



Mobile Viewpoint

User manual for the AgileRRAgileRR 2.0 Playout servers and the Videomanager

Hardware version: AgileR 2.0, Playout servers
Software Version: 1.0.9.2 and higher

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Please read the following instructions to preserve your own safety before using any equipment. Carefully observe all warnings, precautions and instructions on both devices and this operation manual. Retain this manual for future reference.

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Do not operate device in a wet environment, for example near a bathtub, kitchen sink or laundry tub. Do not use the device in areas with high humidity, like a wet basement or near a swimming pool. Never install communication cables in wet environments or areas with high humidity, unless the jacks and cables are specifically designed so. Do not touch the product with wet hands.

Cleaning

Unplug every communication line and in special the power source before cleaning and polishing to prevent an electric shock. Do not use liquid or aerosol cleaners. Use a slightly wet lint-free cloth for cleaning the exterior of the device.

Ventilation

Do not block any of the ventilation shafts of the device. Never cover the slots and openings to prevent overheating. Do not install the device near heat sources as radiators, kitchen appliances and other devices that produce heat. Do not place the device in direct sunlight or close to a sun-heated surface.

Lightning

Never use the device during a lightning storm. Be careful connecting and disconnecting communication cables during lightning storms.

Dust

Do not operate the device in areas with high concentrations of dust.

Vibration

Do not operate the device in areas with vibration or places with an unstable surface.

Power Connection

This product works on a dangerous voltage. Do not attempt to open this product when the power line is connected or where this action requires any tool. This product should always be powered by a grounded outlet. Never connect the power cord coming with the system to any other device or product.

When the product has visual damage, do not connect any power supply but contact the company. Connecting the power supply could lead to unrepairable damage. The power cord / power supply connection serves as the main disconnect device for this equipment.

The power cord must be always easily accessible. Make sure the power cord will not get stuck between surrounding objects, is walked on, or got items placed upon it. Pay particular attention to the plugs, receptacles and the device jacks. Do not tug the power cord. If the provided plug does not fit the jack, contact an electrician. Never install cables or any peripherals without unplugging the device from its power source.

Servicing

Do not service the device. Removing and opening the device may expose you to dangerous voltages and other hazards, and warranty will expire. Leave servicing to qualified service employees only.

Unplug the power source from the device and contact service employees when the following defects or errors occur:

- If the power cord or plug is damaged or frayed
- If liquid has been spilled into the device
- If objects have fallen in or on the device
- If the device has been exposed to rain or moisture
- If the device has been dropped and has been exposed to a major shock
- If the cabinet has been damaged
- If the device seems overheated or is overheated
- If the device emits smoke or a abnormal smell
- If the device fails to operate according to the operating instructions

Accessories

Only use accessories specified by the manufacturer, or sold with the device.

Communication Lines

Do not use communication equipment to report a gas leak in the vicinity of the leak.

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Version

User manual version 7

Hardware version: WMT AgileRR 2.0, Playout Server and Videomanager.

August 5, 2014

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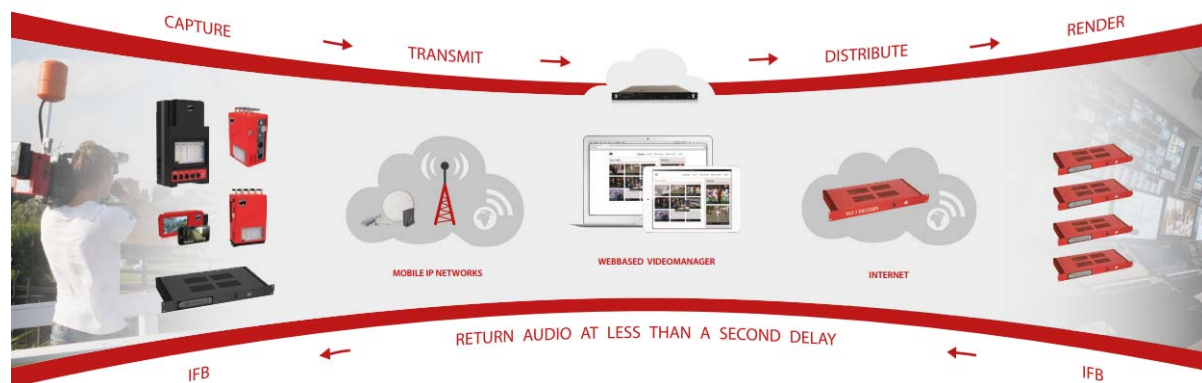
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2. INTRODUCTION

The User Manual contains all essential information for operating the WMT, Playouts and Videomanager . This manual includes a description of the system functions and capabilities modes of operation. Step-by-step procedures for using the AgileR 2.0 , Videomanager, and Playout servers. I'll use a lot of picture to make it easier to understand.

3. HOW DOES THE AGILER 2.0, VIDEOMANAGER AND PLOUT WORK

The AgileR 2.0 connects through the mobile operator network, Wi-Fi and/or Ethernet network to our cloud Videomanager. The Playout server is also connected to Videomanager. The Videomanager says to AgileR 2.0 where the playout is located and how to reach it through the internet. This setup makes it very easy to manage your WMT and Playout server at one central place. In the figure below you can see how a whole setup works.



4. DEFINITIONS

<i>Term</i>	<i>Definition</i>
APN	Access Point Name, the name of the access point that is used to connect to the mobile provider.
BNC	Bayonet-Neil-Concelman connector for connecting a camera.
IP	Internet Protocol, a protocol used to create a network between computers.
LED	Light Emitting Diode, which can be the display or one of the lights in the buttons.
PC	Personal Computer, which can be used to configure a WMT.
RTT	Round Trip Time, the time it takes for a packet to travel from one point to another and back again.
SIM	Subscriber Identity Module, a smartcard with information for accessing a mobile network.
WMT	Wireless Multiplex Terminal, the unit described in this document.
XLR	A connector for connecting an audio device.

5. AGILER 2.0

AgileR 2.0 models

The AgileR 2.0 is available in different versions as shown in the pictures below:

- AgileR 2.0 backpack version with angled aerials
- AgileR 2.0 back of the camera mount with angled aerials
- AgileR 2.0 back of the camera with dome aerial
- AgileR 2.0 backpack with array



Figure 1: Back of the camera with antenna array

Technical specifications

Interfaces

10/100/1000 base-t via USB Ethernet adapter
 SD;SD- SDI,SD-HDMI, composite + 2x analog audio
 HD;HD- SDI,HD-HDMI
 Mini jack IFB/Audio return
 USB for Store & Forward FTP file transfer
 Touch screen
 8 simcards modems
 Wi-Fi

Video input formats:

SD; full D1, ½ horizontal, ¼ resolution in Pal and NTSC mode
 HD; 720p50, 720p60 and 720p59,94
 HD; 1080i50, 1080i60 and 1080i59,94

Supported Video Encoding:

H.264 main profile MVP codec
 Framerate 50, 60, 59,94
 On the fly resolution change (as of sw 1.0.9.5)
 Videobitrate between 64 Kbit and 8 Mbit

Recording

On Internal solid state disk separate from live

Supported Audio Encoding:

AAC 96-128 kHz LFE

IP management Network Interface:

10/100/1000 base-T (combined with fixed IP connection via dongle)

Mobile Network Interface (8 times):

EDGE, GPRS, UMTS, HSPA, HSDPA, LTE and UMTS 2100MHZ, 1850Mhz and 850Mhz
CDMA2000 via external modem
Wi-Fi

Hardware:

Dedicated appliance
Weighs approximately 1,5 kilograms
21cmx15cmx7,5cm (W x b x h)

Power source

Any voltage between 12 and 24 volt like 14.4 volt Li-ion V-Mount cells

Operating system

Embedded Linux

Local storage

16 Gigabyte
Error correction methods implemented
Forward Error Correction (FEC)
H.264 layer redundancy (MobileViewpoint IPR)

6. PLAYOUT SERVER SINGLE, DUO AND QUAD

SDI interfaces

Playout Server Single: one SDI input, one SDI output and one SDI reference
Playout Server Duo: two SDI input, two SDI output and one SDI reference
Playout Server Quad: four SDI input, Four SDI output and one SDI reference

The layout of the SDI interfaces are displayed on the next page. Use the 90degree steel angle of the PCI Express card as a reference for the SDI interfaces.

Other interfaces

2xEthernet 10/100/1000 base-t
SD;SD- SDI,SD-HDMI, composite + 2 x analog balanced audio,
S-video (only on request)
Component video (only on request)
HD;HD- SDI,HD-HDMI. HD-Component
Mini Jack Audio return

Video output formats:

SD; full D1, Pal and NTSC mode
HD; 720p50, 720p60 and 720p59,94
HD; 1080i50, 1080i60 and 1080i59,94

Supported Video Encoding:

H.264 main profile MVP codec
Framerate 50, 60, 59,94

On the fly resolution change (as of sw 1.0.9)

Recording

On Internal solid state disk

Supported Audio Decoding:

AAC 96-128 kHz LFE

IP management Network Interface:

10/100/1000 base-T

Hardware:

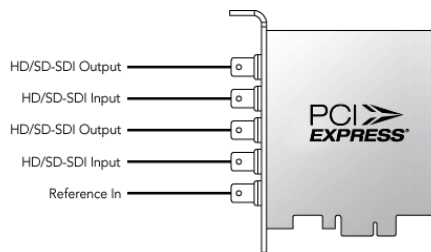
Dedicated appliance 220 volt

Weighs approximately 3,5 kilograms

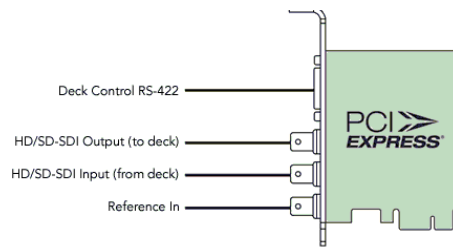
43cmx21cmx4,5cm (wxbxh)

Software:

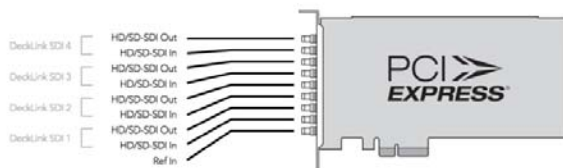
The Playout server contains both server and Playout software. The server hardware is capable to handle 4 clients at the same time.



Playout Duo



Playout Single



Playout Quad

7. CONNECTING THE AGILER 2.0

1. Make sure that the power is switched off
2. The backpack version of the Agiler 2.0 has a bottom plate that needs to be unscrewed to get to the sim cards
3. Insert the SIM's into the SIM slots on the bottom of the unit. Use a thin object such as a pencil to press the yellow button next to a SIM slot to release it. Place the SIM in the SIM cardholder and place it back in the slot.
4. Connect the antennas to the SMA coax connectors on the top of the WMT housing
5. Connect the video output of the video camera to the BNC SDI Input/HDMI/Analogue connector on the top of the WMT housing;
6. Connect the AC/DC adapter to the XLR 4 pole power connector and switch the WMT on.
7. Configure the WMT client



Sim card slots

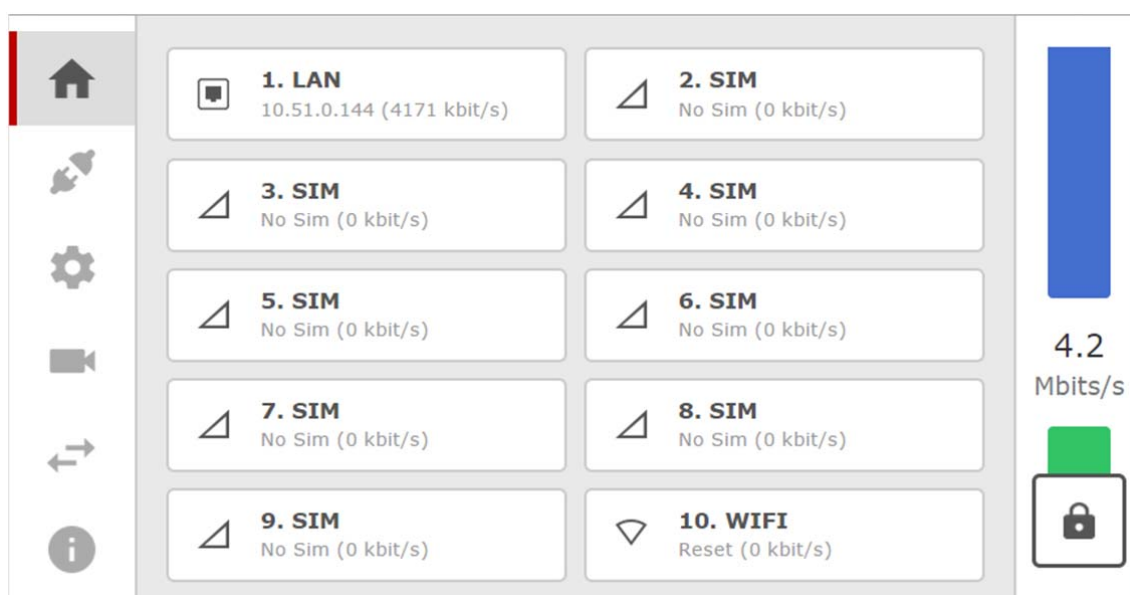
8. OPERATING THE WMT CLIENT

This chapter describes the usage of the WMT client by LCD touch screen. This will give you an interactive way to control the WMT client. The client is divided in multiple interactive pages which can be opened by using the tabs on the left side.

Before you select a tab, be sure the “Display Lock” is off. Make sure the button on the right- is turned to green. You can scroll the button to the bottom by touching it and pulling it to the right. The display is now unlocked and you can start configuring. When the display is not used for a certain amount of time, it will automatically lock to prevent changes by accident.

Overview

Picture 2 shows the “Overview” tab on the LCD touch screen. This screen provides you basic status information on the individual connections and the sum of the current bandwidth usage.



Picture 1: Overview screen of the WMT.

Viewing the status of a connection

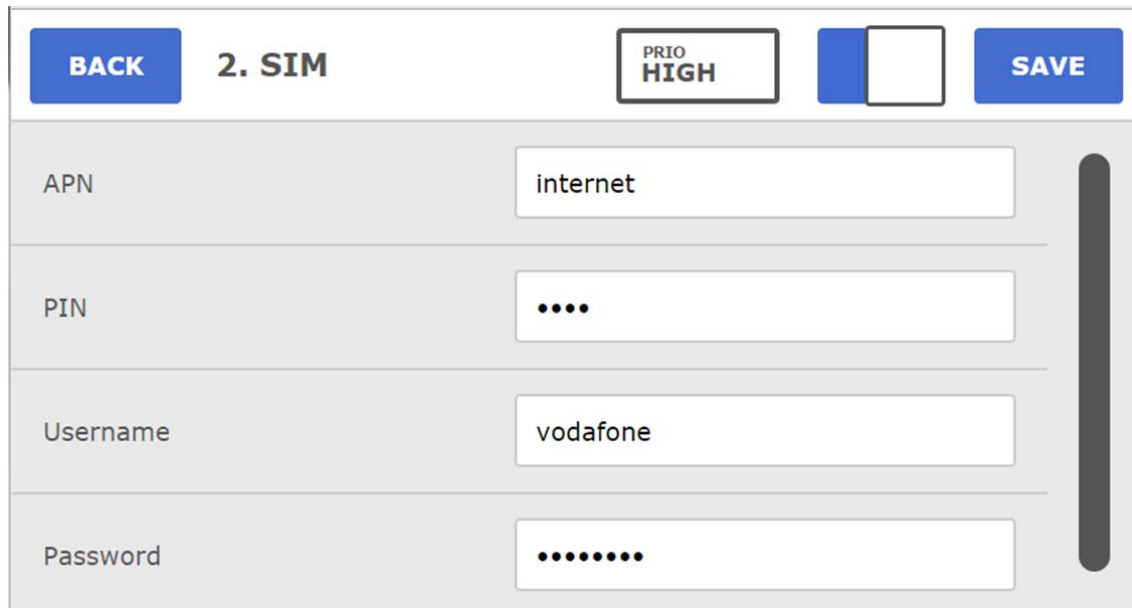
The overview page has been divided into the amount of connections that you have on your system. The example above has 10 connections in total. Each connection shows the signal strength, connection status and bitrate per sim. Each tile functions as a button. When you click on a connection you will jump into the settings of the connection.

Connection status

It shows **connected** in case everything is correctly configured and the WMT server/backend is on line. It will show **searching** when there is no coverage or aerial connected and **config** when the pin code is ok, but is unable to connect with the data network. The most common reason the WMT cannot connect is the wrong APN or user name and password. When using prepaid, this could mean the connection is out of balance.

Viewing the settings of a connection

By tapping a connection it is possible to access the settings like pin code APN and username/password. For Wireless, connection 10 if available, it is possible to select the Wi-Fi network and to submit the authentication string. You can also change the priority per connection or disable the connection completely.



BACK	2. SIM	PRIORITY HIGH	SAVE
APN	internet		
PIN		
Username	vodafone		
Password		

Picture 2: The connection settings

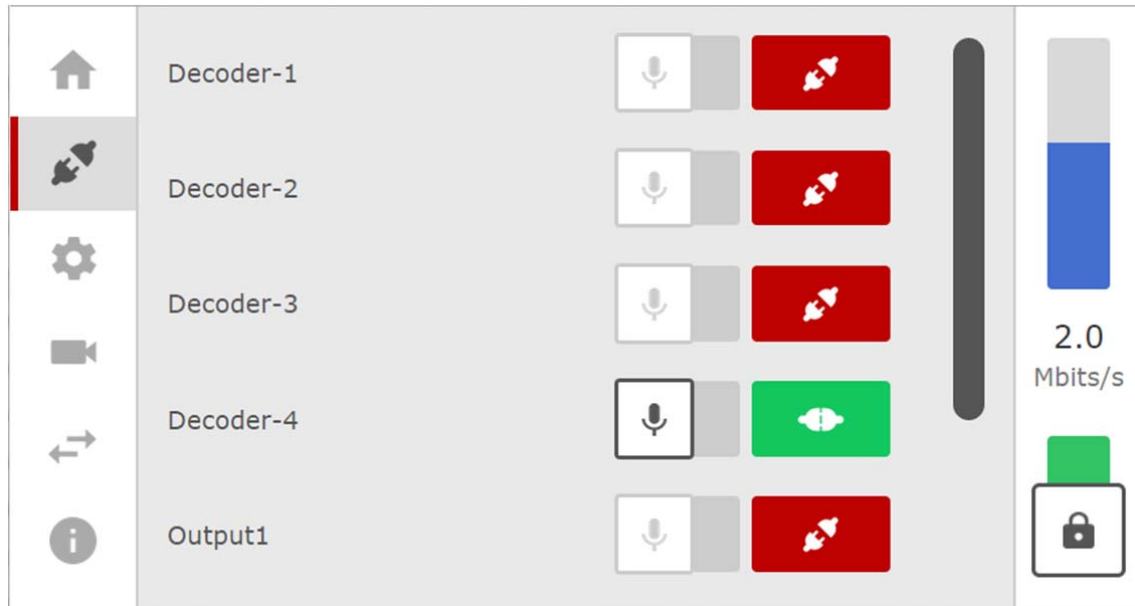
Used bandwidth

The number at the right of the screen represents the sum of the used bandwidth from all connections.



Connect

The connect page gives you the ability to connect your WMT to a Payout that you have within your account. If you press the red button of one of the decoder ports, it will send the WMT video to this output. There is also an IFB button present. You can switch this on or off by sliding it to the right or left. To disconnect the Payout you can press the connect button again. The button will turn red once the payout has been disconnected.



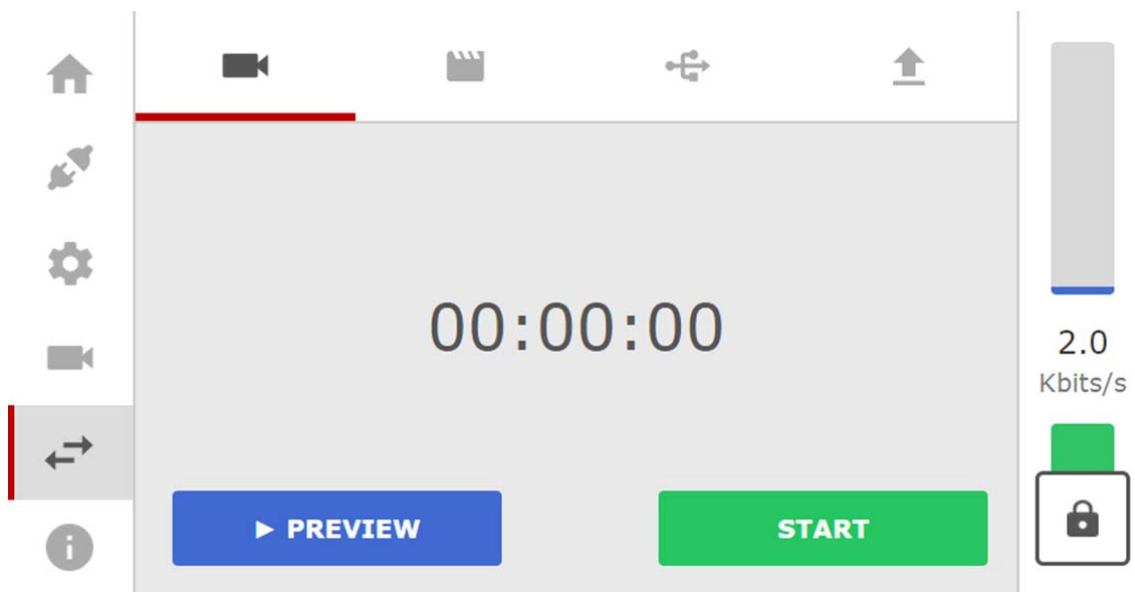
Picture 3: Connect page

Transfer

The Transfer page gives you the ability to transfer files that are stored on a USB flash drive or the recorded files that are located on the system or camera.

When you click on the Transfer icon, you will see the Record and Transfer screen. This option can record the camera feed (live from the camera or a stored video) when pressing the 'start' button and transfer it as soon as you press the 'stop' button. An FTP server needs to be filled in to make use of this feature.

The Store & Forward function can be used to upload files to a FTP server using the Transport screen. By inserting an USB-stick you can copy files from the stick to the WMT which will upload them to the FTP server after you enable "Store & Forward" in the settings screen (please check the settings paragraph in this chapter). The FTP server can be configured by the web interface.

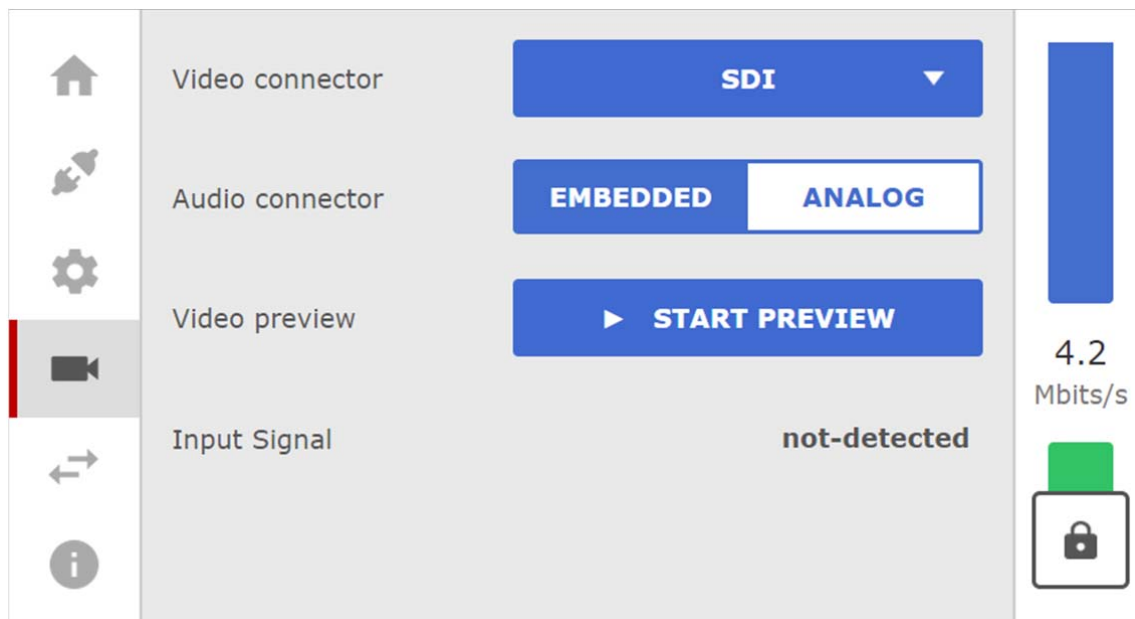


Picture 4: The Transport screen. Here you can start a recording from the camera and transfer it as soon as the 'stop' button is pressed.

Input

The preview functionality will show you the live video that is currently on the in selected connector (SDI, HDMI, Firewire or Composite). In case the connector is not attached, the wrong connector is attached, or the camera that is attached to the connector is not running you will see a no signal screen as shown below.

Press “Start Preview” to start the preview. The preview will automatically stop after 10 seconds to preserve battery power.



Picture 5: The input screen

The preview tab shows the input signal or in case of no input the no signal image. The preview will automatically stop after 10 seconds to preserve battery power. When previewing the image the audio bars will indicate audio input levels.

If you connected a camera to the correct connector, selected the right connector, but still get no signal, check your Input settings in the “Settings” screen. Make sure that both WMT and camera send and receive the same in-and output. If the camera has a output of 720p at 50Hz, and the WMT is set to PAL, a no signal message will appear at the preview screen. Check your camera settings and the WMT settings to ensure you got the right settings enabled.

Input Signal

The input signal is the input that is connected to the WMT. Make sure that the output from the camera of transmitting device is the same as the chosen input on the WMT, otherwise a “no signal” screen will be shown. Also make sure the camera transmits SD or HD, depending on the chosen settings.

The encoder input can be set to the following settings:

- PAL
- NTSC
- 720p 50Hz (HD only)
- 720p 59Hz (HD only)
- 720p 60Hz (HD only)

- 1080i 50Hz (HD only)
- 1080i 59Hz (HD only)
- 1080i 60Hz (HD only)

***** NOTE:** Input values may vary, depending on your software version. Contact service employees if your requested input is not on the list.

Connectors

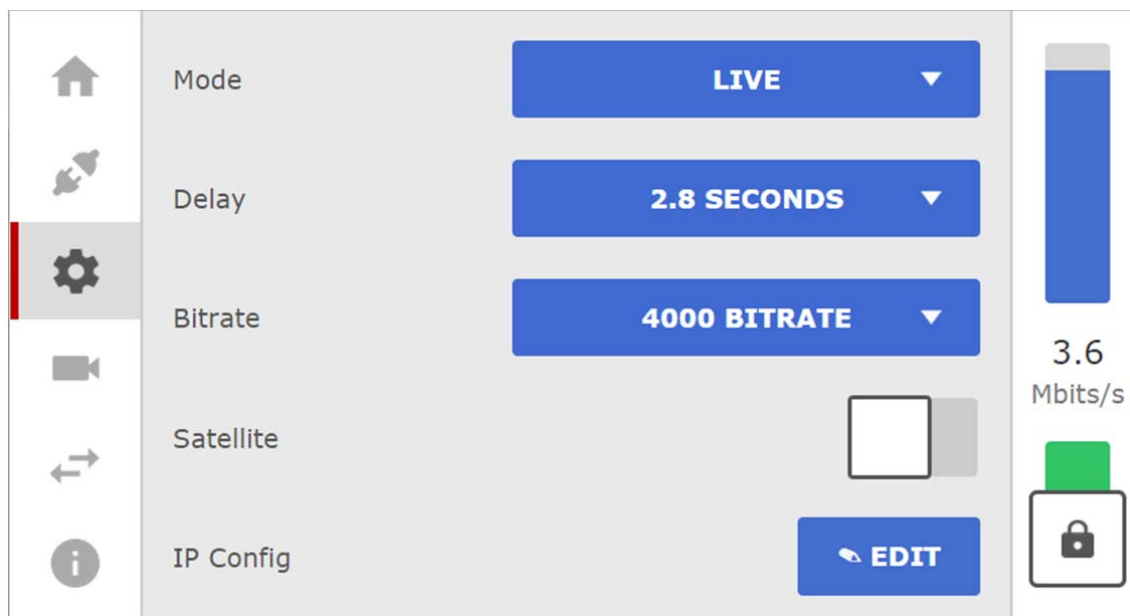
The WMT has the following connectors to connect a camera or other device. Different systems may have different connectors. When you order your system, make sure the right connector is on it to ensure you can connect your equipment to the WMT.

Picture 1 may help you finding the different connectors on your system.

- SDI
- HDMI
- Composite
- Firewire

Settings

The settings page can be used to configure in-and output settings, and some other basic configuration. The advanced configurations have to be done in the WMT web interface as described in the next chapter. Picture 5 illustrates the settings page.



Picture 6: The settings screen.

Modus

The modus section can be used to set the mode the WMT works in. The WMT has the following modus:

- **Disabled**
When the WMT is disabled, it does not send any data to the server. Your videostream will be black and the preview will be disabled.
- **Audio/Video**
When the WMT is set to Audio/Video, it will send audio and video to the server. You can preview this audio/video at the preview section.
- **SAF (Store And Forward)**
When the WMT is set to SAF (Store And Forward) it will send data to the FTP server. Files that have been selected to send in the "Transport" screen will now be sent. While the WMT is set to SAF it will not transmit audio and video. The preview will be disabled.
- **Live + record (19 inch only)**
When the WMT is set to Live + record all contents of the input signals is stored on the internal solid state disk.
- **Live H.265**
When the system is set the Live H.265 it will make use of H.265 encoding. Not every system has the ability to make use of H.265. Please contact the reseller to check if you have this option available.

- **SAF + record (19 inch only)**

When the WMT is set to SAF + record files the system is in **Continuous Picture Technology (CPT)** mode. File parts that are recorded are send immediately to the server. The playout will play those files after a programmed delay. The delay is set in the

Delay

Delay means the delay between both ends (camera and playout). You can set the delay manually. You can set the delay from 0.8 till 20 seconds.

Satellite

If you are using a satellite dish with the WMT client you need to make sure that you put the satellite switch on.

IP config

Via settings you can set the client number which is normally 1 in a point to point set-up. In case a separate server is used the number can be between 1 and 20. The Server IP is the public IP number of the server or server playout in a point to point set-up.

Encoder output

The encoder output is the output that the WMT transmits and if selected stores on disk. When recording is selected the WMT stores the input signal in High quality on the internal SSD (solid state disk). The recording are accessible via the Transfer tab. The WMT can convert different signals to lower quality to save bandwidth. These settings do not influence the recording. The following settings are possible:

Change the current profile

The current profile is highlighted with a blue dot. To change the profile to a new profile, press mode button and select the mode that you prefer.

***** NOTE:** Output values may vary, depending on your software version. Contact service employees if your requested input is not on the list.

Info

Picture 7 illustrates the info screen. You can check serial number, software version, hardware version, current server IP address and the client number. You can also restart the WMT, in case this is required or refresh the gui when a license has been changed.



Picture 7: The info screen

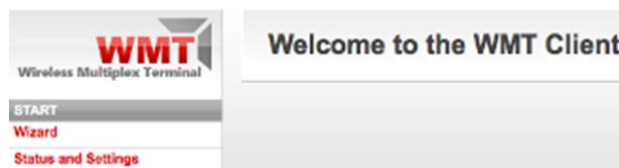
THE WEB INTERFACE

This chapter will describe the web interface, which can be accessed by requesting the network address of the WMT in a web browser. Different menus will be described in this chapter.

Accessing the web interface

Access the WMT Web Interface using the following steps:

1. Connect a laptop or other PC directly with the second Ethernet port. This management port is located at the left side of the WMT
2. Use the following IP and subnet values: IP 198.18.0.50, subnet mask 255.255.255.0
3. Browse to the following address: <http://198.18.0.1>
4. By default, you have to provide login details.: user, leave empty, password pokon
5. Picture 1 illustrates the screen when you have successfully logged in.



Picture 1: Login succesfull!

First time: use the configuration wizard

When you log on for the first time, the WMT needs to be configured. You can use the “First Time Configuration Wizard” to set your WMT client configuration settings. Simply click “Wizard” and follow these steps:

1. *Step 1: Installing a license key*
By default, your license key is already installed. If this is not the case, contact Mobile Viewpoint. We will e-mail your license key as soon as possible. Click ‘Next’ to continue to the next step.
2. *Step 2: Global configuration*
 - Client number: Each WMT client must identify itself with a unique number to the WMT server;
 - System name: You can add your own system name to each WMT client;
 - Server IP: Fill in the WMT server (back-end) IP address.Click ‘Next’ to continue to the next step.
3. *Step 3: Connection configuration*
For each connection you will need to configure the following settings:
 - SIM pin code: Enter the pin code of the SIM. The default pin code is 0000. The pin code is only required when the SIM requires a pin code;
 - UMTS APN: The access point name for connecting to the mobile network;
 - UMTS Username: The username used to get access to the mobile network;
 - UMTS Password: The password used to get access to the mobile network.Click ‘Next’ to continue to the next step.
4. *Step 4: Completing the wizard*
If all steps within the wizard are completed, you will see the text ‘Wizard Succeeded’. Click ‘Done’ to exit the wizard.

Status

This section will give you information about the current status. You can access this section after clicking ‘Status and Settings’ when you have logged in.

WMT
Wireless Multiplex Terminal

Status Overview
System uptime: 0 hours 5 minutes 2 seconds

Video
Detected Video Format: not-detected

Buffer
Buffer Size: 0 packets

Channel

Sent	0.6 kbit/s
Received	0.6 kbit/s
Sent	1.0 packets/s
Received	1.0 packets/s
Send failed	0.0 packets/s
Acknowledged	1.0 packets/s
Retransmissions	0.0 packets/s
Deduplicated	0.0 packets/s

Connection 1

Transport Status	no sim
Network Status	no sim
Transport IP	0.0.0.0
Transport Signal Level	0
Link Status	config
Link RTT	0 ms
Link Receive Loss	0%

Connection 2

Transport Status	no sim
Network Status	no sim
Transport IP	0.0.0.0
Transport Signal Level	0
Link Status	config
Link RTT	0 ms
Link Receive Loss	0%

Connection 3

Transport Status	no sim
Network Status	no sim
Transport IP	0.0.0.0

Speed

This page will give you information about the current speed. You will see information about all connections independently and all connections in total. You can see both sent and received speed. The speed is displayed in kilobit per second (Kbit/s).

Speed

Send Speed	
Connection 1	0 kbit/s
Connection 2	0 kbit/s
Connection 3	0 kbit/s
Connection 4	0 kbit/s
Connection 5	0 kbit/s
Connection 6	0 kbit/s
Connection 7	0 kbit/s
Connection 8	0 kbit/s
Connection 9	0 kbit/s
Connection 10	2 kbit/s
Total	2 kbit/s

Receive Speed	
Connection 1	0 kbit/s
Connection 2	0 kbit/s
Connection 3	0 kbit/s
Connection 4	0 kbit/s
Connection 5	0 kbit/s
Connection 6	0 kbit/s
Connection 7	0 kbit/s
Connection 8	0 kbit/s
Connection 9	0 kbit/s
Connection 10	6 kbit/s
Total	6 kbit/s

Overview

The overview page gives you an overview of all connections and connection status.

- Buffer Size: The size of the current buffer
- Send Packets/sec: The amount of packets sent each second over this connection;

- Send Bytes/sec: The amount of bytes sent each seconds over this connection;
- Send failed/sec: The amount of packets failed to sent each second over this connection;
- Acked packets/sec: The amount of acknowledged packets sent second over this connection;
- Retransmission/sec: The amount of retransmissions (packets) each second over this connection;
- Received Packets/sec: The amount of received packets each second over this connection.

Connection

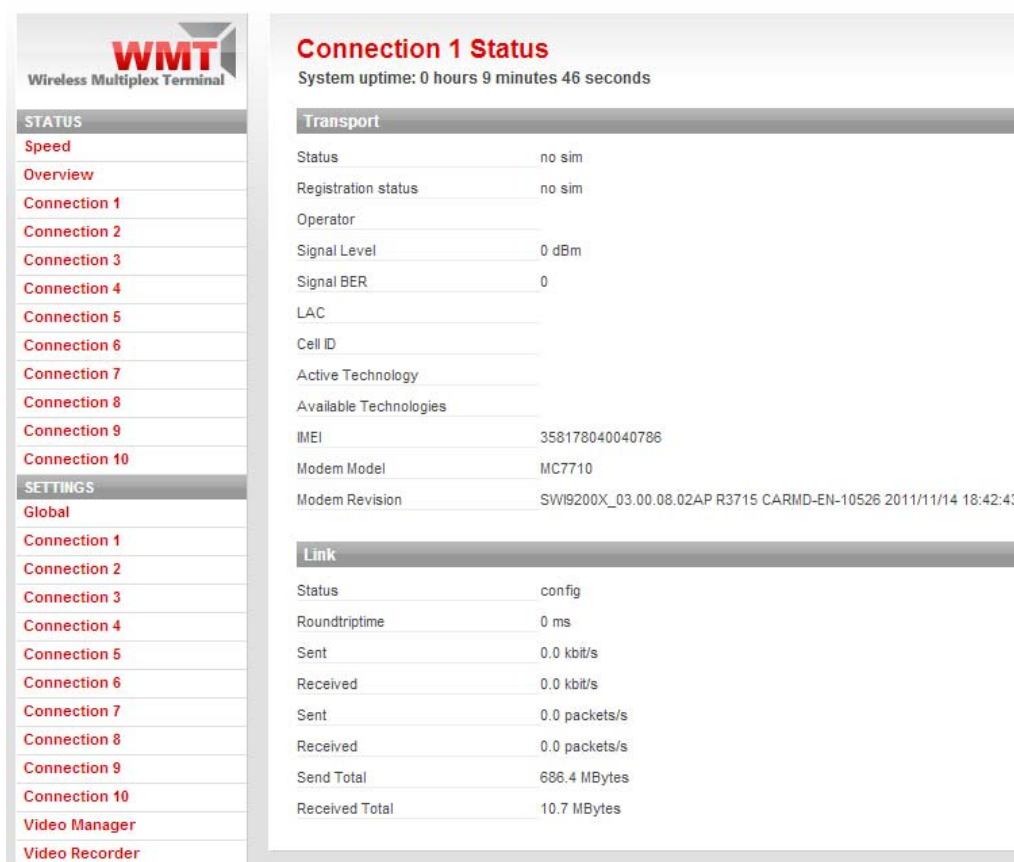
Each available connection has its own status page. You will see the following information when you open a status page:

- Status: The status of the connection;
- Operator: The operator of the connection;
- Signal level: The signal strength of the connection;
- Active Technology: The technology of the connection currently being used (for example HSDPA);
- Available Technologies: The technologies supported by the current connection.

Besides information about the physical connection, you will also find information about the link:

- Status: The status of the link;
- Roundtrip time: The time a packet takes to get from WMT to WMT Server and back.
- Send bytes/s: The amount of bytes sent each second;
- Send packets/s: The amount of packets sent each second;
- Received bytes/s: The amount of bytes received each second;
- Received packets/s: The amount of packets received each second.
- Send Total: the total amount of data sent on this connection/SIM card. Reset of the number takes place by **Tools**, reset totals.
- Received total: the total amount of data received on this connection/SIM card

The sum of all above is the total data used and can be used to give a indication of the complete usage of the WMT.



WMT
Wireless Multiplex Terminal

STATUS

- Speed
- Overview
- Connection 1
- Connection 2
- Connection 3
- Connection 4
- Connection 5
- Connection 6
- Connection 7
- Connection 8
- Connection 9
- Connection 10

SETTINGS

- Global
- Connection 1
- Connection 2
- Connection 3
- Connection 4
- Connection 5
- Connection 6
- Connection 7
- Connection 8
- Connection 9
- Connection 10
- Video Manager
- Video Recorder

Connection 1 Status
System uptime: 0 hours 9 minutes 46 seconds

Transport

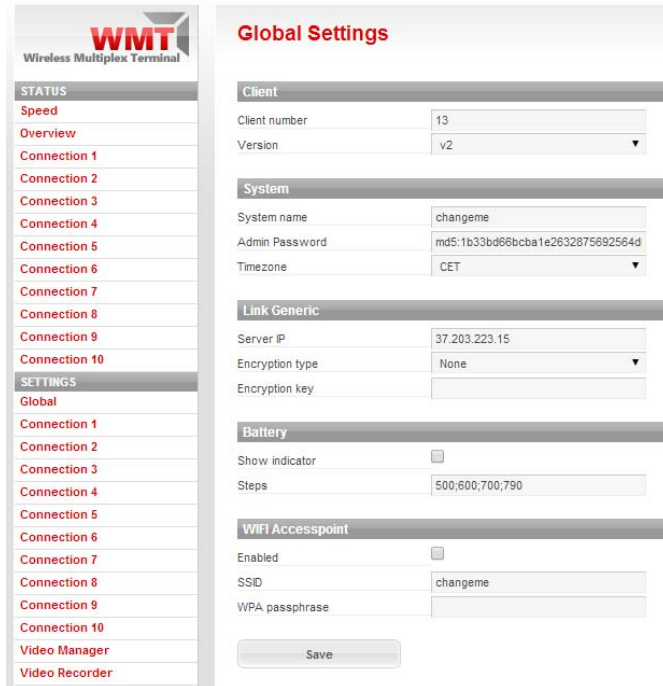
Status	no sim
Registration status	no sim
Operator	
Signal Level	0 dBm
Signal BER	0
LAC	
Cell ID	
Active Technology	
Available Technologies	
IMEI	358178040040786
Modem Model	MC7710
Modem Revision	SWI9200X_03.00.08.02AP R3715 CARMD-EN-10526 2011/11/14 18:42:43

Link

Status	config
Roundtriptime	0 ms
Sent	0.0 kbit/s
Received	0.0 kbit/s
Sent	0.0 packets/s
Received	0.0 packets/s
Send Total	686.4 MBytes
Received Total	10.7 MBytes

Settings

You can access this section after clicking 'Status and Settings' when you have logged in.



Global configuration

You can change the global configuration parameters by clicking 'Global' in the Settings section. You will see the following settings you can change:

- Client number: The WMT client number to identify the WMT client on the WMT server always use version V2.
- System name: The name of the system the client runs on;
- Admin password: You can change the password of the client with this field;
- Server IP: The IP address used to communicate with the server;
- Encryption type: The type of encryption used to encrypt data between the client and server;
- Encryption key: The key used to encrypt the data between the client and server.
- Battery indicator (Will only work on the latest models)
 - Enabling the battery indicator will show the status of the battery at the touchscreen. Due to the fact people can connect different batteries it is possible to configure the thresher hold values yourself.
 - Known values for normal Lion batteries: 14.4;15.4;16.4
 - Known values for MobileViewpoint 12 volt iron lithium polymer batteries: 12; 12.75;13.5

Use the 'Save' button to commit your changes.

Connections

You can change the settings for each available connection. The number of connections corresponds with the amount of SIM slots on the device. You can change the connection settings by selecting a connection from the Settings section. You can change the following settings:

- Enabled: Enable or disable the connection using this checkbox;
- SIM Pin code: A SIM pin code used to activate the SIM;
- UMTS APN: The name of the access point from the mobile provider;
- UMTS Username: The username used to access the APN;
- UMTS Password: The password used to access the APN.

Use the ' Save ' button to commit your changes.

Video manager

When using the video manager this option should be enabled. The IP address of the video manager is 93.187.12.13 port 80.

For WMT Clients XMLPC protocol should be used. For Payouts and Payout server JSONrpc be used.

Video Manager Settings

Video Manager	
Enabled	<input checked="" type="checkbox"/>
IP	93.187.12.13
Port	80
Protocol version	xmlrpc ▼

Save

Video recorder

Video Recorder Settings

Video Recorder

Server Store Stream

Audiobitrate	96000
Analogue Audio Left Gain	-6dB ▼
Analogue Audio Right Gain	-6dB ▼

Within the video recorder settings you can define the URL used to fetch the stream from the server by a playout. This setting will be set by default automatically using the videomanager.

Enabling the Server Store Stream option will enable the server to record video.

No signal image

You can change the no signal image by uploading a picture with the following specifications:

- PNG image
- 720 x 576
- 8-bit/color RGB
- Non-interlaced

Audio player

In the audio player configuration contains the audio return or IFB settings. In case of a set-up together with the video manager these settings are configured automatically. In case of a point-to-point set-up the settings need to be done manually.

When using a point-to-point set-up make sure the audio player is enabled. Configure the right URL to retrieve the audio stream (RTSP). The URL should be configured compliant with the one configured in the playout. When using factory settings these are the default settings:

rtsp://[ip-server]/playout-[serial playout].sdp

For example: *rtsp://192.168.0.10/playout-7320.sdp*

Note that in a set-up behind a NAT the internal IP number is used.

Audio Player Settings

Audio Player

URL

Volume

In the volume configurations you can define the settings of the headset, DAC1 Analog, DAC1 Digital coarse, DAC1 Digital Fine, headset mixer left and right and the left and right analog loopback. The settings in figure below are default on the WMT and should work fine in most cases.

Volume Settings

Volume Configuration

Headset	2	▼
DAC1 Analog	9	▼
DAC1 Digital Coarse	1	▼
DAC1 Digital Fine	32	▼
HeadsetL Mixer AudioL1	on	▼
HeadsetR Mixer AudioR1	on	▼
Left1 Analog Loopback	on	▼
Right1 Analog Loopback	on	▼
Analog	0	▼

Profiles

The profile section is equal to the Settings screen on the LCD screen on the WMT, except that it is located inside a web interface.

Modus

The modus section can be used to set the mode the WMT works in. The WMT has the following modus:

- **Disabled**
When the WMT is disabled, it does not send any data to the server. Your videostream will be black and the preview will be disabled.
- **Live**
When the WMT is set to Live, it will send audio and video to the server. You can preview this video at the preview section.
- **SAF (Store And Forward)**
When the WMT is set to SAF (Store And Forward) it will send data to the FTP server. Files that have been selected to send in the "Transport" screen will now be sent. While the WMT is set to SAF it will not transmit audio and video. The preview will be disabled.
- **CPT(Continuous Picture Technology)**
This option lets you set the delay to go up much higher. You can do this by steps of 15 seconds each.

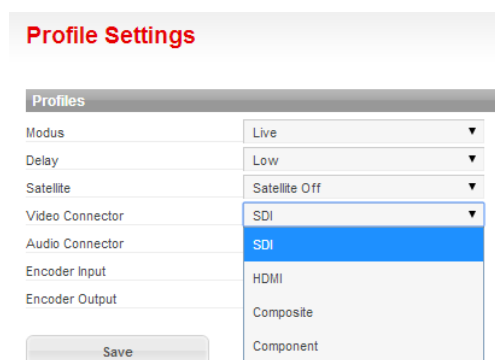
Delay

Delay means the delay between both ends (camera and playout). The delay can set to 6 different values. The delay is for both audio and video.

Value	Delay
Ultra low (audio only)	0,8 seconds
Very low	1,8 seconds
Low	2,8 seconds
Medium	5,0 seconds
High	10 seconds
Very High	20 seconds

Connectors

The WMT has the following connectors to connect a camera or other device. Different systems may have different connectors. When you order your system, make sure the right connector is on it to ensure you can connect your equipment to the WMT. In the dropdown menu you can select the correct input connector.



The screenshot shows the 'Profile Settings' interface. A dropdown menu is open for 'Video Connector', showing options: SDI (selected), HDMI, Composite, and Component. Other settings visible include Modus (Live), Delay (Low), Satellite (Satellite Off), Audio Connector (SDI), Encoder Input (HDMI), and Encoder Output (Component). A 'Save' button is at the bottom left.

Encoder input

The encoder input is the input that is connected to the WMT. Make sure that the output from the camera of transmitting device is the same as the chosen input on the WMT, otherwise a “no signal” screen will be shown. Also make sure the camera transmits SD or HD, depending on the chosen settings.

The encoder input can be set to the following settings:

- PAL
- NTSC
- 720p 50Hz (HD only)
- 720p 59Hz (HD only)
- 720p 60Hz (HD only)
- 1080i 50Hz (HD only)
- 1080i 59Hz (HD only)
- 1080i 60Hz (HD only)

***** NOTE:** Input values may vary, depending on your software version. Contact service employees if your requested input is not on the list.

Encoder output

The encoder output is the output that the WMT transmits. The WMT can convert different

Output	Quality
Best Quality	Interlaced with intra frames and automatic down scaling of the resolution
Medium Quality	The maximum Bitrate is capped at 1.5 Mbit SD and 3 Mbit HD and automatic down scaling of the resolution
Lower Quality	The maximum Bitrate is capped at 1 Mbit SD and 2.5 Mbit HD and forced at half resolution.

signals to lower quality to save bandwidth. The following settings are possible:

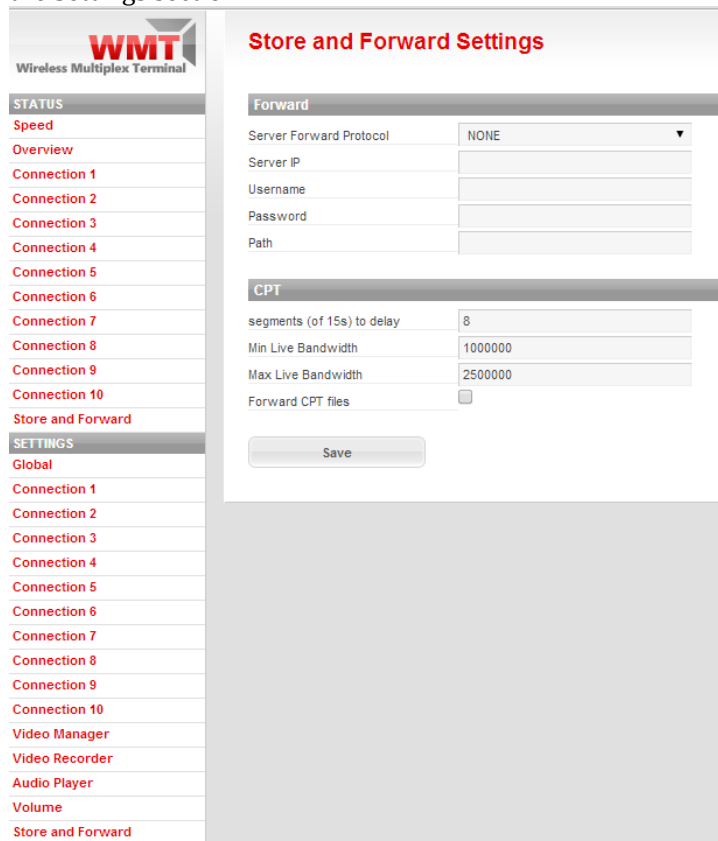
***** NOTE:** Output values may vary, depending on your software version. Contact service employees if your requested input is not on the list.

Change the current profile

The current profile is highlighted in blue. To change the profile to a new profile, press the requested profile for a few seconds.

Store and Forward

Before you can use the Store and Forward functionality, it needs to be configured. This can be done by opening the Store and Forward configuration page by clicking 'Store and Forward' in the Settings section.



WMT
Wireless Multiplex Terminal

Store and Forward Settings

Forward

Server Forward Protocol: NONE

Server IP: []

Username: []

Password: []

Path: []

CPT

segments (of 15s) to delay: 8

Min Live Bandwidth: 1000000

Max Live Bandwidth: 2500000

Forward CPT files:

Save

You need to select the FTP protocol in the Server Forward Protocol option.

Forward	
Server Forward Protocol	FTP
Server IP	
Username	
Password	
Path	

CPT	
segments (of 15s) to delay	8
Min Live Bandwidth	1000000
Max Live Bandwidth	2500000

[Save](#)

Also provide information about the FTP server where the file(s) have to be stored. Click the 'Save' button to commit your changes. Transfer a small test file to ensure your FTP settings are correct.

Store and Forward Settings

Forward	
Server Forward Protocol	FTP
Server IP	
Username	
Password	
Path	

CPT	
segments (of 15s) to delay	8
Min Live Bandwidth	1000000
Max Live Bandwidth	2500000
Forward CPT files	<input type="checkbox"/>

[Save](#)

To send files using the Store and Forward functionality, click 'Store and Forward' in the Other section. This will open a page where you can upload a file. After selecting a file and clicking the 'Upload' button, you can view the status of the upload by clicking 'Store and Forward' in the Status section. This will open a page with an overview of the queued file transfers.

OTHER
Tools
Upgrade
Store and Forward
About

STATUS
Speed
Overview
Connection 1
Connection 2
Connection 3
Connection 4
Connection 5
Connection 6
Connection 7
Connection 8
Connection 9
Connection 10
Store and Forward

Other tab

Status tab

With the priority buttons (up and down) you can change the order in which the files will be uploaded to the FTP server. If there is a file in the list that shouldn't be uploaded click on the Stop & Delete button to remove the file from the WMT client.

The upload speed can be monitored and is listed above the overview of the uploaded files. The estimates in the overview are calculated using the upload speed. When the file upload is complete, the finished flag will be set to 1. Because the backend needs to perform some actions after the file is uploaded, a situation can occur where the file is 100% uploaded and the finished flag is not set to 1.

Serial Relay, Events, Serial Bus, Camera and IO Module

Can only be used for security observation setups. This feature can be configured by Mobile Viewpoint employees only.

Other

You can access this section after clicking 'Status and Settings' when you have logged in.

Tools

The screenshot shows a 'Tools' section with the following elements:

- Reboot**: A button labeled 'Reboot now'.
- Shutdown**: A button labeled 'Shutdown now'.
- Savepoint**: A button labeled 'Create Savepoint'.
- Savepoint**: A button labeled 'Restore Savepoint'.
- Factory Defaults**: A button labeled 'Restore Defaults'.
- Reset Totals**: A button labeled 'Reset Totals' next to a text input field.

Rebooting the WMT client

You can reboot the WMT client by opening the 'Tools' page and clicking the 'Reboot now' button. After confirming this, the client will be rebooted.

Shutdown the WMT client

You can shutdown the WMT client by opening the 'Tools' page and clicking the 'Shutdown now' button. After confirming this, the client will be shutdown.

Create/restore a Savepoint

A Savepoint is a backup of the current configuration. You can create a Savepoint by clicking the 'Create Savepoint' button after opening the 'Tools' page. After confirming this, the Savepoint will be created.

You can restore a Savepoint by clicking 'Restore Savepoint' at the same page. This will restore the configuration of the WMT client back to a Savepoint created earlier.

Restoring factory defaults

You can restore the WMT client configuration back to the factory defaults. Please note your current configuration will be deleted. You will need to provide your license key again.

To restore the factory defaults; click 'Restore Defaults' after opening the 'Tools' page. After confirming this, the factory defaults will be restored.

NOTE: After resetting your settings are permanently lost and cannot be restored.

Reset totals

You can reset the data usage totals per connection. Submit the number of the connection and click reset totals.

Upgrade

When a new software release is released, it is possible to upgrade your system on this page. Select the file you want to upgrade to (provided by Mobile Viewpoint) and select upgrade. Your system will now be upgraded.

IMPORTANT: Only use upgrade files provided by Mobile Viewpoint. Using other software or files may result in breaking the system.

About

This page will provide you global information about the WMT client, such as the software version used, information about the hardware and the license installed.

About

Copyright

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Software

Software version 1.0.12.1-rc10

Hardware

Hardware serial 3215

Hardware version wmt10

Hardware ID 69248e42ddf9072317a0feab154bd78e

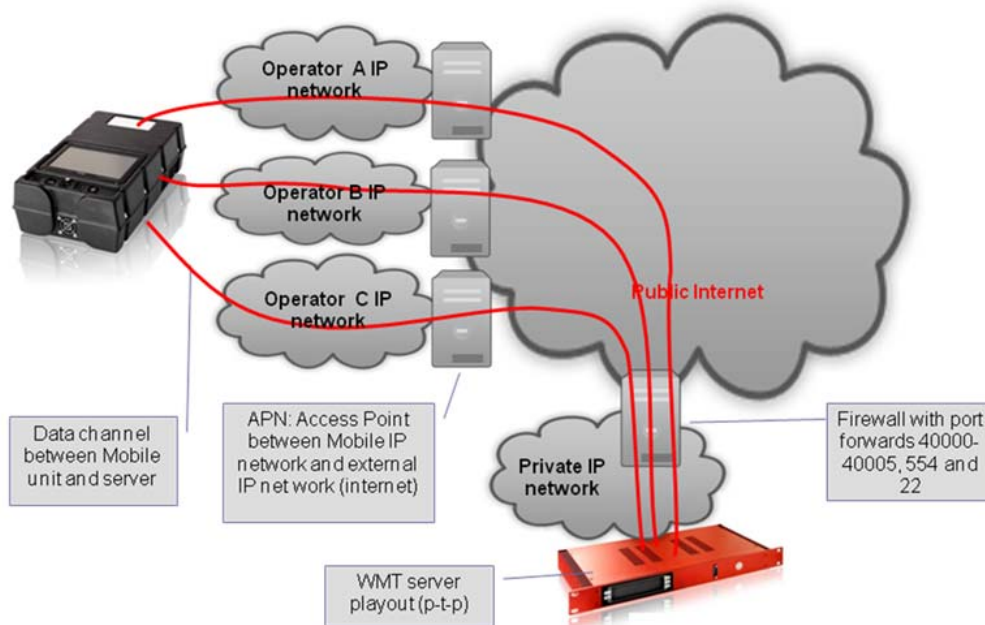
License

Status ok

Key

9. PLAYOUT SERVER

The Playout Server can be behind a firewall or directly connected to the internet with a public IP address. The easiest way to get your setup working like it supposed to do you should use our cloud video manager.



Behind a firewall

In case the p-t-p playout is behind a firewall/NAT server it needs to be configured with port forwards. The following ports need to be forwarded to the Playout:

- UDP ports from 40000-40160 (6 for every WMT connected) → WMT traffic
- TCP port 554 → video connection
- TCP port 22 → for remote support
- UDP port for audio return 5002 - 15001
- TCP 8080 → http streaming, recordings listing
- TCP 1935 → flash streaming
- TCP 7070 - 7071 - 7072 → Videomanager management access
- TCP 8847 → WMT management

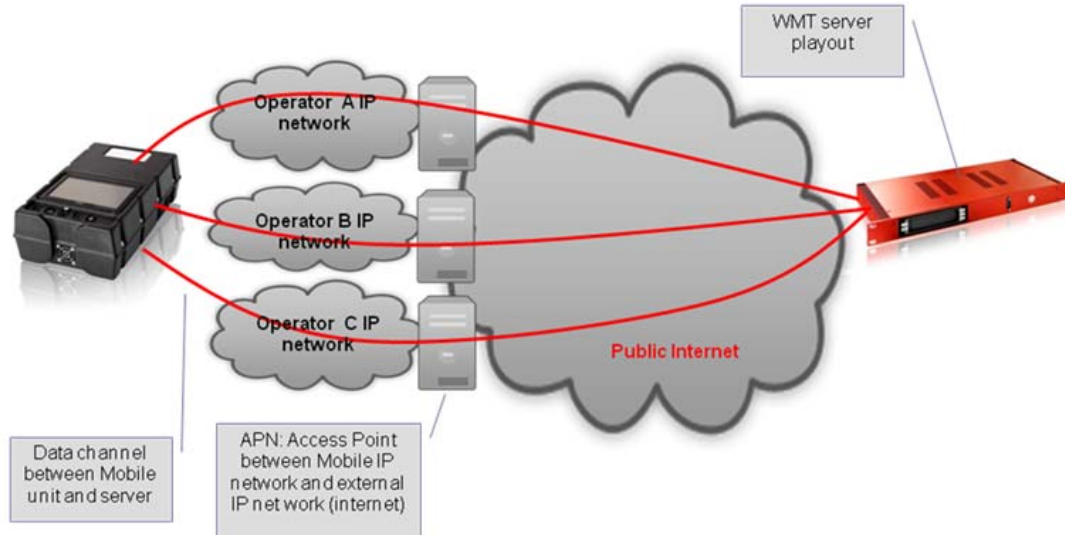
In case you're having a hard time figuring out how to forward the ports in your own router please visit www.portforward.com. Here you can select your own router model and get a step by step tutorial about how to forward the ports.

The server IP number configured in the WMT should be the public IP number of the Firewall NAT server.

Opening port 554 makes it possible to retrieve the stream via another Playout as well.

Set-up at a public IP number

In case the p-t-p playout is set-up at a public IP number everything is straight forward as displayed in the figure below. The server IP number configured in the WMT is the same as the public IP number of the p-t-p playout.

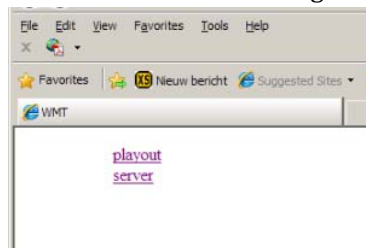


Setting up the hardware

First of all connect the system with 220/110 volt power cord. It is possible to set the IP number of the Playout in two ways: via the front screen or via the second ethernet interface card. Using the front screen you use the up down and ok buttons to choose between dhcp and static. When you choose a static ip-address use the up and down arrow to change the numbers and use the ok buttons to go through all the settings. Don't forget to confirm the save config option.

Using the network interface card follow the next guidelines:

- Connect a laptop or other PC directly with the second ethernet port. The first Ethernet port is located on the left close to the power supply.
- Configure the IP interface of PC with the following IP 198.18.0.50, subnetmask 255.255.255.0
- Browse to the following address: <http://198.18.0.1>



- Select server
- Select from the left Colum Global settings
- When asked for a user name password leave user empty, password pokon
- Set the LAN IP number via the web interface.

Global Settings

License

License key: 2025-3-1--00000000-0-0-!K6zg29ITGvSx

System

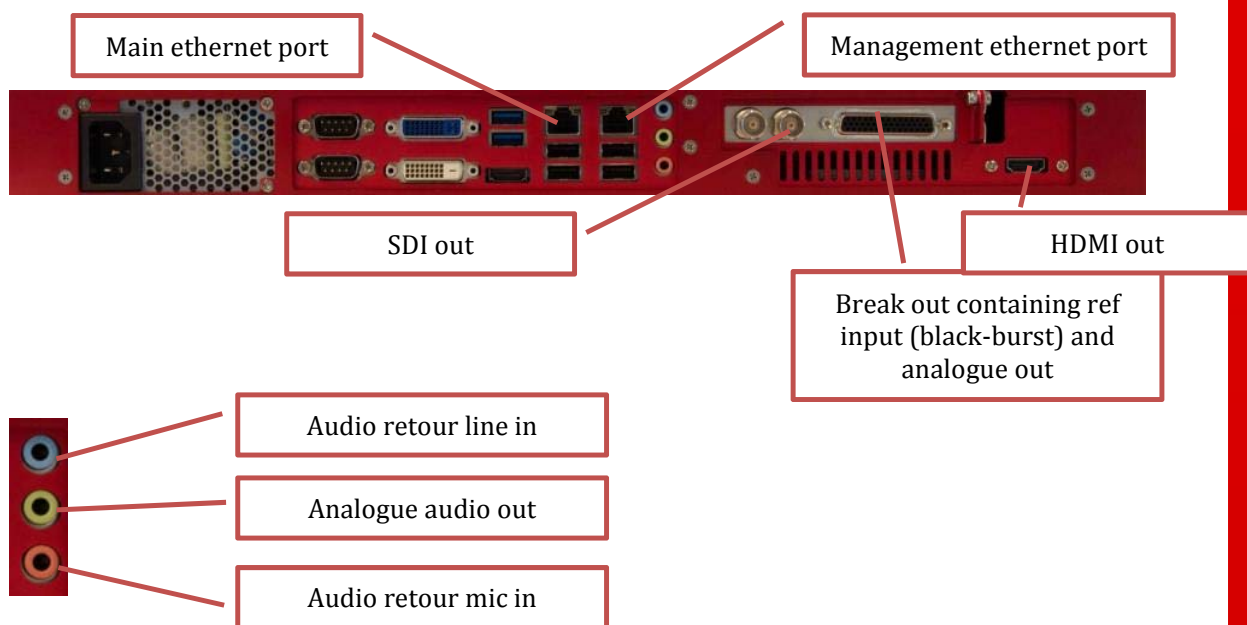
System name	playout-2025
Admin Password	md5:1b33bd86bcba1e2632875692564dt
Use DHCP	<input checked="" type="checkbox"/>
LAN Speed	Auto
LAN IP	10.0.0.2
LAN Subnetmask	255.255.255.0
LAN Gateway	10.0.0.1
LAN DNS 1	
LAN DNS 2	
NTP Server	178.21.112.218:192.87.106.3:194.171.116

Save

Picture 2: setting of the ip number

Back panel configuration

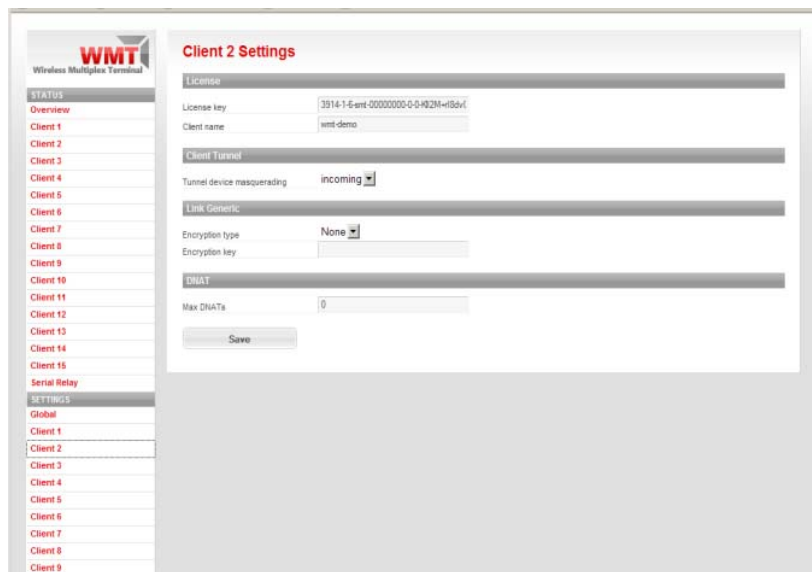
For information about the SDI inputs and outputs please go to chapter 4 Playout Server specifications.



Configuration of the WMT server software

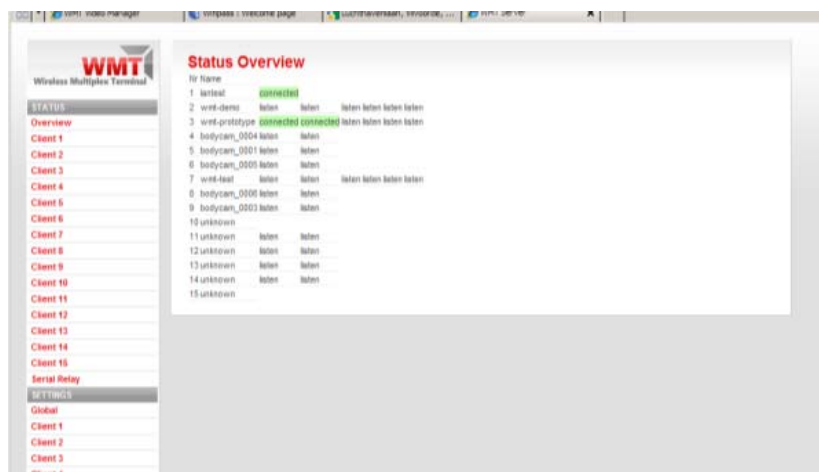
Basic setup per client

- After configuration of the IP number click on settings of the client number you want to configure. Note that this number should be the same as on the WMT client.
- Fill in the license key of the WMT client (copy from the configuration website of the WMT)
- Leave all other settings as defined by default



Picture 3: configuration of the client license on the server via settings

- Press save and go to overview. As soon as the WMT clients connect you should see listen (for every mobile connection) turn into connected.



Picture 4: Status page of the WMT server. It will show connected when connections are coming in.

Configuration of the WMT Payout software

Video manager

The videomanager is enabled by default. The IP adres should be 93.187.12.13. This IP address is the IP address of our cloud Videomanager. The protocol version is xmlrpc. If you are using a point-to-point setup you need to disable the videomanager. Point-to-point setups aren't recommended.

Video Manager Settings

Video Manager	
Enabled	<input checked="" type="checkbox"/>
IP	93.187.12.13
Port	80
Protocol version	xmlrpc <input type="button" value="v"/>

NOTE

Make sure the Video Player's 'URL Selection mode' is set correctly. Otherwise the configuration provided by the videomanager isn't used.

Video player

The video player settings are:

- Enabled; enable disable the total set-up
- URL: Fill in the url of the stream when the videomanager is not used. In a point-to-point setup this url should be RTSP://127.0.0.1/wmt-[serial wmt].sdp. See **local Sources** for switching the URL's for replay of recordings.
- Httpunnel: this is the port number used to fetch the stream from the WMT server via TCP and packaged as http. This is by default 554 and in case the WMT server is in the same subnet as the payout (like point-to point) it is recommended to fill in 0 because UDP will be used with less delay.
- Jitter: sets the jitter buffer in mS. By default 200 and depending on the connection between the server and the payout it can be set higher. Note that this will influence the total end to end delay.
- RTCP sync: This should always be enabled
- Videotype: Choices are PAL, VGA, 720p50Hz, 720p59Hz, 720p60Hz, 1080i50Hz, 1080i59Hz, 1080i60Hz and NTSC. Both All settings except VGA send the signal to the SDI output. VGA setting send the video to the VGA adapter and if mounted the analogue output. The videotype defines the resolution of the no signal image.
- Scaling: In case the video resolution on the input (WMT, 3G-MC) is smaller than D1 this option will make sure the video is scalled up to meet D1 resolution with aspect ratio maintained.
- Testsound: In case there is not input signal on the payout a no signal picture will be shown. This option will also enable a 1Khz 0db sound
- Analog Audio on: this option enables analogue audio output (line out)

Stream Timeout. This option is only used in combination with RS485. When RS 485 signals are received the payout will start retrieving the video and stop automatically after the time out period passed.

- Enabled

- Timeout

Video Player 1 Settings

Video Player	
Enabled	<input checked="" type="checkbox"/>
URL Selection Mode	Videomanager
Manual URL	
Httpunnel	554
Jitter	200
RTCP Sync	<input checked="" type="checkbox"/>
Videotype	PAL
Genlock offset	0
Scaling	<input type="checkbox"/>
Testsound	<input checked="" type="checkbox"/>
Analogue audio On	<input type="checkbox"/>
Idle Image (png)	<input type="button" value="Browse..."/> No file selected.
Display Status	<input checked="" type="checkbox"/>
Audiolevel	0

Stream Timeout	
Enabled	<input type="checkbox"/>
Timeout	300

Audio Recorder

Audio retour settings are:

Enabled: enables audio retour

- Mode: You can select manual or Videomanager mode.
- URL: this is the URL where the audio retour stream is available. This should never be touched using a videomanger because these setting will be controlled from the videomanger. In case of a point-to-point setup this URL should be RTSP://127.0.0.1/playout-“serialnumber”.sdp
- Videomanager: when Videomanager is selected and all the units have been added to the Videomanager, you can simply select it and below the surface the connection between WMT and playout will be made automatically.

Audio Recorder Settings	
Audio Recorder	
Enabled	<input checked="" type="checkbox"/>
Bitrate	96 kbps
URL Selection Mode	Videomanager
Manual URL	

Serial Input

This setup is only needed when used in combination with PTZ cameras. Contact your account manager in case this becomes a requirement.

Serial Input Settings

Serial Input	
Enabled	<input type="checkbox"/>
USBDevices	select <input type="button" value="v"/>
Com	/dev/ttyS0
Baudrate	2400 <input type="button" value="v"/>
Relay Server IP	<input type="text"/>
Relay Server Port	<input type="text"/>
Relay Server Client ID	<input type="text"/>
Relay Server Peer ID	<input type="text"/>

Serial Filter	
Enabled	<input type="checkbox"/>
CameraId	<input type="text"/>
PTZ Protocol	Pelco-D <input type="button" value="v"/>

Upload Idle Image

This option makes it possible to upload an idle image. The only format supported is PNG. The maximum size of the PNG is 500Kbyte

Volume

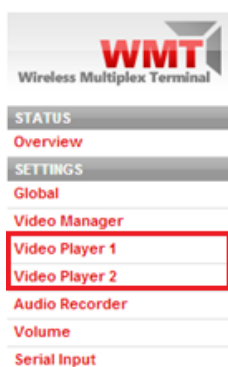
For audio retour input and output it is possible to configure volumes and sources. The settings Master, PCM, front and line are for setting the volume of audio coming from the WMT/ The Mic setting is the volume of the mic input mixed back on the audio output of the playout. Capture and Input source define the volume and the source pint for capturing audio which is send back to the mobile unit (WMT etc).

Volume Settings	
Volume Configuration	
Master	25 <input type="button" value="v"/>
Front	25 <input type="button" value="v"/>
PCM	255 <input type="button" value="v"/>
Line	25 <input type="button" value="v"/>
Mic	25 <input type="button" value="v"/>
Mic Boost	2 <input type="button" value="v"/>
Input Source	Line <input type="button" value="v"/>
Capture	25 <input type="button" value="v"/>

Duo and quad playout options

The duo and quad playout have a slightly different menu. The extra options will be explained below.

On a single playout you will have only one Video Player. This is because a normal playout has only one in and one output. The duo playout can handle two clients at the same time and the quad can handle four at the same time. In the image below you see a duo playout as an example. As you can see it is having a Video Player 1 and a Video Player 2.



If you enter one of the Video Players, you will see a small difference as well. As the image below is showing you can see that the duo and quad Playouts have a URL selection mode. In here you can select if the player is in the videomanager of manual.

Video Player 1 Settings

Video Player	
Enabled	<input checked="" type="checkbox"/>
URL Selection Mode	Videomanager <input type="button" value="v"/>
Manual URL	<input type="text"/>
Httpunnel	554
Jitter	200
RTCP Sync	<input checked="" type="checkbox"/>
Videotype	PAL <input type="button" value="v"/>
Genlock offset	0
Scaling	<input type="checkbox"/>
Testsound	<input checked="" type="checkbox"/>
Analogue audio On	<input type="checkbox"/>
Idle Image (png)	<input type="button" value="Browse..."/> No file selected.
Display Status	<input checked="" type="checkbox"/>
Audiolevel	0
Stream Timeout	
Enabled	<input type="checkbox"/>
Timeout	300

- **Manual**
You need to fill in the RTSP URL manually.
- **Videomanager**
This lets you use the videomanager with this particular player. You also need to add the Videomanager IP address in the Videomanager column in the player menu.

10. THE VIDEOMANAGER

The Videomanager is a tool created by Mobile Viewpoint which makes using our systems even more easy. We changed the complete way that it looks and feels.

The tool lets you do things like:

- Make connections
- Make exports
- View your exports and send them to a Playout
- Manage Mobile Uploads
- Manage Playout and client settings

In the next pages you will find a tutorial about how to use the Video manager.

Connection page

The connection page lets you connect a certain WMT client to a certain playout. The systems that you bought from us will be added to your own Videomanager account. The Videomanager is a web based application what you can use on every browser. Please fill in the following URL: <http://videomanager.mobileviewpoint.com>. Use the hyperlink or copy the link in favorite browser.(Figure 2: The login screen).

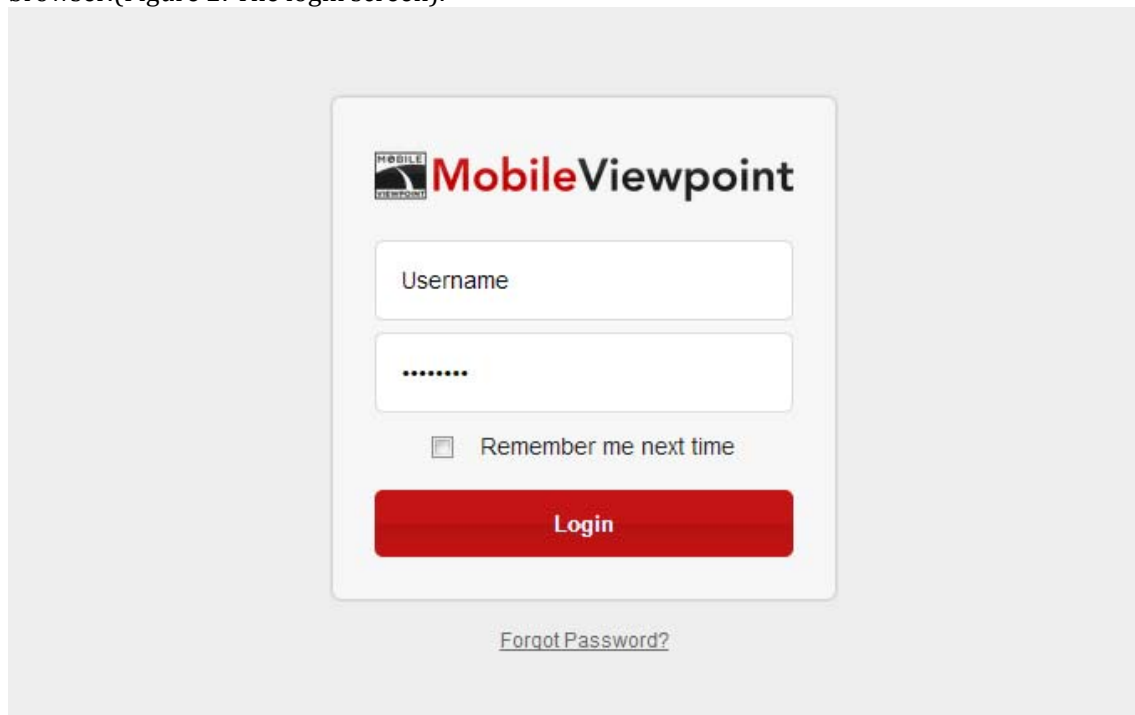
The image shows a login screen for MobileViewpoint. It features a central white box with a rounded border. At the top left of this box is the MobileViewpoint logo, which consists of a small square icon with the word 'MOBILE' above it and 'VIEWPOINT' below it, followed by the text 'MobileViewpoint' in a larger font. Below the logo are two input fields: the first is labeled 'Username' and the second is filled with seven asterisks. Underneath the password field is a checkbox labeled 'Remember me next time'. At the bottom of the box is a prominent red button with the word 'Login' in white text. Below the entire box, centered, is a link that says 'Forgot Password?'.

Figure 2: The login screen

Once you've logged into the Videomanager with the account credentials we provide, you will get into the connection screen (Figure 3: The connection page).

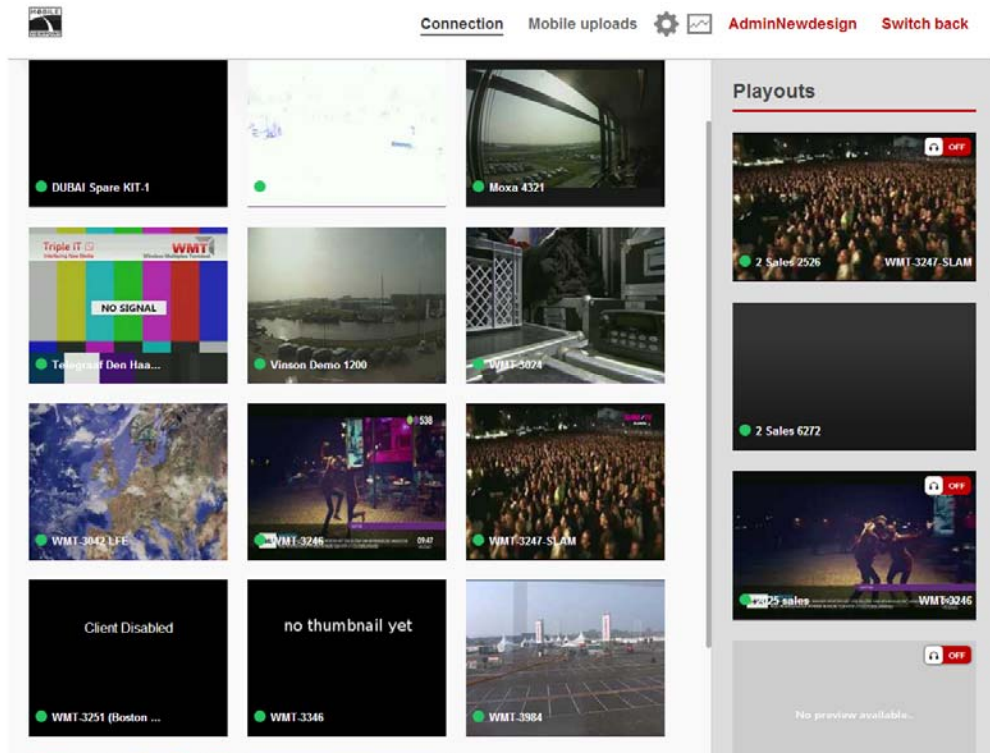


Figure 3: The connection page

The connection screen is divided into two segments. On the left side you will see all the WMT clients that you own and on the right side you will see all of your playouts that you have. Every unit shows a name and an online/offline indicator. When a unit is online you will see a frame of the video that refreshes every 5 seconds.

If you want to see more details about a certain WMT client, you can just click on it. A detailed view will appear (Figure 4 Detailed WMT view).

Detailed connection view

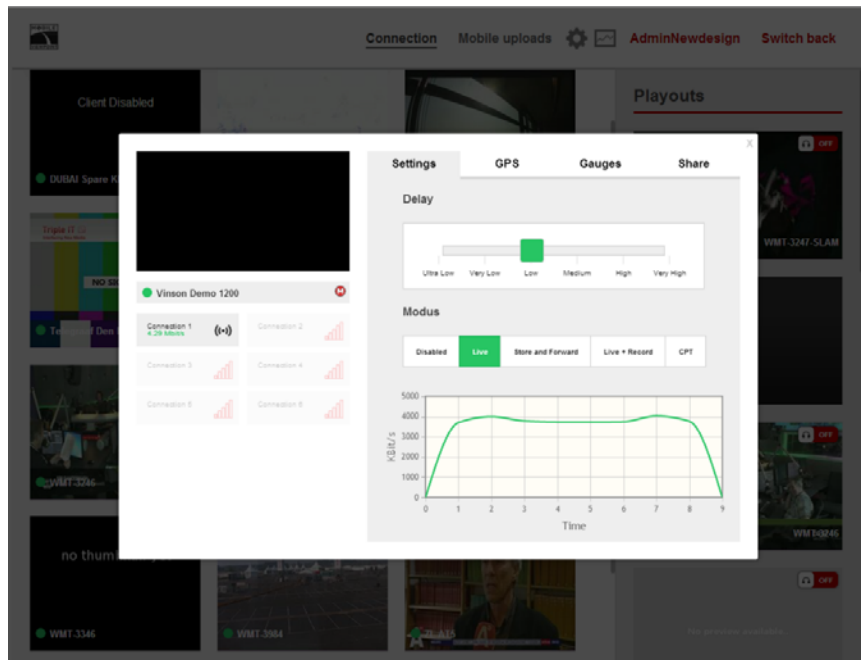


Figure 4 Detailed WMT view

On the left side of the detailed view you will see the live video. Below the video you will see all the connections. If something is connected to the connection you will see the bitrate (Figure 5 live connection).



Bitrate: In figure 4 you can see a graph of the bitrate of the WMT. You can use it for monitoring.

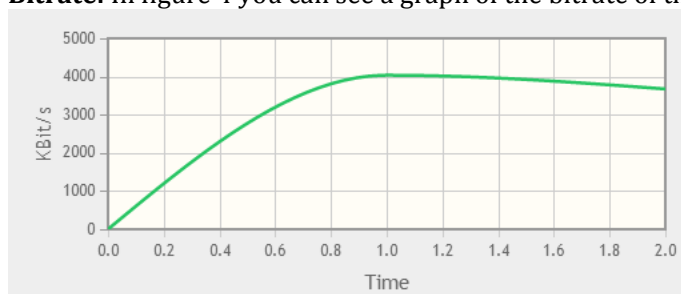


Figure 4 Bitrate graph for connection monitoring

Delay: Shows the delay that is set on the WMT client. When you change this, it will change live on the WMT as well. You can adjust the delay by dragging the green square (figure 5 adjust delay)

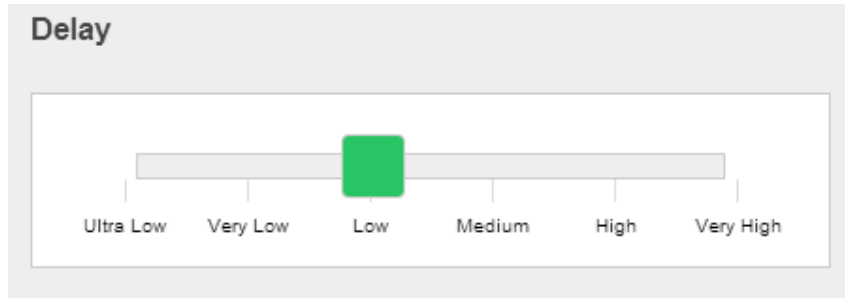


Figure 5 adjust delay

In the table below you can see the delay in seconds for each setting.

Setting	Delay in seconds
Ultra low	0,5
Very low	1
Low	1,5
Medium	5
High	10
Very High	20

Modus: Here you can set the Modus of the WMT client. The modus set can be different on each WMT client. In figure 6 below you can see which modes are available for your WMT.

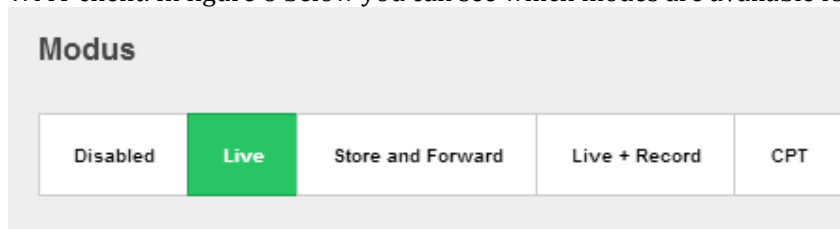


Figure 6 WMT modus

Gauges: at the gauges tab you can see information from the hardware of the WMT. The current, volts and temperature are displayed in gauges (figure 7 gauges)

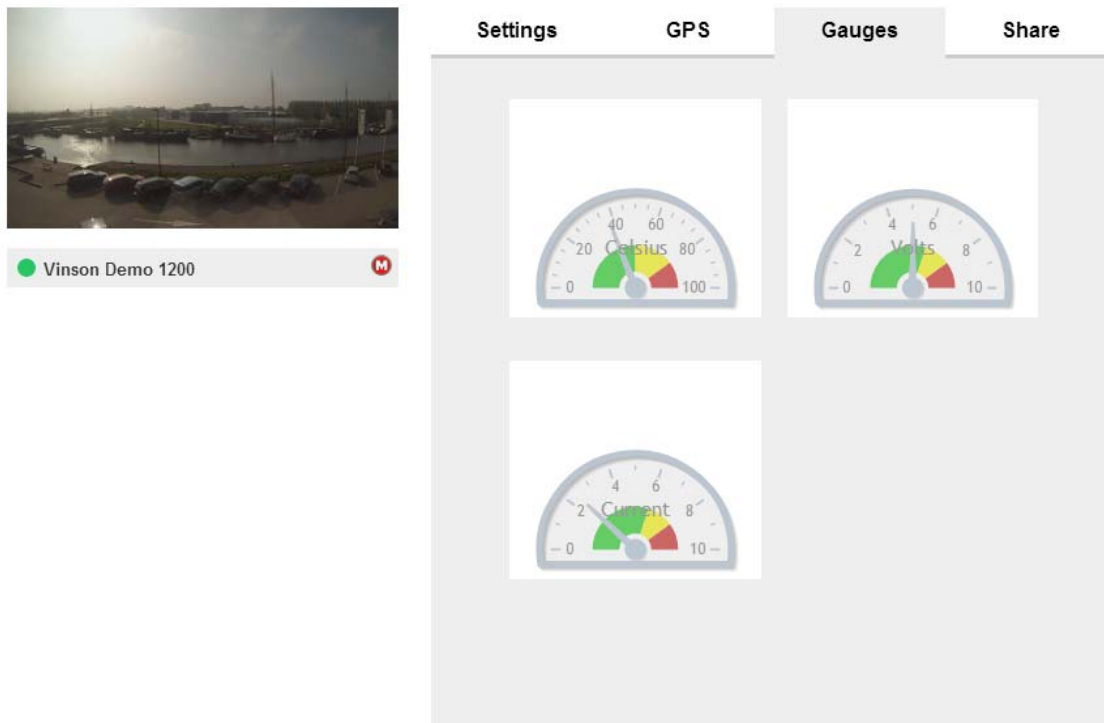


Figure 7 Gauges

GPS: at the GPS tab the location of the WMT is show on a map. (GPS is not available on all models)

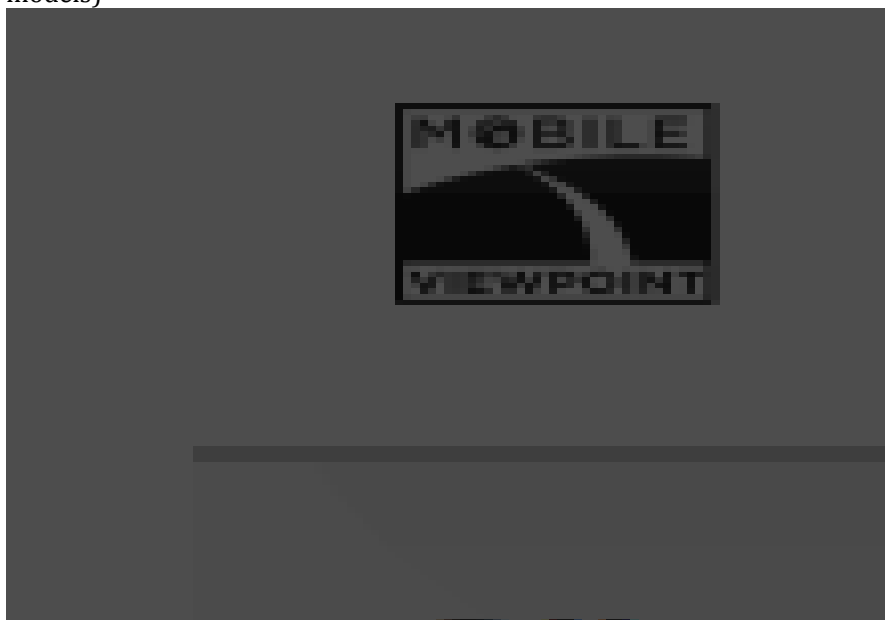


Figure 8 GPS

Drag and drop

The most important feature of the connection page is the ability to drag and drop a WMT client to a desired Playout. Simply drag and drop your client to the Playout (

Figure 6 Drag and drop). Once you have dropped the connection onto the Playout, it will get visible on the Playout in a matter of seconds.

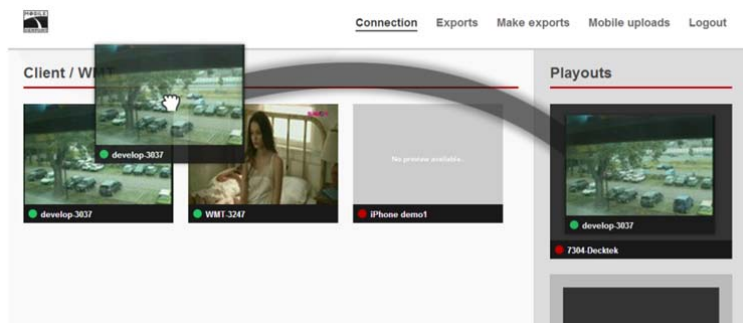


Figure 6 Drag and drop

Once the connection to the Playout has been made you can choose if you want to use IFB. You can use the switch at the top right corner of the Playout (Figure 7 IFB On/Off).



Figure 7 IFB On/Off

To disconnect the WMT client from the Playout you can simply hover over the playout and you will see that the 'disconnect' button will appear (Figure 8 Disconnect button).



Figure 8 Disconnect button

Make Export

The make export page lets you make exports from video files that have been recorded on server or WMT client (Figure 9 Make export page).

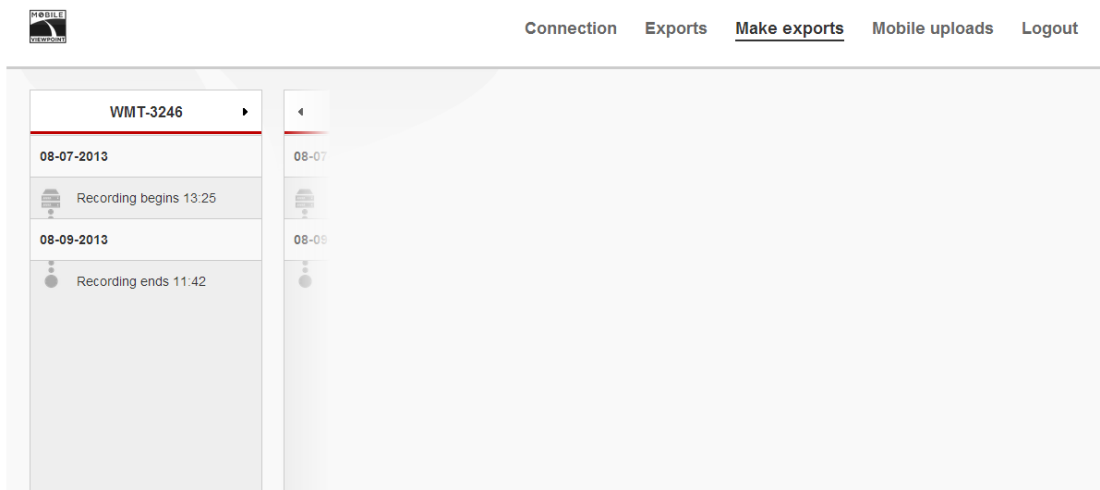


Figure 9 Make export page

Overview

On the left side of the make export page you will see the clients that you have. With the arrow keys you can switch between the different clients. Below the client name you see the date and when a recording starts and ends. When you click on the recording you will immediately see the video that has been recorded on that specific moment (Figure 11 Selected recording).

There are two types of exports that you can make. The first one is a WMT client export and the second one is a server export. We indicate this with two different icons:

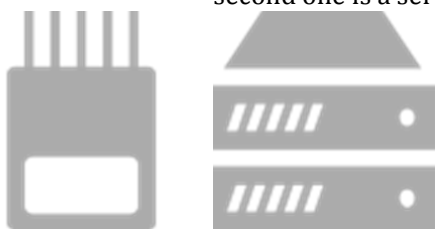


Figure 10 Client export server export

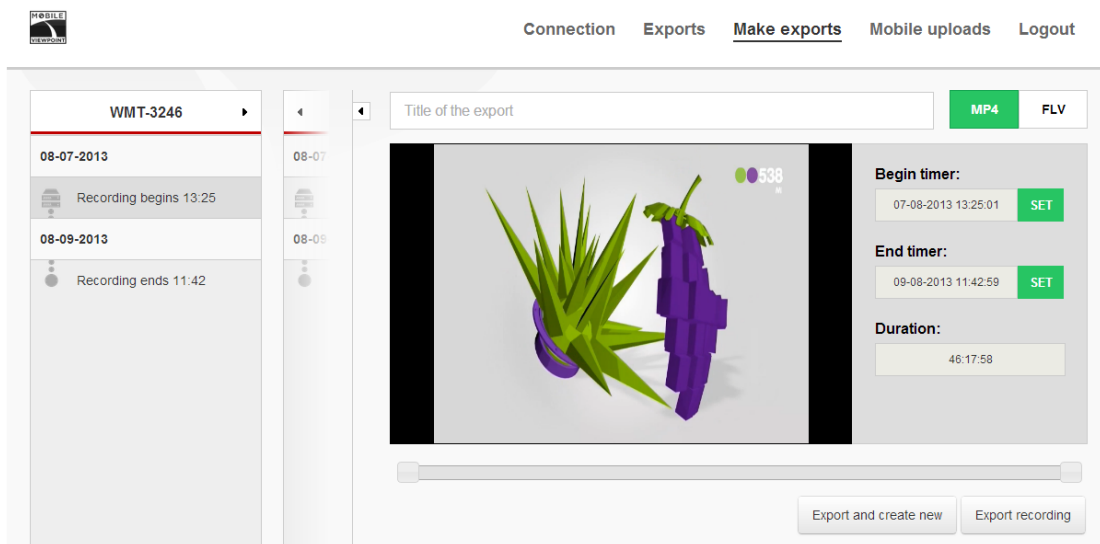


Figure 11 Slected recording

Title bar and export file type

Before you make a selection from an export you need to fill in a title. You can do this at the title bar at the top of the screen. On the right side of the title bar you can choose the export file type as well. You can choose between MP4 and FLV (Figure 12 Title bar and export file type).

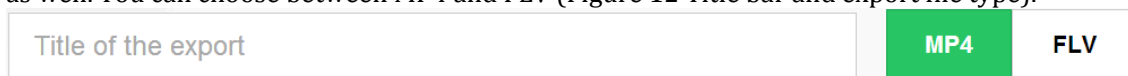


Figure 12 Title bar and export file type

Make a selection

At the make export page you can make an export from a piece of the footage that you have recorded. You can do this by using the slider at the bottom of the video (Figure 13 Export slider) or you can use the 'begin timer' and 'end timer' on the right side of the video (Figure 14 Begin/end timer).

To use the begin and end timer you can simply drag the slider to an area where you want to see the video start. When you push the green 'set' button next to the begin timer it will set this particular point as the starting point of the recording. Now you can drag the end slider to a location where you think the video should end. It will play from the point where you have placed the slider. When you press the 'set' button from the end timer it will make this the end point of the export.



Figure 13 Export slider

Begin timer:

08-08-2013 00:58:22 **SET**

End timer:

08-08-2013 19:11:21 **SET**

Duration:

18:12:59

Figure 14 Begin/end timer

When the selection is made and the title has been filled in, you are ready to Export the recording. You can do this two ways. You can just hit 'Export recording' or you can press 'Export and create new'. The 'Export recording' button makes the export and redirects directly to the 'Exports' page. When you press the 'Export and create new' button, the export will be made and you will stay at the 'Make export' page to create a new export.

Exports

All the created exports from the 'Make export' page will become visible in the 'Exports' page. In the Export page you can simply click on a video and it will start playing. All the server recordings will appear on the left side of the page and the Client recordings become visible on the right side of the page (Figure 15 The Export page).

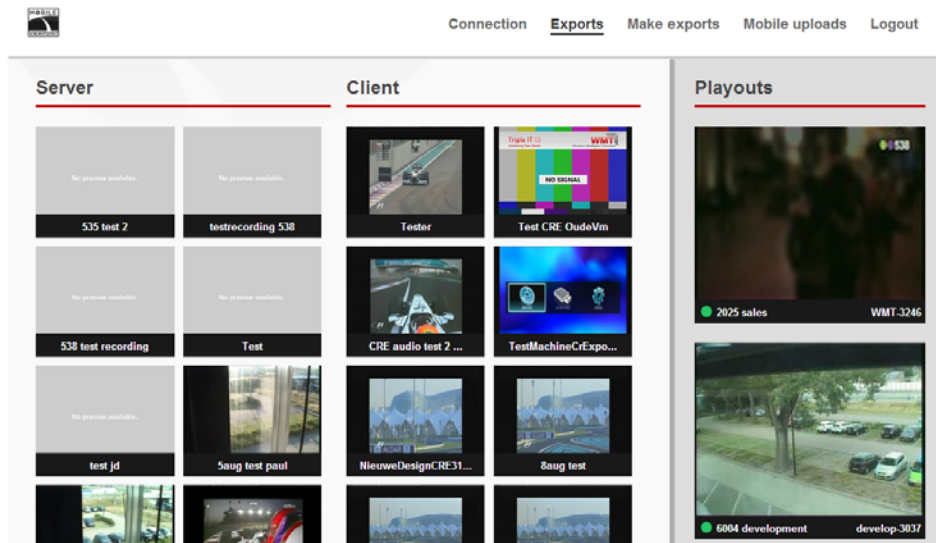


Figure 15 The Export page

If you want to look at the video you can simply click on it. The video will immediately start (Figure 16 Watch recording).

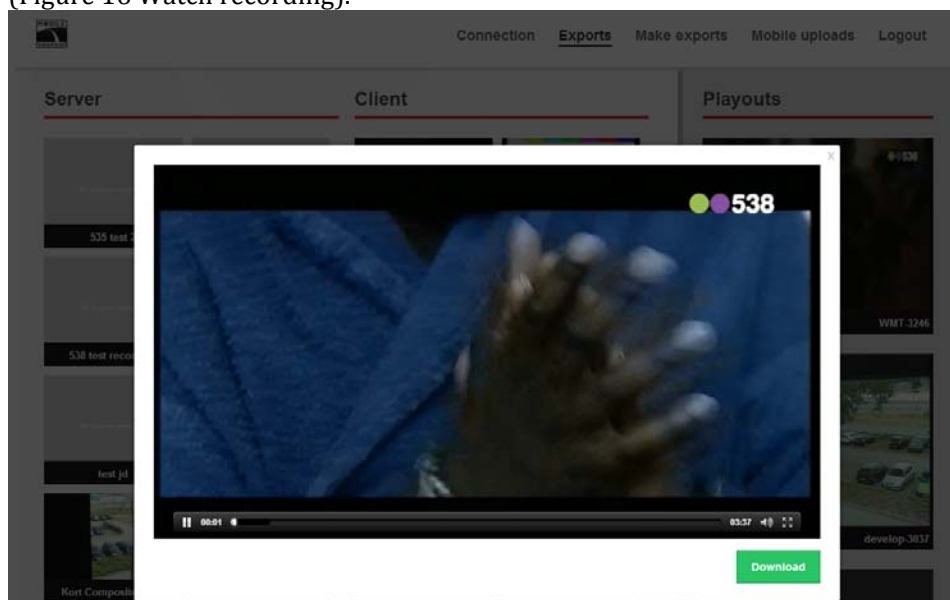


Figure 16 Watch recording

WMT Live Application and mobile Uploads

With the "WMT Live" application you can stream live and send recordings to the videomanager with your iPhone . Once your have connected your iPhone to your own videomanager or our cloud videomanager, it will appear on the "Connection" page (figure 16 iPhone WMT Live app

client). For extra information about the “WMT Live” application read the “WMT Live app user manual”.

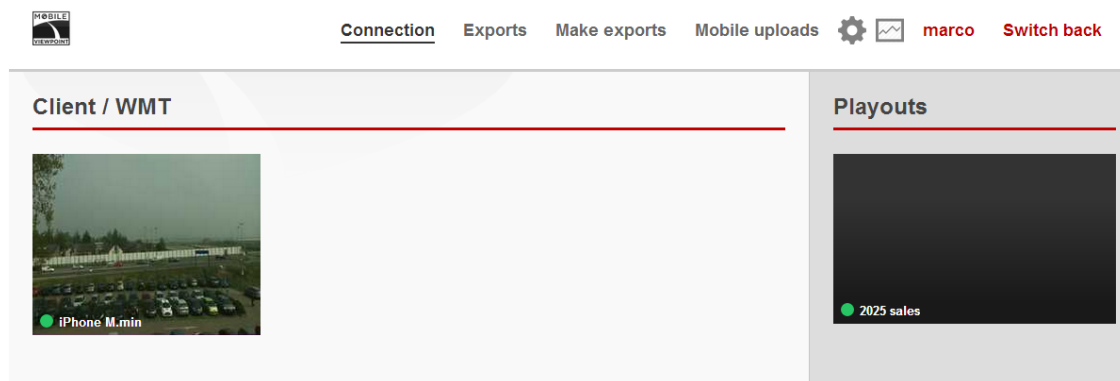


Figure 16 iPhone WMT Live app client.

Once the WMT Live app client is connected to your or our cloud Videomanager you can simply drag and drop it to one of your Playouts.

Mobile uploads

Before the recordings appear on the “Mobile uploads” page they should be uploaded by the “WMT Live” application. You can enter the “Recordings” menu by tapping on the icon in figure 17 Recording menu

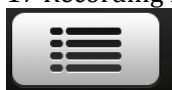


Figure 17 Recent menu

Once you have entered the “Recordings” you will have to upload them to your Videomanager. You can do this by tapping on the file (figure 18 recent recordings)

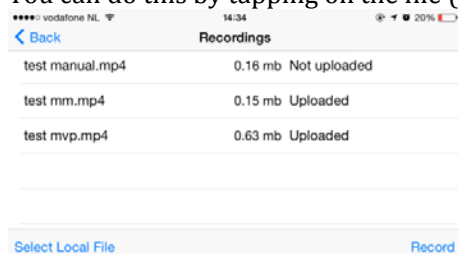
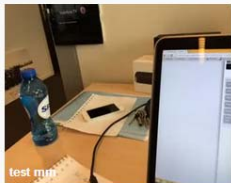


Figure 18 Recent recording

In figure 18 you can see that two recording have been uploaded to the Videomanager. The two recordings now appear on the “Mobile uploads” page (figure 19 iPhone uploads). You can drag and drop the recording to your desired Playout.



iPhone Uploads



Playouts



Figure 19 iPhone uploads

Transcoding

When a video has been exported you could have the problem that the resolution that you have exported is not the one you want. The Transcoding solution lets you resize the video. You can choose between PAL and 1080i. The transcoding feature works very simple. Just click on the video that you want to transcode in the `Exports` page and choose to what resolution you want to resize the video. After this you can press the `Transcode` button that is located next to the resolution checkbox. When you press the Transcode button it will take some time for the video to be transcoded. When this is done you can download the video in the resolution you have selected (Figure 20 Transcoding).

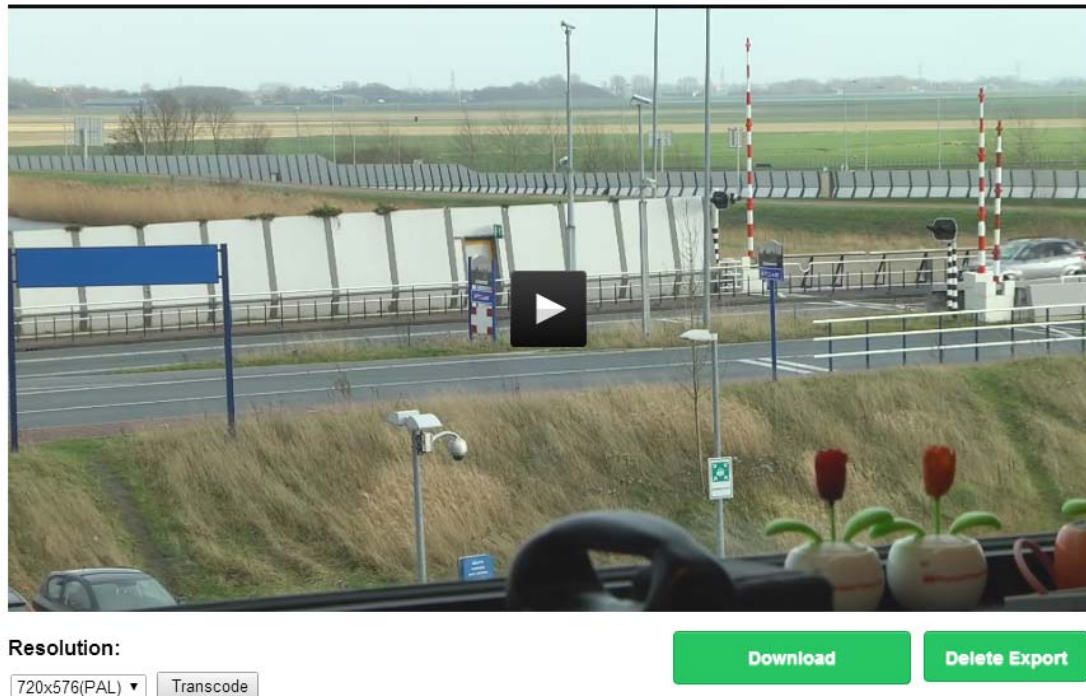


Figure 20 Transcoding

Settings

On the settings page you can change the names of the clients and change the settings of the Playouts that you own. You can enter the settings page by clicking on the icon displayed in figure 21.



Figure 21 Settings icon

The screenshot shows the 'Settings' page with the following structure:


- Navigation Bar:** MOBILE VIEWPOINT logo, Connection, Exports, Make exports, Mobile uploads, , TestGroup, Switch back.
- Settings Panel (Left):**
 - Settings**
 - PC Config >
 - Client(s)**
 - 1200 prototype >
 - 3153 WMT8 >
 - Android demo >
 - develop-3037 >
 - iphonepaul >
 - Niek Test >
 - testandroid >
 - TestUseriphon >
 - Playout(s)**
 - MultiDecoderFake >
 - 8881 >
 - Server(s)**
- PC Config Panel (Right):**
 - Select the servers that are in the same private network as this pc/tablet.
 - AT5-RTVNH WMT Server
 - Develop 7342
 - nebula.triple-it.nl
 - Server-6004
 - Server-8881
 - wmt-demo.triple-it.nl
 - wmt-server-01.mobileviewpoint.com
 - wmt-server-02.triple-it.nl
 - wmt-server-03.triple-it.nl
 - wmt-server-04.triple-it.nl

Figure 21 Settings page

PC config

At the PC Config tab you can select the servers that are in the same private network as the tablet/PC that you are using. This option is specially designed to make sure that your own pc/tablet can access the Videomanager and will be able to work with all the features.

Client(s)

The Client settings let you change the server where the client is currently connecting to. You can also change the client id of the client (Figure 22 Client(s) settings).

Edit Client 1200

Name

13 currently used
Update

Hint: if a server is disabled, then you are not the owner.
Please configure the client with the following ip:
213.132.176.210. And with client id: 13
The owner of this server is: Mobileviewpoint

Figure 22 Client(s) settings

Playout(s)

The Playout settings tab lets you change the public ip of the playout, the internal ip address, name and the external HTTP port (Figure 23 Playout(s) settings).

Edit PlayoutServer 8881

Name

Ipaddress

ExternalHTTPPort

PrivateIpAddress

Connection check
Update

Figure 23 Playout(s) settings

Statistics

On the statistics page you can enable data logging per client. Data logging isn't available for all clients. You can enter the statistics page by clicking on the icon below in figure 24



Figure 24 Statistics page

Before you can use data logging it should be enabled on the statistics page. When your client can't log the data usage the following message will appear "Client does not support data usage logging"

When data usage logging is available. You will see two calendars in which you can select a date to review your data usage. When you have selected two dates. You can press on "Draw bar diagram" for a diagram with the data usage per connection.

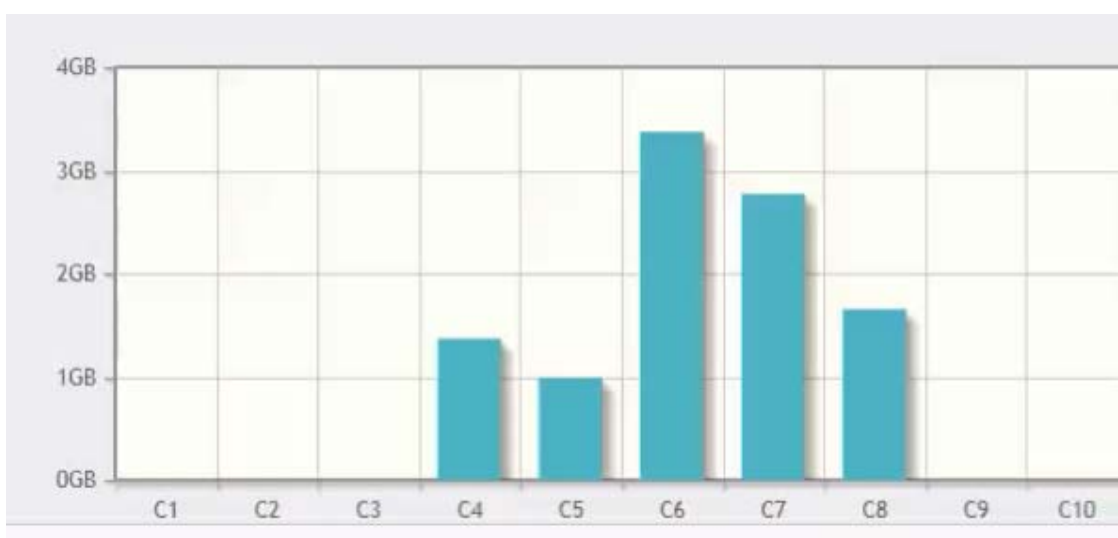


Figure 2 data usage per connection.

Switch user

The switch user button that is located at the top of the screen lets you switch to different users that are connected to the usergroup. You are able to switch back and forth between the different users (Figure 24 Switch user).



[Connection](#)
[Exports](#)
[Make exports](#)
[Mobile uploads](#)

[TestGroup](#)
[Switch back](#)

Figure 24 Switch user

TROUBLESHOOTING

Quick tips

Set up the WMT client at locations where there is a good reception. Attach a good quality antenna to every antenna connector to improve reception quality, especially indoors.

Verify basic functioning

After you powered up the WMT client, the following sequence of events should occur:

1. When power is first applied, verify that the power light is on;
2. After approximately 1 minute, verify that:
 - The LAN port light on the switch/computer is lit for the connected Ethernet cable;
 - The connections to the server are connected.

Power light not lit

If the Power and other lights are not lit, check the following:

- When using a power adapter:
 - Make sure that the power cord is properly connected to your WMT client and that the power supply adapter is properly connected to a functioning power outlet;
 - Check that you are using the power adapter supplied by Mobile Viewpoint for this product.
- When using a battery:
 - If you are using the WMT client with a battery make sure that the battery is fully charged.

If the error persists, you have a hardware problem and should contact technical support.

LAN or Internet port light not lit

If the LAN or Internet lights on your switch or computer are not lit when the Ethernet connection is made, check the following:

- Make sure that the Ethernet cable connections are secure at both the WMT client and at the computer;
- Make sure that power is turned on to the connected switch, computer and WMT client;
- Be sure you are using correct Ethernet cables.

Problems with connecting to the WMT client

If you are unable to connect to the web interface of the WMT client check the following:

- Check the Ethernet connection between the computer and the router as described in the previous section;
- Your computer's IP address should be in the range of 198.18.0.10 to 198.18.0.254. Refer to your computer's documentation for help with finding and changing your computer's IP address;
- Make sure you are using the correct login information. By default, you don't need to provide login details. If this is changed, make sure that CAPS LOCK is off when entering this information;
- Make sure your browser has Java, JavaScript, or ActiveX enabled. If you are using Internet Explorer, refresh the page to be sure the page is loaded. Try closing the browser and launching it again.

Problems with one of the mobile connections

A mobile connection is unable to connect

- Verify that the APN settings for the SIM are correct;
- Check if the signal quality of the mobile connection is good enough;
- Check if the mobile connection is at least using the technique UMTS or HSDPA. The bandwidth of a GPRS connection is not enough;
- Check that the settings for the WMT server (IP address and port number) are correct.

The mobile connection keeps connecting and disconnecting

This behaviour is an indication that the round trip time of the connection becomes too high and the connection is temporarily disabled. Once the RTT decreases below the minimum value the connection is enabled again.

Sending too much traffic causes a high RTT value. Change the profile and/or video resolution to lower the required bandwidth. If this problem persists check the signal quality and the network technology of the mobile connection.

11. RF POWER SPECIFICATION

Note that the WMT only uses WCDMA modes but for compliance reasons we list all capabilities. Power specification of every radio module (modem) is:

- 850/1900/2100MHz WCDMA, Power class 3 (+24dBm) \Rightarrow class 3 +24 dBm, =251 mWatt
- 850/900MHz GSM/GPRS/EDGE, GSM Power class 4/EDGE E2 \Rightarrow class 4 +21 dBm = 125 mW
- 1800/1900 MHz GSM/GPRS/EDGE, GSM Power Class 1/EDGE E2 \Rightarrow Power class 1: +33 dBm (+1dB/-3dB) = 2W

12. REGULATORY APPROVALS

North America (USA / Canada)

The Sierra Wireless MC8790 modem is granted modular approval for mobile applications. Integrators may use the MC8790 modem in their final products without additional FCC / IC (Industry Canada) certification if they meet the following conditions. Otherwise, additional FCC / IC approvals must be obtained.

1. At least 20 cm separation distance between the antenna and the user's body must be maintained at all times.
2. To comply with FCC / IC regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed 5 dBi in the cellular band and 4 dBi in the PCS band.
3. The MC8790 modem and its antenna must not be colocated or operating in conjunction with any other transmitter or antenna within a host device.
4. Label must be affixed to the outside of the end product into which the MC8790 modem is incorporated, with a statement similar to the following:

- This device contains FCC ID: N7NMC8790
- This equipment contains equipment certified under IC: 2417C-MC8790.

5. A

user manual with the end product must clearly indicate operating requirements and conditions to ensure compliance with current FCC / IC RF exposure guidelines.

The end product with an embedded MC8790 modem may also need to pass the FCC Part 15 unintentional emission testing requirements and be properly authorized per FCC Part 15.

The European Union

Sierra Wireless hereby declares that the MC8790 modem conforms with all essential requirements of Directive 1999/5/ EC:

CE 0682

The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location in the EU community:

Sierra Wireless (UK), Limited Lakeside House 1 Furzeground Way, Stockley Park East
Uxbridge, Middlesex

UB11 1BD

England

tory requirements of the EN 62311:2008 and IEC 62209-2:2010