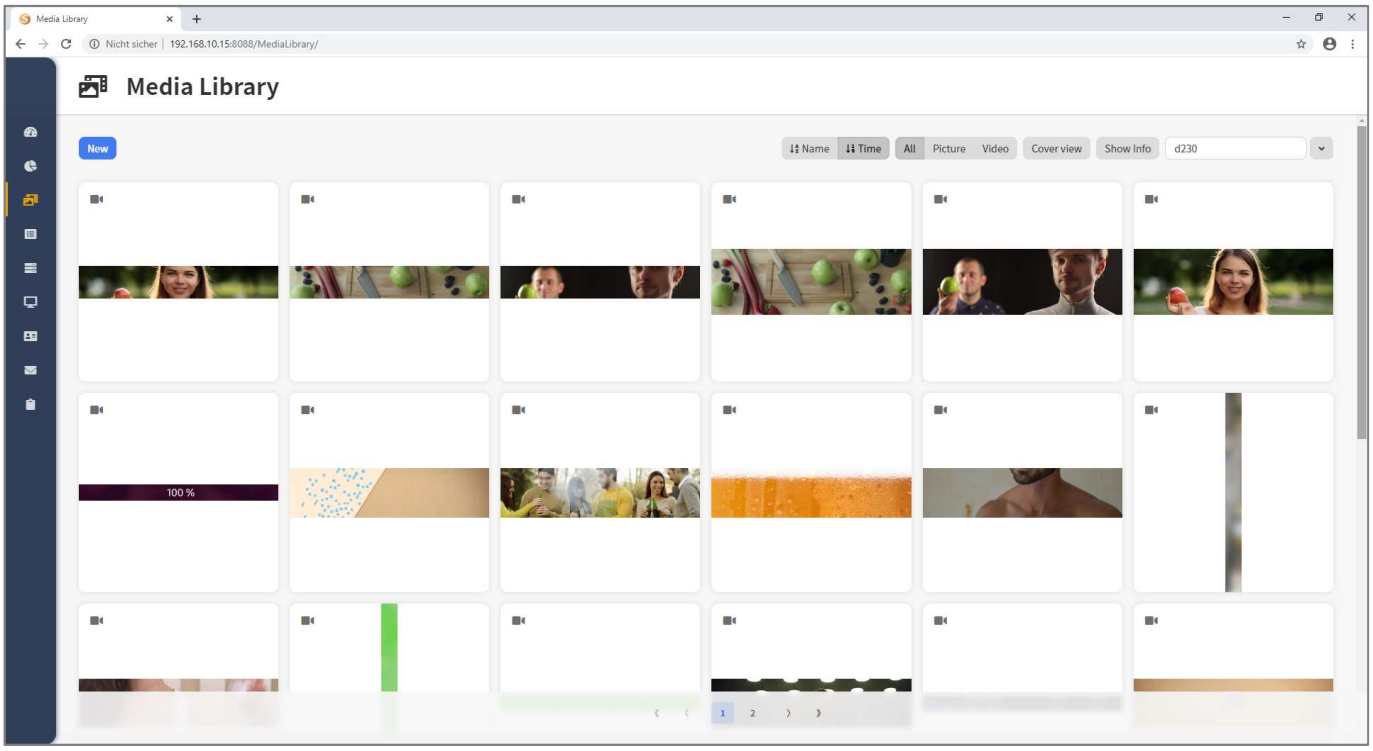
APPENDIX

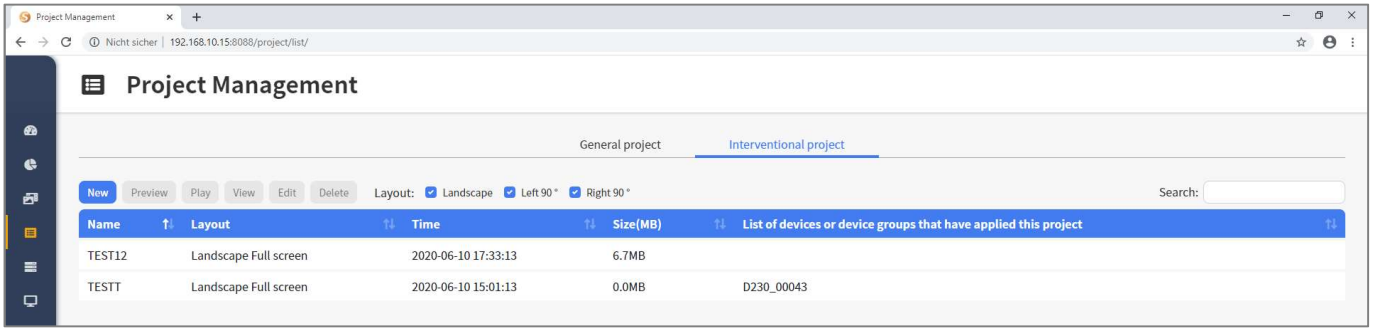
Screenshots of the Linux Server Software

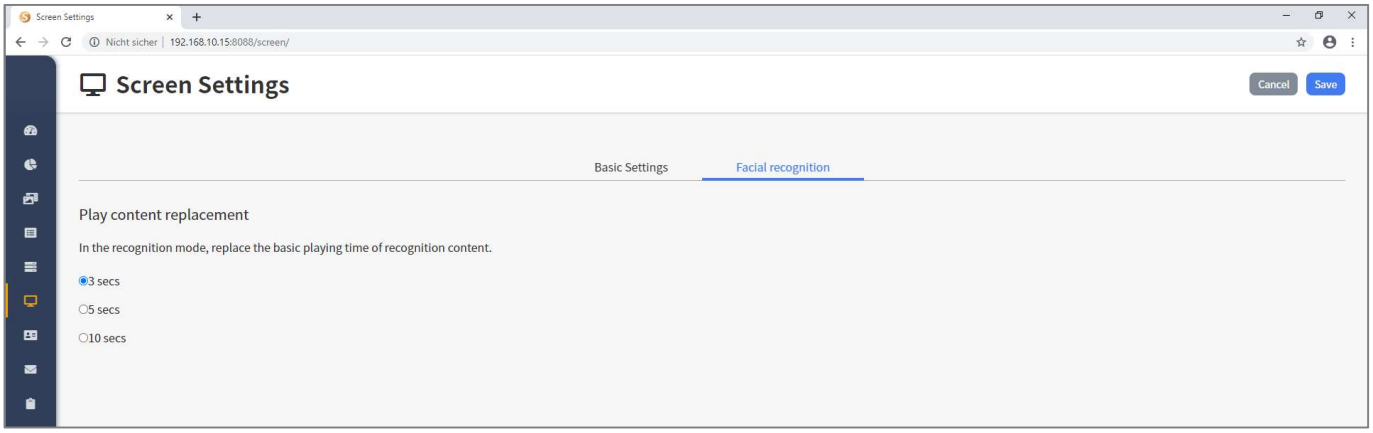












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