

Qeedji

User manual

DMB400

4.14.16 001C



Legal notice

DMB400 4.14.16 (001C_en)

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Product information

Product design and specifications are subject to change at any time and 'Qeedji' reserves the right to modify them without notice. This includes the hardware, the embedded software and this manual, which should be considered as a general guide to the product. The accessories supplied with the product may differ slightly from those described in this manual, depending on the developments of the various suppliers.

Precautions for use

Please read and heed the following warnings before turning on the power: - installation and maintenance must be carried out by professionals. - do not use the device near water. - do not place anything on top of the device, including liquids (beverages) or flammable materials (fabrics, paper). - do not expose the device to direct sunlight, near a heat source, or in a place susceptible to dust, vibration or shock.

Warranty clauses

The 'Qeedji' device is guaranteed against material and manufacturing defects for a certain duration. Check the device warranty duration value at the end of the document. These warranty conditions do not apply if the failure is the result of improper use of the device, inappropriate maintenance, unauthorized modification, operation in an unspecified environment (see operating precautions at the beginning of the manual) or if the device has been damaged by shock or fall, incorrect operation, improper connection, lightning, insufficient protection against heat, humidity or frost.

WEEE Directive



This symbol means that your appliance at the end of its service life must not be disposed of with household waste, but must be taken to a collection point for waste electrical and electronic equipment or returned to your dealer. Your action will protect the environment. In this context, a collection and recycling system has been set up by the European Union.

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Part I

Description and installation

1.1 Introduction

This manual explains how to install and configure your DMB400 device.

Recommendations and warnings

This device is designed to be used indoor.

This device is intended to work with the power supply unit. This power supply unit must be connected to a mains socket conforming to standard NF C 15-100. If the AC power cable is damaged, it must be replaced. It is possible to order a power supply unit replacement by sending a request to the email address sales@eedji.tech.

This device is a Class A device. In a residential environment, this device may cause radio interference. In this case, the user is asked to take appropriate measures.

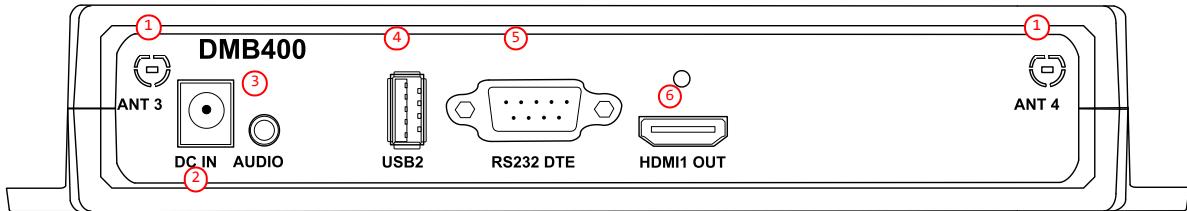
Content of the package

Items	Description	Quantity
Device	DMB400 device with Gekkota embedded.	1
Power supply unit	12 V power supply unit with cable of 1.2 m.	1
Labels	One on the cardboard packaging and another one at the back of the product. <i>Additional label can be present in case build-in options.</i>	2
WLAN antennas	To be screwed on the dedicated WLAN locations. <i>Provided with the device when it is supporting the WLAN option.</i>	2

 In this documentation, the unit of measurement for dimensions is done in millimeters followed by its equivalent value in inches.

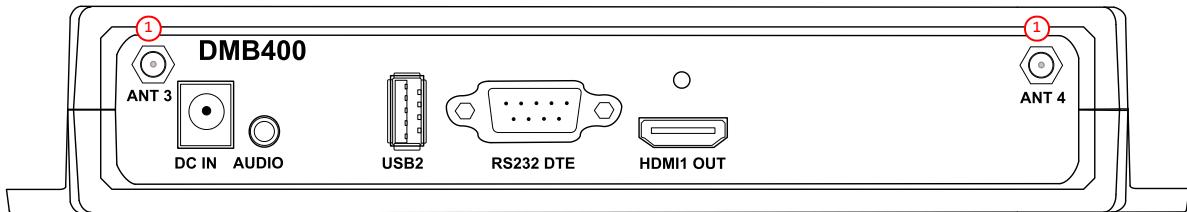
1.2 Getting started

Device front face



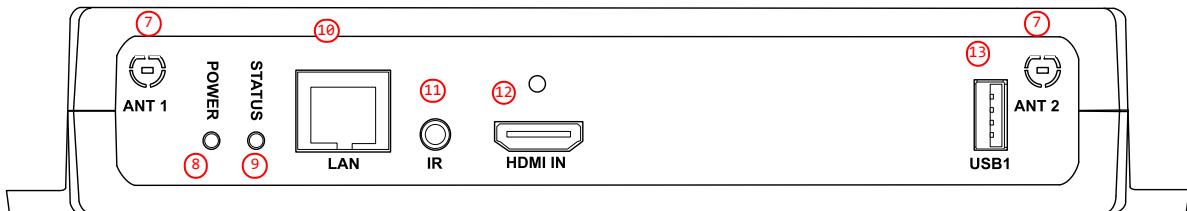
- ① Antennas locations,
- ② Power supply connector,
- ③ Audio connector,
- ④ USB2 3.0 connector,
- ⑤ RS232 DTE connector,
- ⑥ HDMI output connector.

Device front face with the WLAN option



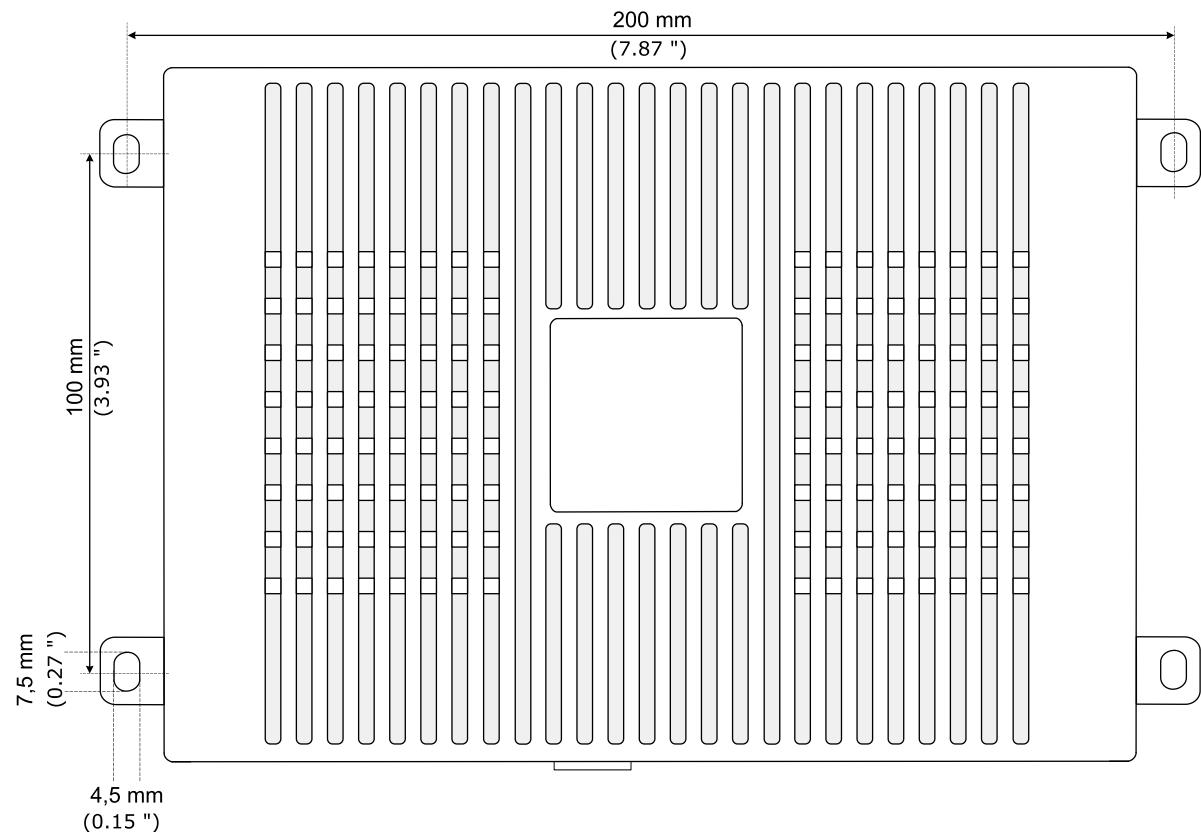
- ① Location of the 2 WLAN antennas to screw.

Device rear face

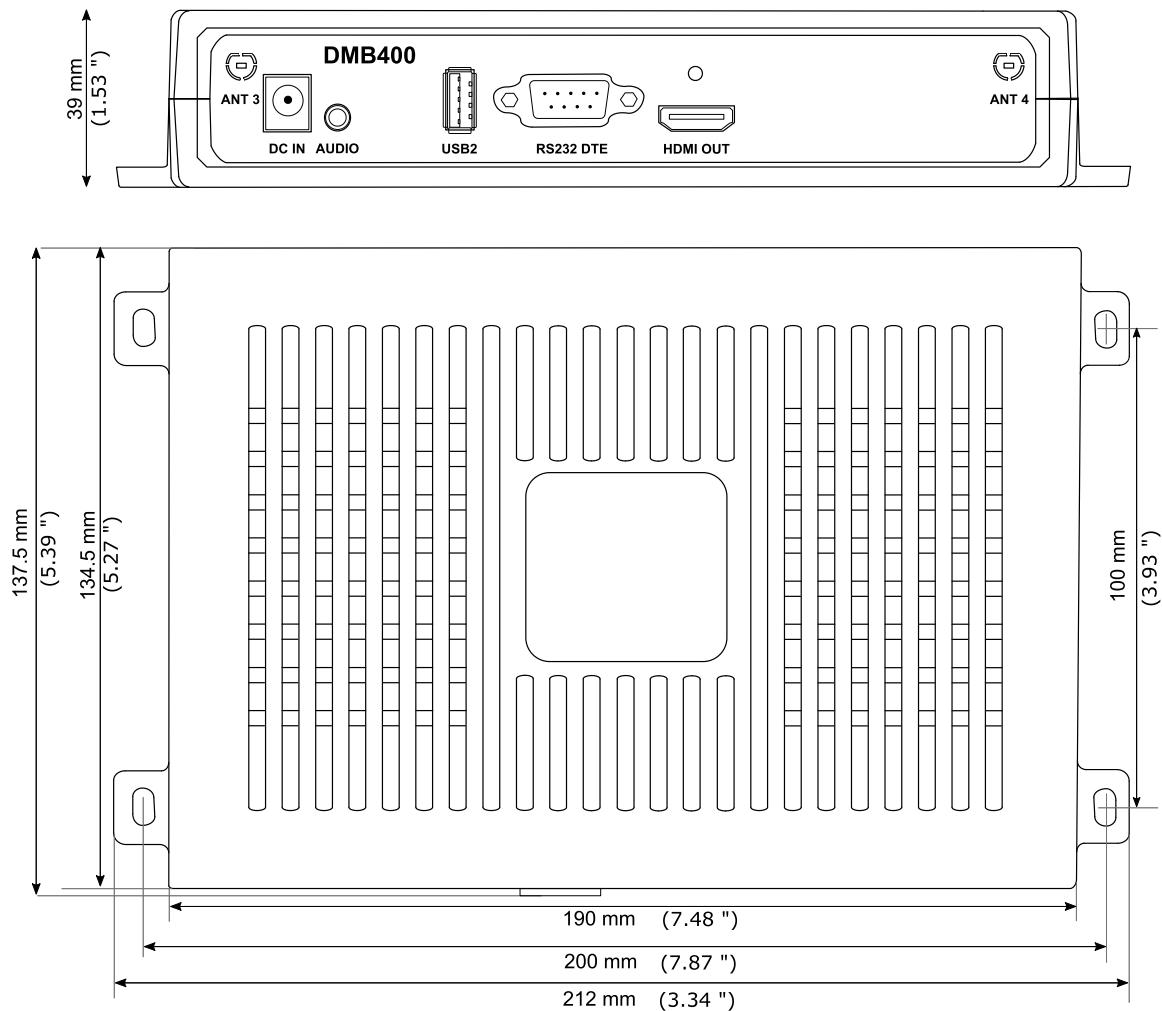


- ⑦ Antenna location,
- ⑧ Power supply red LED,
- ⑨ Status green LED,
- ⑩ LAN RJ45 connector,
- ⑪ GPIO/Infrared connector,
- ⑫ HDMI input connector,
- ⑬ USB1 2.0 connector.

1.2.1 Device fixture



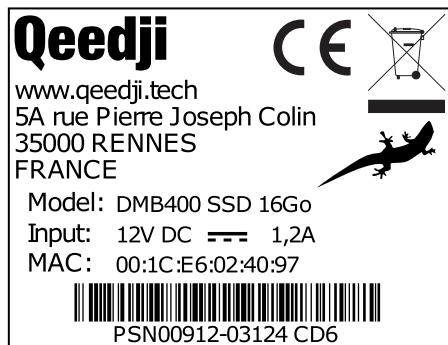
1.2.2 Device dimensions



1.2.3 Labelling

Product label

The model of the device, the power supply characteristics, the serial number (PSN) and the MAC address are written on a label stuck on the case.



Packingbox label

This is the label stuck also on the packingbox. It is showing information on:

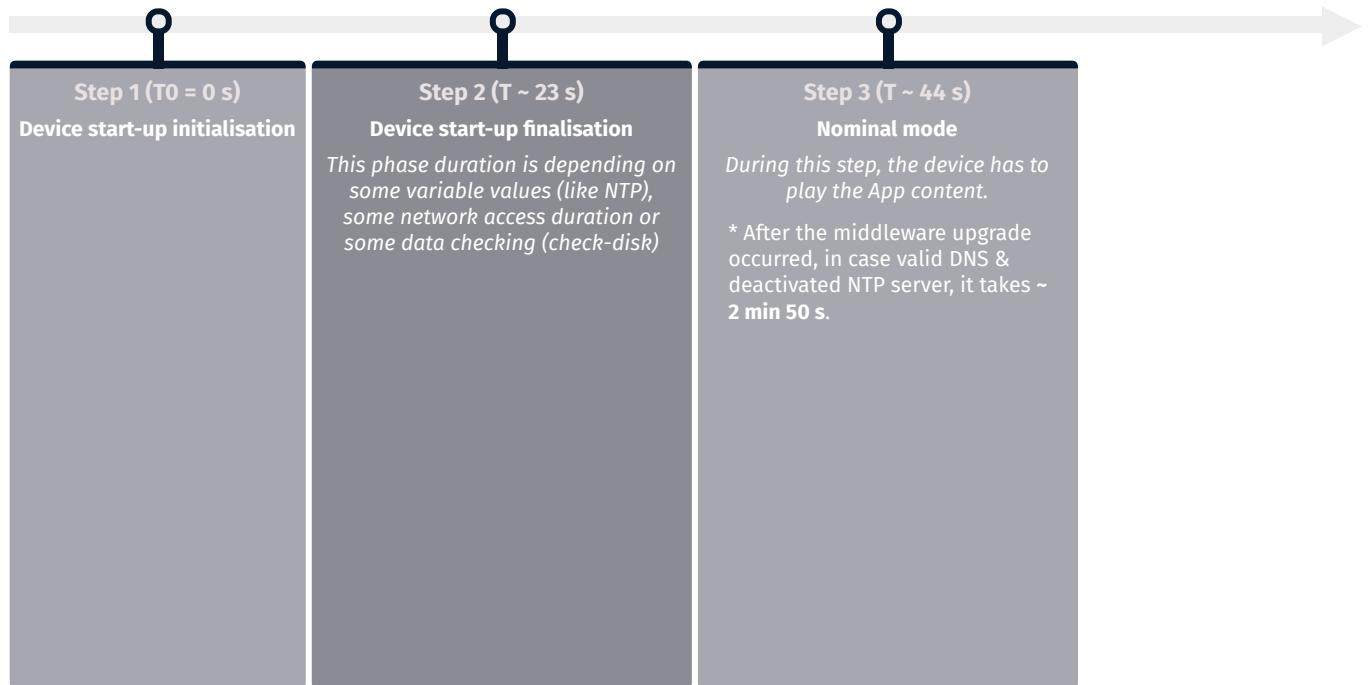
- the device model,
- the serial number (PSN).



Some additional labels may be present in case of built-in options.

 *The serial number of the device may be requested in case of technical support.*

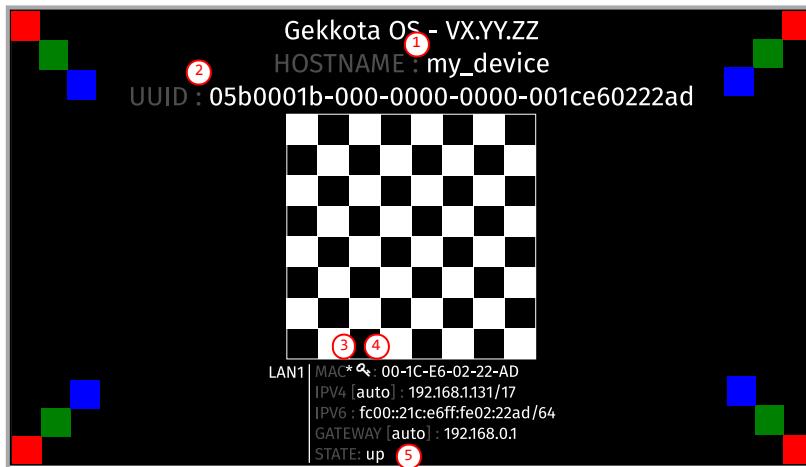
1.2.4 Device start-up steps



1.2.5 Test card

When the `Test card` App launching at device start-up is activated, the device displays alternatively one test pattern content per network interface supported by the device every ten seconds and this for one minute. The test pattern displays important information to assist in the device configuration.

This is an example of test pattern content that is displayed when the `test card` is activated.



- The `*` star pictogram is showing the chosen identification method in the device. It can be `HOSTNAME` ①, `UUID` ② or `MAC` ③. In the example, the star is showing the `MAC` identification method (default value).
- The `key` pictogram ④ is showing the MAC address value associated to the Gekkota license key.
- The `up` STATE ⑤ is meaning that the network interface currently showed is alive. If the STATE is `down`, the network interface is not alive.
- When the test card is activated, the content of the App is not displayed. To play the App again, you must deactivate the `Test card`.

The `Test Card` can be deactivated by using the device configuration console web user interface.

If the CEC is activated on your display device, and the CEC pass-through feature is fully supported by your display device, the test card content can be displayed or undisplayed thanks to the display device remote control with these key sequence:

- [left, right, left, right] key pressed in less than ten seconds.
 - Your display device must support a remote control and supports properly the CEC.
 - So that your remote control key presssing is taken into account, ensure that there is no OSD menu or OSD banner displayed over the content.
 - For SAMSUNG display devices, the CEC activation is often made by activating the `Anynet` feature.
 - For LG monitors, the CEC activation is often made by activating the `Simplink` feature.
 - In case the key sequence is not more taken into account, some display devices may require to unselect then select again the HDMI input on which the device is connected to force a `CEC_Set_Input_Source` before applying the key sequence. Some others may require to refresh the `Anynet` peripherals with the `TOOLS` key of the remote control.

If you have an USB keyboard connected to an USB hub, the same key sequence is supported:

- [left, right, left, right] key pressed in less than ten seconds.

This user preference needs to be set to `true` to support the test card displaying/undisplaying thanks to an USB keyboard:

- `innes.player.mire.key-event.*.authorized`.

These user preferences need to be set to `true` to support the test card displaying/undisplaying by CEC thanks to display device's remote control:

- `innes.player.mire.key-event.*.authorized`,
- `system.connector.*.*.cec.cec_1.enabled`.

1.3 LEDs behaviour

LED POWER behaviour (power on device)

State	Information
Red	OK: Power supplied
Off	Error: Power supply issue ¹

LED LAN behaviour (power on device)

State	Information
Off	There is no network traffic on the Ethernet connector.
Blinking	The blinking frequency is indicating the data rate on Ethernet connector.

LED STATUS behaviour depending on device start-up steps

• Step 1: Device start-up initialisation

State	Information
Green: continuous	OK
Always Off	Error: Power supply issue ¹

• Step 2: Device start-up finalisation

State	Information
Off	OK. This step duration can be from several seconds to several minutes.
Green blinking: 1 second duration flash and periodicity every 2 seconds	Error: Boot issue ¹

• Step 3: Nominal mode

State	Information
Green blinking: 1 very short flash (300 ms) spaced 4 seconds apart	OK
Green blinking: 2 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Warning: Fail Soft Mode Level 1 Frequent device reboot detected (for example 4 times in less than ½ hour) Message is displayed on the screen: «Fail Soft Mode: waiting for new content ». The instability has been caused probably by a content media not supported yet by the Gekkota OS. Consequently, to prevent any further reboot, the content has been invalidated. The message displayed on the screen indicates that a new publication is needed to go ahead. ²
Green blinking: 3 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Warning: Fail Soft Mode Level 2 Frequent device reboot detected (for example 4 times in less than ½ hour) Content is purged Message is displayed on the screen «Fail Soft Mode: waiting for new content ». The instability has been caused probably by a content not supported yet by system or one user preference which has been modified. Consequently, to prevent any further reboot, the content has been invalidated and user preferences (saved before unexpected reboot) have been restored. The message displayed on the screen indicates that a new publication is needed to go ahead. ²
Green blinking: 4 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Warning: Check disk The device has detected memory corruption on content storage. The media storage is being repaired. This repair step is called Check-Disk and its duration can be several minutes. During this step, a message “checking the file system of data partition in progress” is displayed on the screen. ³
Green blinking: 5 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Warning: errors on system partition The user has to connect to device console web user interface, go to <i>Maintenance > Tools</i> menu, and click on the <i>Format</i> or <i>Repair</i> button to solve the problem. ³
Green blinking: 6 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Warning: a middleware upgrade is pending During this phase, no content is played on the device, do not switch OFF the device.
Green blinking: 7 very short and consecutive flashes (300 ms) spaced 4 seconds apart	Error: write problem on the storage For an unknown reason, your storage space isn't usable any more. ³
Off	Error. ¹

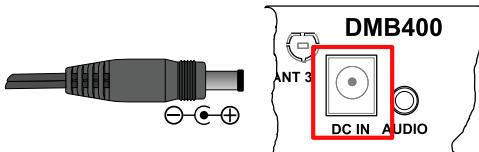
¹ If the problem persists in despite of an appropriate power-supply, contact support@qeedji.tech.

² If the problem persists, it is recommended to find out the media not supported yet by the system and remove it from content.

³ If the problem persists after a partition repairing, contact support@qeedji.tech.

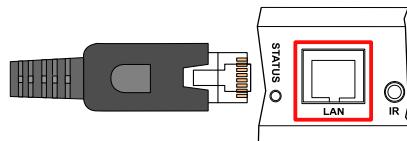
1.4 Connectors pin-out

Power supply connector (12 V DC - 1.2 A)



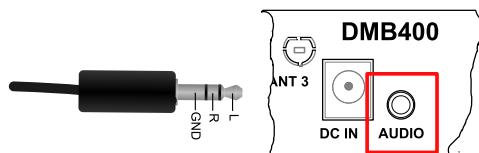
LAN connector

Ethernet RJ-45. 10/100/1000 BaseT. It is recommended to use shielded cables.



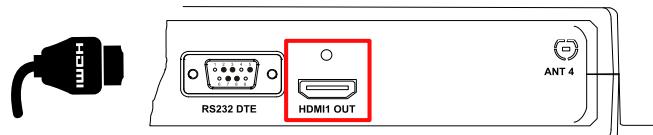
Audio Jack 3.5 mm connector (stereo L+R)

It is recommended to use cables whose length is less than 3 meters.



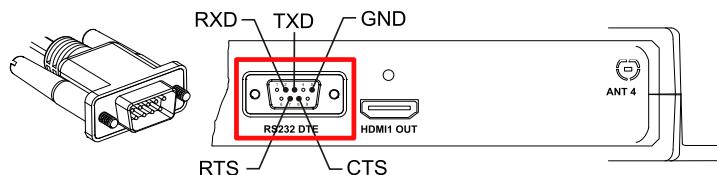
Video output connector (HDMI 2.0)

This connector is used to connect a screen or video projector.



RS232 DTE connector

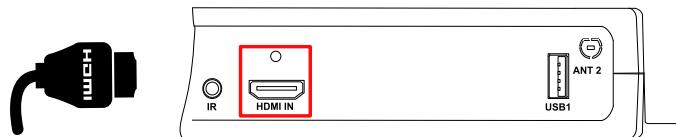
It is recommended to use cables whose length is less than 3 meters.



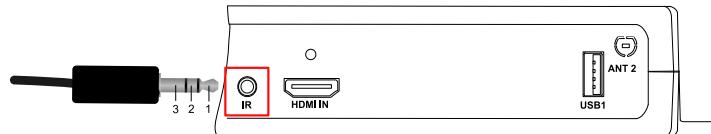
RS232 DTE connector pin-out:

Nº	Function
1	CD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	-

Video input connector (HDMI 1.4)



Jack 3.5 mm connector (GPIO1/IR)



Nº	Name	Write/Read	Control
1	Voltage reference 3.3 V		
2	GPIO1	IN or OUT	CPU/GPIO1
3	Ground		

Electrical features

	Vin min	Vin max	VOH min	VOL max	VIH min	VIL max
GPIO1	-0.5 V	3.6 V	2.9 V	0.4 V	2.0 V	0.8 V

The 3.3 V pin must not be used as power supply, but rather as a reference voltage.

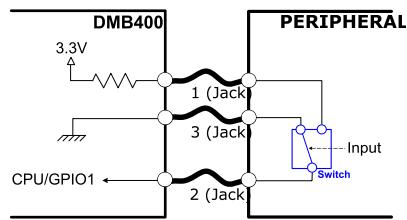
Along the device booting, the GPIO1 is configured as input during some seconds. And then after the system startup, the GPIO1 is operational.

The GPIO has a weak pull-up.

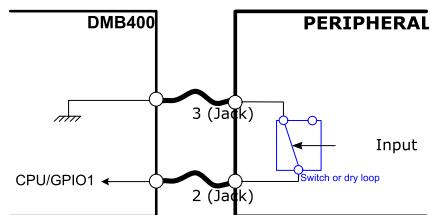
It is not recommended to hotplug/unplug the GPIO1 connector, which could damage the device.

Principle schematics for several use cases

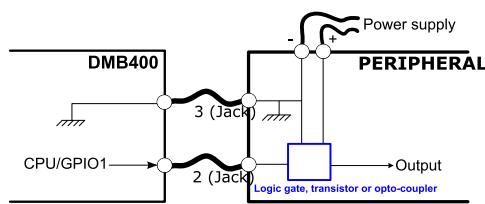
Three wires input configuration for GPIO1:



Two wires input configuration for GPIO1:



Output configuration for GPIO1:



Configuration

GPIO1 connector configuration can be done by editing the user preferences using the device configuration console web user interface or with a configuration script. The GPIO1 configuration part for this script is described here:

How to configure the Jack 3.5 mm connector:

```
//Set Jack 3.5 mm mode infrared
if (aDirection == "disable")
{
    Services.prefs.setBoolPref("system.connector.jack35_1.1.io uart_1.enabled", true);
}
else //Set Jack 3.5 mm mode GPIO
{
    Services.prefs.setBoolPref("system.connector.jack35_1.1.io uart_1.enabled", false);
}

// Set the Jack 3.5 mm direction: input or output
if (aDirection == "out")
{
    Services.prefs.setBoolPref("innes.app-profile gpio-input.jack35-gpio_1.jack35_1.*.authorized", false);
    Services.prefs.setBoolPref("innes.app-profile gpio-output.jack35-gpio_1.jack35_1.*.authorized", true);
    Services.prefs.setBoolPref("system.connector.jack35_1.1.io.jack35-gpio_1.enabled", true);
}
else if (aDirection == "in")
{
    Services.prefs.setBoolPref("innes.app-profile gpio-input.jack35-gpio_1.jack35_1.*.authorized", true);
    Services.prefs.setBoolPref("innes.app-profile gpio-output.jack35-gpio_1.jack35_1.*.authorized", false);
    Services.prefs.setBoolPref("system.connector.jack35_1.1.io.jack35-gpio_1.enabled", true);
}
else if (aDirection == "disable")
{
    Services.prefs.setBoolPref("innes.app-profile gpio-input.jack35-gpio_1.jack35_1.*.authorized", false);
    Services.prefs.setBoolPref("innes.app-profile gpio-output.jack35-gpio_1.jack35_1.*.authorized", false);
    Services.prefs.setBoolPref("system.connector.jack35_1.1.io.jack35-gpio_1.enabled", false);
}
```

Part II

Applicative console Web user interface

2.1 Applicative console web user interface

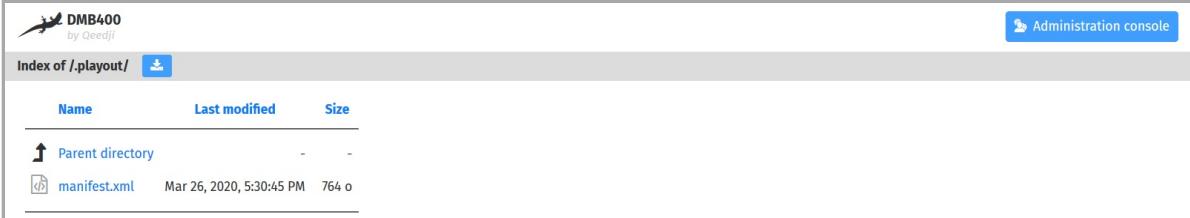
The DMB400 device supports a console web user interface that can be accessed with a web browser. The supported web browsers are: Google Chrome , Mozilla Firefox , MS-Edge (Chromium) .

It is available from the URL: http://<device_IP_addr>/ .

The default credentials values, put at factory, to access to the device console web user interface are:

- login: admin ,
- password: admin .

The URL falls automatically into the applicative user interface: http://<device_IP_addr>/.playout/ . This pane allows to watch the App content:



WebDAV directories

Clicking on the parent directory provides access to the root of the device's WebDAV server, which provides access to directories, among other things:

- .playlog/ : location to store data for mediometry,
- .resources/ : location to store the resources of the device console web user interface,
- .software/ : location to store .frm middleware for updates,
- .status/ : location to store the device status file status.xml ,
- .upnp/ : location to store device.xml device status for UPnP detection,
- .assets/ : location to store some of the resources of the device console web user interface,
- .playout/ : location to store the App when deployed on the device,
- .log/ : location to store the application logs, when they are activated.

Part III

**Administration console Web user
interface**

3.1 Device configuration console web user interface

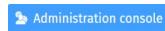
The DMB400 device supports a device configuration console web user interface that can be accessed with a web browser. The supported web browsers are: Google Chrome , Mozilla Firefox and MS-Edge (Chromium) .

It is available from the URL: http://<device_IP_addr>/ .

The default credentials values, put at factory, to access to the device console web user interface are:

- login: admin ,
- password: admin .

The URL falls automatically into the applicative user interface¹. At the top right corner, click on the Administration Console button.



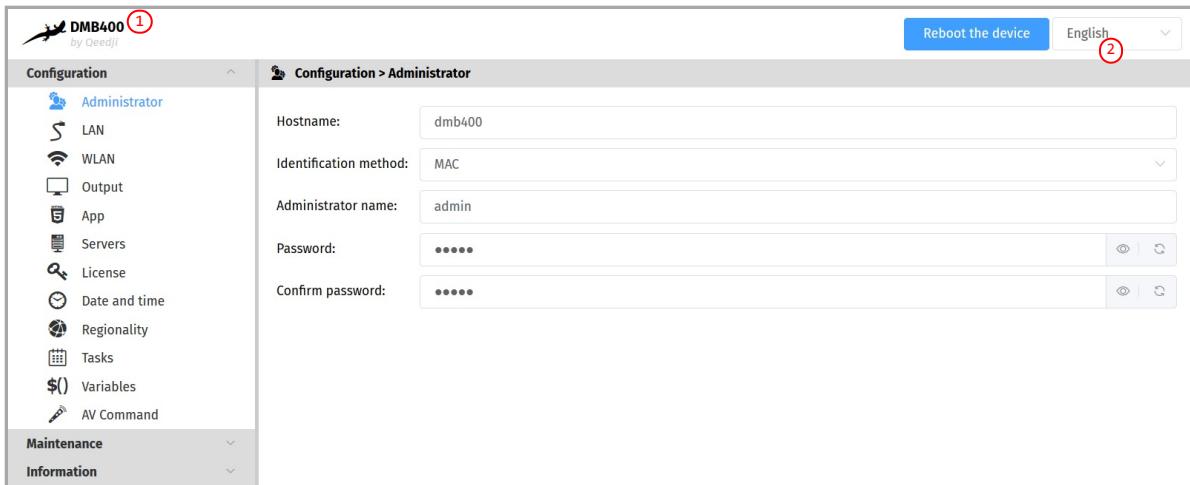
¹ For further information, refer to the chapter § [Applicative console web user interface](#).

With the button at the top right corner ①, choose the language in which your device console web user interface needs to be displayed. The supported languages are:

- English,
- Spanish,
- German,
- French.

It is desirable that your device DMB400 device is on time. When possible, do synchronize it with an NTP server.

This is the device configuration console web user interface.



After you have changed and saved all your settings in the different panes, be sure to perform a device restart by clicking on the Reboot the device ② button so that your changes are fully reflected.

Click on the device logo ① at the left top corner to return to the applicative user interface.

If the device does not respond to its IP address, either the device power supply is unplugged, or the Ethernet cable is not connected, or the network configuration is not properly adjusted. To solve the problem, if your computer and local network supports IPV6, connect an Ethernet cable on the device and connect to the device console web user interface with its IPV6 address, which can be found on the test pattern displayed on the screen.

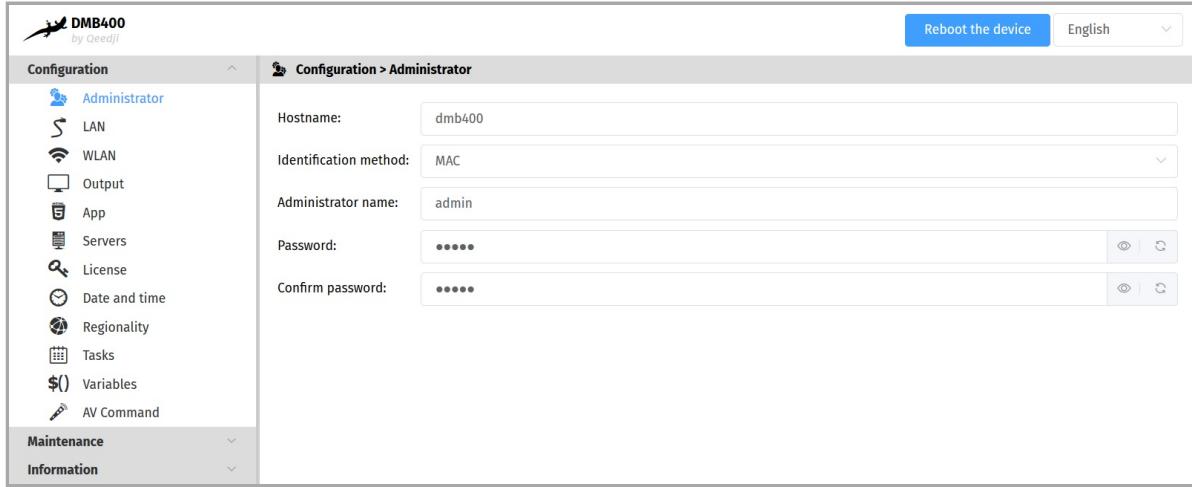
For example, for the MAC address value: ``00-1c-e6-02-1e-45``,
In a web browser, enter the URL: [http://\[fc00::21c:e6ff:fe02:1e45\]/.admin/](http://[fc00::21c:e6ff:fe02:1e45]/.admin/)

To obtain the application note reminding some notions about IPV6 configuration, refer to the appropriate application note on the [Qeedji Website](#).

3.1.1 Configuration > Administrator

In the Configuration tab, select the **Administrator** menu to change:

- the Hostname ,
- the login credentials:
 - Administrator name ,
 - Password ,
- the device identification method:
 - MAC (default),
 - Hostname ,
 - UUID .



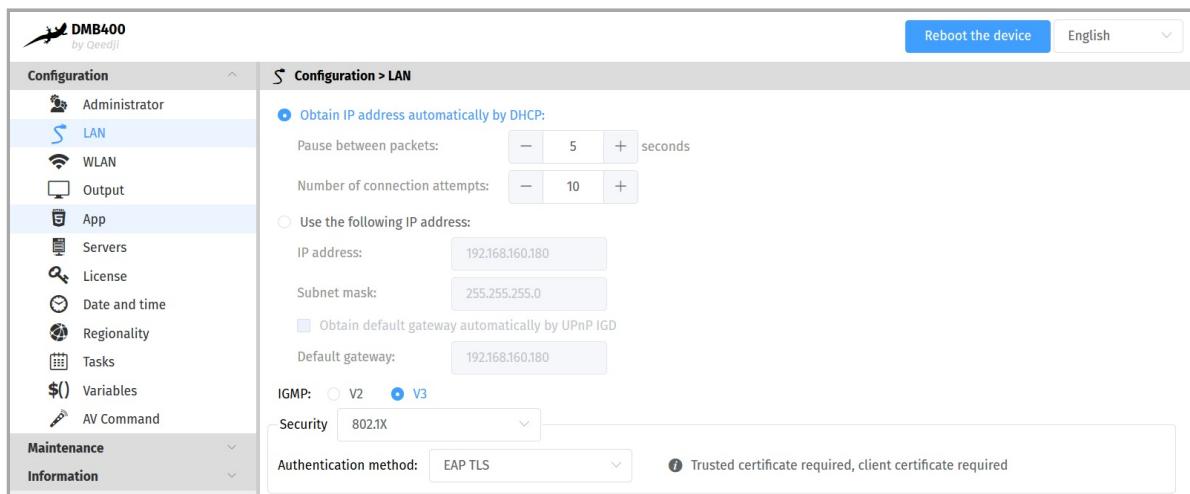
!> It is recommended that you enter one unique `Hostname` value for each device. In case several DMB400 devices are located in different buildings or geographical locations, we recommend that you enter hostname values with information about the building and the location (e.g. `HALL-RD-Paris-1`).

For security reasons, it may be useful to change the login credentials values. Please keep them in a safe place afterwards.

!> The same login credentials are used to access to the WebDAV server and to use web services.

3.1.2 Configuration > LAN

In the Configuration tab, select the **LAN** menu to set up the network configuration of the **LAN** interface of your device.



The connection to the device configuration console web user interface with the device IPV6 address, computed from the device MAC address value, is supported. For example, if the LAN MAC address of the device is *00-1c-e6-02-27-bf*, type the URL [http://\[fe80::21c:e6ff:fe02:22ad\]/](http://[fe80::21c:e6ff:fe02:22ad]/) or type [http://\[fc00::21c:e6ff:fe02:22ad\]/](http://[fc00::21c:e6ff:fe02:22ad]/) in a web browser. The routable prefix is depending on your network configuration.

If your device is not located in a secure network, select:

- security: *None*.

If your device is located and properly declared in a secure network, select *802.1X*, then select an *802.1X* authentication method supported by your RADIUS server:

- security: *802.1X*.

■ In the context of a secure network, your device must be first declared in your dedicated RADIUS server with a user *Login / password*. Given that the login credentials used by Qeedji devices for all the 802.1X authentication methods are the LAN MAC address value of the DMB400 device, any new Qeedji device entry must be registered in your RADIUS server with these specific values with the format *abcdefabcdef / abcdefabcdef* for a MAC address *ab-cd-ef-ab-cd-ef*. Some identification methods may require you add a *trusted certificate*, used by your RADIUS server and/or a *client certificate*, generated with the MAC address of your device, the radius users credentials and the trusted certificate of the RADIUS server; For further information, please contact your IT department.

■ When using a 802.1X certificate with an expiration date, in case your device is not on time or when the expiration date has expired, the device is not able to access to the network anymore. To work around, you have to insert one USB stick containing a specific configuration script to set either a new certificate or update the device date and time.

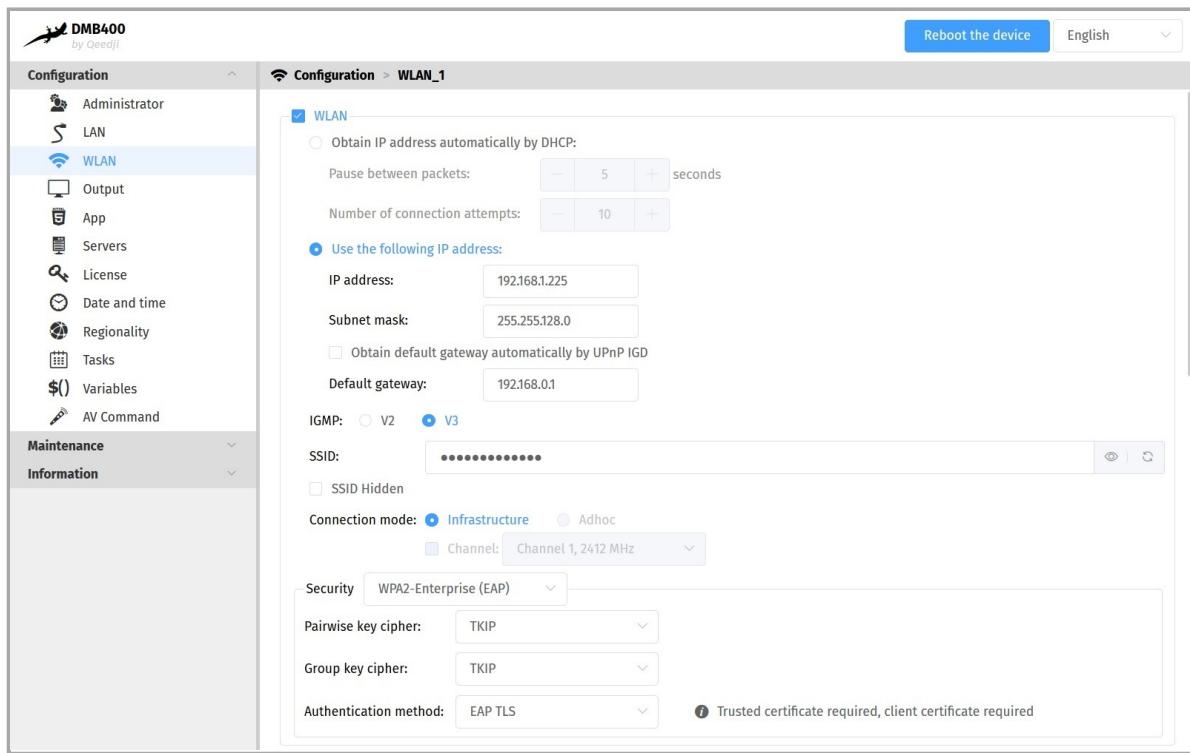
■ The device supports the UPnP and can be for example detected automatically in the local network environment of your computer.

■ By default, the device is configured with DHCP activated. In case the DHCP server is not available, after the DHCP timeout, the device ends up using the static IP address whose default value is 192.168.0.2 when it has never been changed yet by the user. It is recommended to set an appropriate IP address, netmask and gateway if this case would happen.

3.1.3 Configuration > WLAN

In the Configuration tab, select the **WLAN** menu to set up the network configuration of the **WLAN** interface on your device.

☞ The **WLAN** menu is only displayed when the **WLAN** option is supported by your device.



- Connection mode :
 - Infrastructure : Allows to establish a WIFI connection between your device and a WIFI router:
 - Security :
 - None,
 - WEP,
 - WPA-Personal (PSK),
 - WPA2-Personal (PSK),
 - WPA-Enterprise (EAP),
 - WPA2-Enterprise (EAP).
 - Adhoc : Allows to establish a direct WIFI connection between your device and e.g. your computer, without using a router.
 - Security :
 - None,
 - WEP.

The **SSID Hidden** option tells to the device whether or not the SSID value is broadcasted over the network by your WIFI router. It also allows to deduce the subset of pair key encryption and group key encryption modes supported.

The maximum lengths for WLAN crypto keys are:

- for **WEP** key:
 - 26 hexadecimal characters max.
- for **WPA-Personal (PSK)** and **WPA2-Personal (PSK)** keys:
 - 63 ASCII characters max.

☞ TKIP pair (or group) key encryption is not supported if the router is in IEEE 802.11n mode.

☞ Some computer OS version may not support **Adhoc** connection. For further information, contact your IT department.

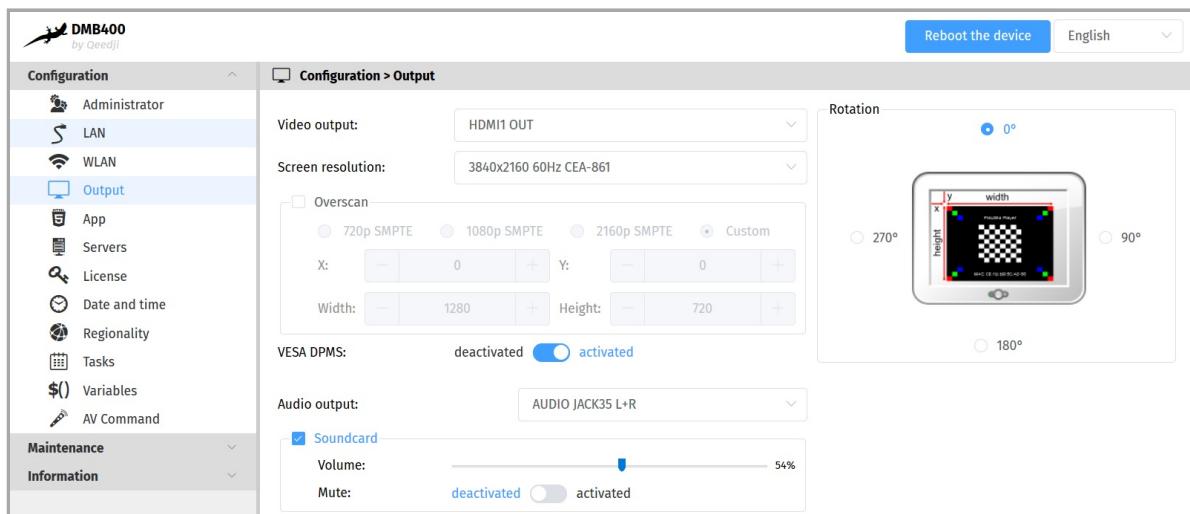
☞ Selecting the **WPA-Enterprise (EAP)** or **WPA2-Enterprise (EAP)** security implies that your device is located in a secure network, and therefore connects to a properly configured WIFI router with a dedicated RADIUS server.

☞ In the context of a secure network, your device must be first declared in your dedicated RADIUS server with a user **Login / password**. Given that the login credentials used by Qeedji devices for all the 802.1X authentication methods are the LAN MAC address value of the DMB400 device, any new Qeedji device entry must be registered in your RADIUS server with these specific values with the format **abcdefabcdef / abcdefabcdef** for a MAC address **ab-cd-ef-ab-cd-ef**. Some **identification methods** may require you add a **trusted certificate**, used by your RADIUS server and/or a **client certificate**, generated with the MAC address of your device, the radius users credentials and the trusted certificate of the RADIUS server; For further information, please contact your IT department.

The **WLAN** interface activation is not checked by default.

3.1.4 Configuration > Output

In the Configuration tab, select the **Output** menu to configure, among other things, the unit's video and audio output.



- **Screen resolution :**
 - Resolution : 96x96 to 3840x2160.
 - Mode : SMPTE, VESA, CEA-861, SONY, SAMSUNG, CGV CPLINE AV-HD, PC, DENSITRON, XGA, LESTEL, LINSN, ...
 - Frequency : 25 Hz, 30 Hz, 45 Hz, 60 Hz, 50 Hz.
- **Overscan :**
 - 720p SMPTE,
 - 1080p SMPTE,
 - 2160p SMPTE,
 - Personalized:
 - X : horizontal origin of the viewport in pixel,
 - Y : vertical origin of the viewport in pixel,
 - Width : width of the viewport in pixel,
 - Height : height of the viewport in pixel.
- Rotation : 0°, 90°, 180°, 270°.
- VESA DPMS : **on** (horizontal/vertical sync standby on) or **off** (horizontal/vertical sync standby off) ¹.
- Audio output : **AUDIO JACK35 L+R**.
- option Sound card : allows to activate or deactivate the sound card:
 - Volume : 0.100%,
 - option Mute : **on** (mute) or **off** (mute on).

☞ The rotation is not supported for resolutions higher than 1920x1080.

☞ Some screens may not support certain display modes. In this case, try another mode with the same resolution.

☞ When supported by your screen and your device, if possible use a 60 Hz mode which is the smoothest mode for scrolling text.

¹ VESA DPMS sleep and standby output is performed either by a screen sleep task programmed into an App, or by a power management task with the `strongly optimized` mode.

☞ Some screen, due to their construction, have been designed with an overscan, which means that the edges of your content send by the media player may not be visible on your screen even when choosing the right optimal resolution for your screen. To alleviate this problem, use the overscan on your *Qeedji* device to slightly reduce the width and height of your viewport. While doing so, it is recommended to display the test pattern of the device.

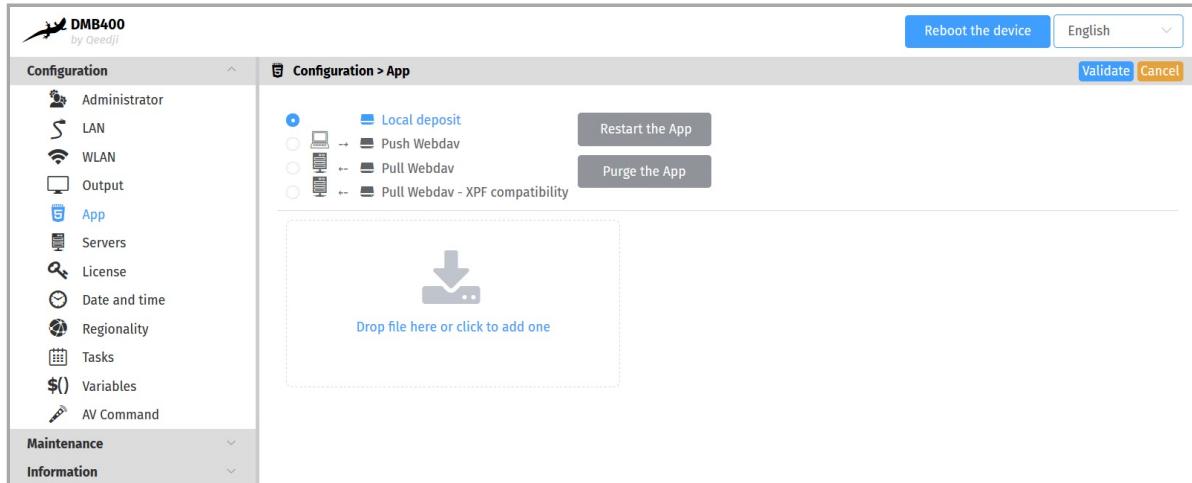
⚠ When using the overscan, for a right configuration of your device, please make sure that your screen is not in `Wall`, `Mozaic` or `Tile` mode.

3.1.5 Configuration > App

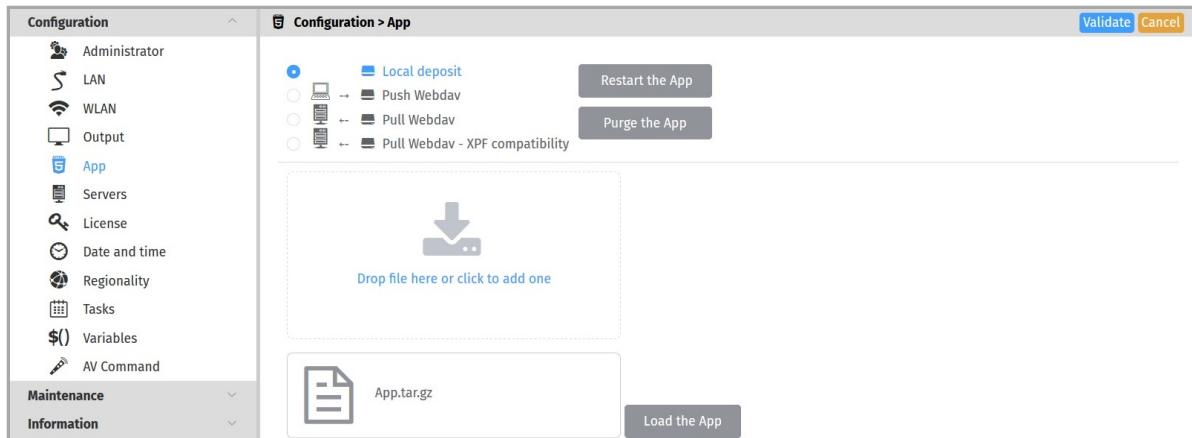
In the Configuration tab, select the App menu to select how the App must be loaded.

For each of these modes, you can use the Uninstall the App or Restart the App buttons at any time to remove the App from the device or restart it respectively.

- The Restart App OR Uninstall the App cannot work when the Test card is activated.
- In order to restart an App, the App must be first loaded on the device.
- Local deposit : Allows to load an App from the device console web user interface and play its content immediately.



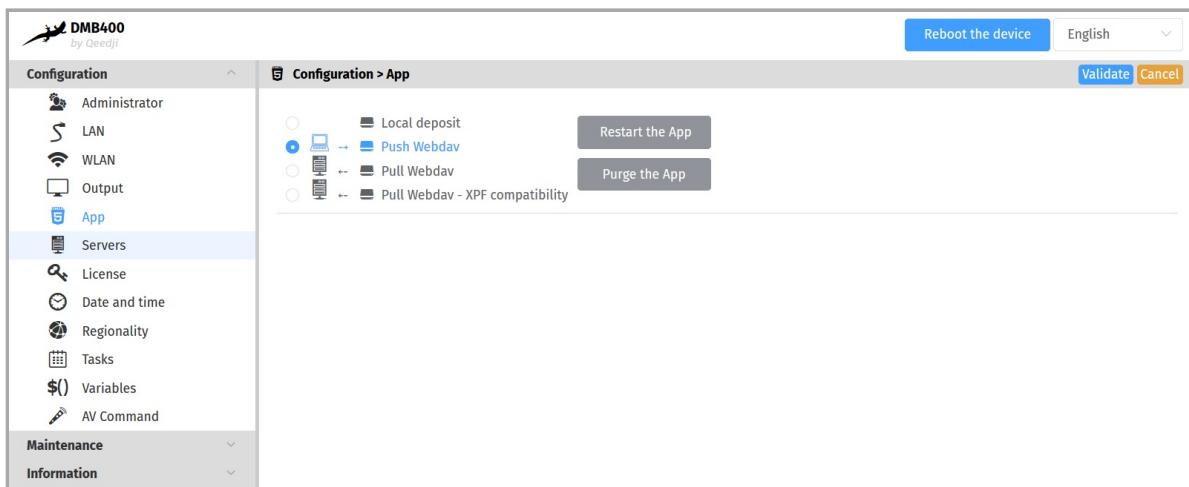
Use the Drop file here or click to add one box to drop your App .



Then click on the Load the App button. When the file disappears from the interface, the App is loaded and starts automatically.

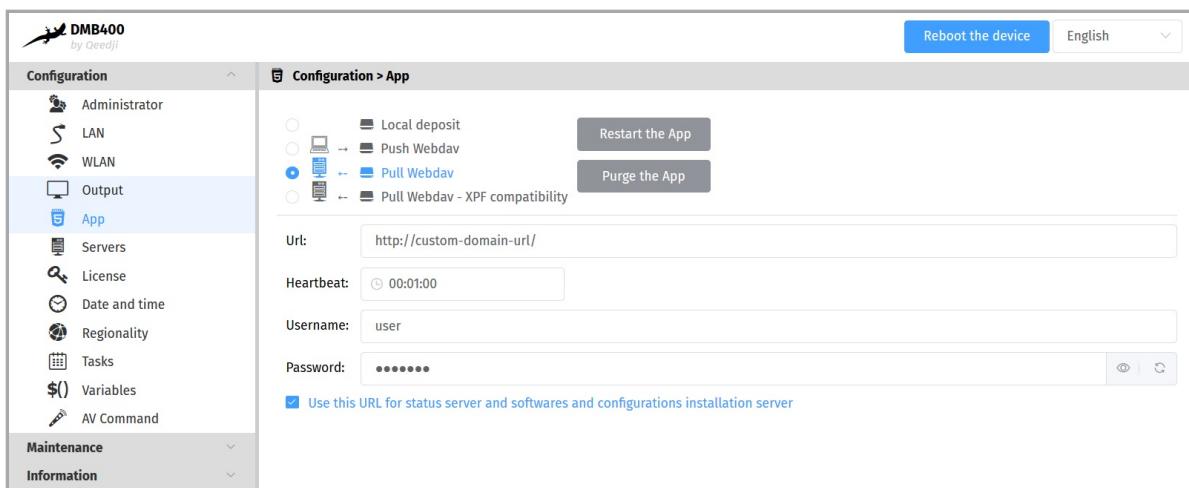
- The development of App is reserved for advanced users with software development skills. The content of the App must contain at least these 2 files `manifest.xml` and `player.html`. Then archive your App in one of the supported formats: `*tar.gz`, `*.zip`, `*.tar`, `*.tgz`. App examples are available at [github SDK-G4 API \(PDF example\)](#). For further information, contact support@qeedji.tech.

- Push WebDAV : Configure the device to receive an App coming from any WebDAV client or from any compatible software suite. Once the App is loaded, it starts immediately.



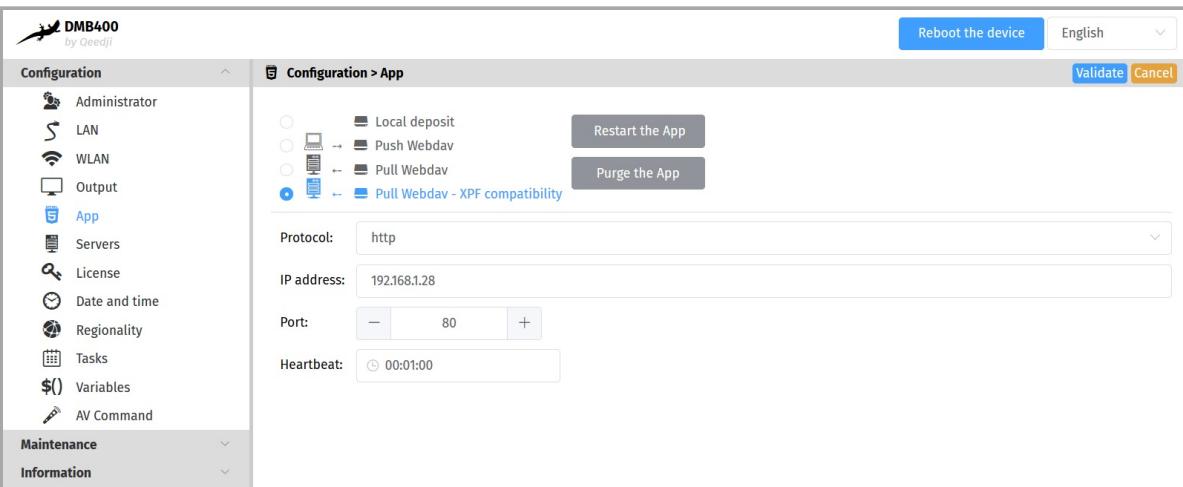
To find out which software suites are capable of publishing an App on Qeedji devices, contact support@qeedji.tech.

- Pull WebDAV : allows to configure the device so that it can regularly load or update an App from a remote WebDAV server. Once the App is loaded, it starts immediately.



Fill in the fields below properly:

- URL : URL of the remote server's WebDAV frontal. For example: URL : http://domain:8080/.directory/
 - Username/Password : login credential to access to the remote server's WebDAV frontal.
 - Heartbeat : in HH:MM:SS format, time period to connect to the remote server (default: 1 minute).
 - option: Use this URL for the status server and the software and configuration installation server :
 - if enabled, this option allows, based on the defined URL, to automatically set the URLs of the remote servers for:
 - middleware upgrade and configuration scripts distribution:
 - URL + .setup/ suffix,
 - the diffusion of the device status:
 - URL + .devices-status/ suffix.
 - if disabled, this allows to set specific remote server URLs.
- To find out which software suites are able to publish on a remote server, an App supporting Qeedji devices, contact support@qeedji.tech.
- Pull WebDAV - XPF Compatibility : allows to configure the device so that it can regularly retrieve XPF content from a remote WebDAV server and transform it into an App. Once the App is generated, its content is immediately played.



■ The user preference `innes.app-profile.manifest-downloader:g2.*.*.*.validity-calendar` allows to store the content of an iCAL file defining the validity range for content updates of devices in Pull WebDAV - XPF compatibility mode.

Fill in the fields below properly:

- Protocol : http or https,
- IP address : IP address of the remote server (XPF compatibility),
- Port : port used by the remote server (XPF compatible),
- Heartbeat : in HH:MM:SS format, time period to connect to the remote server (default: 1 minute).

App supported

The device can support for example:

- Linear playout App,
- Room booking App,
- GAP App.

For further information, contact support@qeedji.tech.

The device is supporting GAP App in the Local deposit mode and in the pull WebDAV mode.

■ A GAP App is a zip archive, compliant with the boot strap App (e.g. containing for example an `app.html` file and a `manifest.xml` file), which has been renamed with into a `.gap` file extension.

The device can support also for example App coming from Qeedji PowerPoint Publisher for Media Players. Once this PowerPoint Add-on is installed on your computer, it allows to publish a PowerPoint presentation on some of your media players. For further information, refer to the chapter § [Appendix: Qeedji PowerPoint publisher For Media Players](#).

3.1.6 Configuration > Servers

In the Configuration tab, select the **Servers** menu to enter the configuration to connect to the servers peripheral to your device.

The screenshot shows the 'Configuration > Servers' page of the DMB400 device. The left sidebar has sections for Configuration (Administrator, LAN, WLAN, Output, App, Servers), Maintenance, and Information. The main area contains the following configuration fields:

- Status, installation and configurations servers:**
 - Status server:
 - Url: http://custom-domain-url/device-status/
 - Heartbeat: 00:01:00
 - Username: user
 - Password: [REDACTED]
 - Softwares and configurations installation server:
 - Url: http://custom-domain-url/setup/
 - Heartbeat: 00:01:00
 - Username: user
 - Password: [REDACTED]
- DNS Servers:**
 - Obtain DNS server address automatically
 - Use the following DNS server address:
 - Preferred DNS server: 192.168.0.1
 - Alternate DNS server: 192.168.0.1
 - DNS suffixes: [REDACTED]
- NTP time server:**
 - NTP time server:
 - NTP Server: fr.pool.ntp.org
 - Maximum number of tries: 5
 - Maximum waiting time for each try: 10 seconds
- Proxy servers:**
 - Manual proxy configuration:
 - HTTP:** Address: [REDACTED] Port: 8080
 - HTTPS:** Address: [REDACTED] Port: 8080
 - FTP:** Address: [REDACTED] Port: 8080
- No proxy for:**
 - Delivery server
 - Status server
 - Softwares and configurations installation server
 - Others: localhost, 127.0.0.1
- Example:** innes.pro, 192.168.0.1/24
- Automatic proxy configuration URL:** [REDACTED]

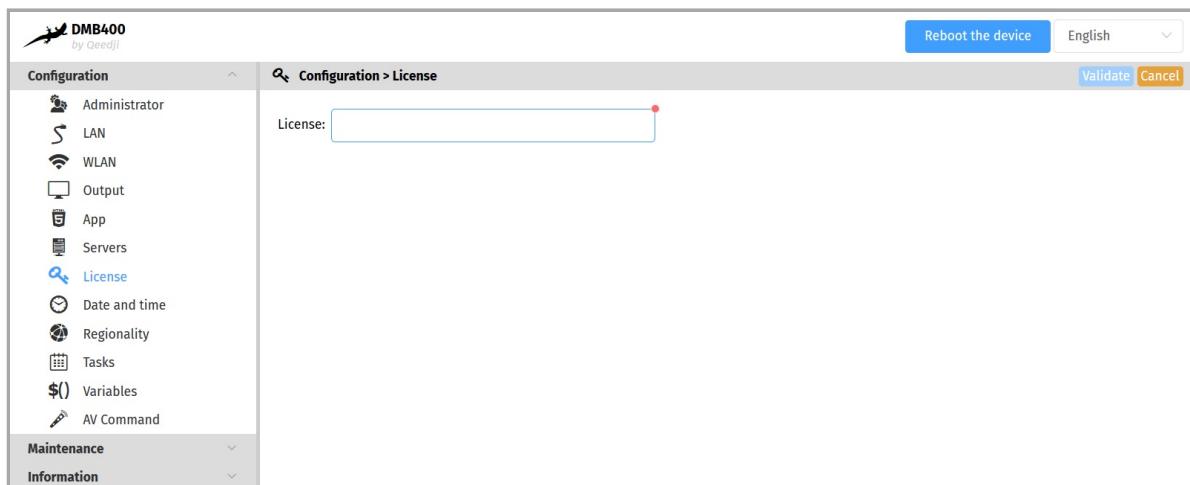
- status, software installation and configuration servers.
 - Status server :
 - URL : URL of the remote server's WebDAV frontend for the broadcast of the .device-status/status.xml device status file. For example: http://domain:8080/.directory/
 - Username/password : login and password for the remote server's WebDAV frontend connection.
 - Heartbeat : in HH:MM:SS format, period duration of the connection to the remote server (default: 1 minute).
 - Software installation and configuration servers :
 - URL : URL of the remote server's WebDAV frontend for hosting update software and configuration scripts. For example: http://domain:8080/.directory/
 - Username/password : login and password for the remote server's WebDAV frontend.
 - Heartbeat : in HH:MM:SS format, period duration of the connection to the remote server (default: 1 minute).
- DNS servers ,
- NTP Time Servers : allows to set a time server in order the device is always on time ¹,

- Proxy server .

¹ If your device does not have access to the Internet, it is possible to turn an MS-Windows computer into a NTP server. For further information, contact your IT department.

3.1.7 Configuration > License

In the Configuration tab, select the **License** menu to view your device license number.

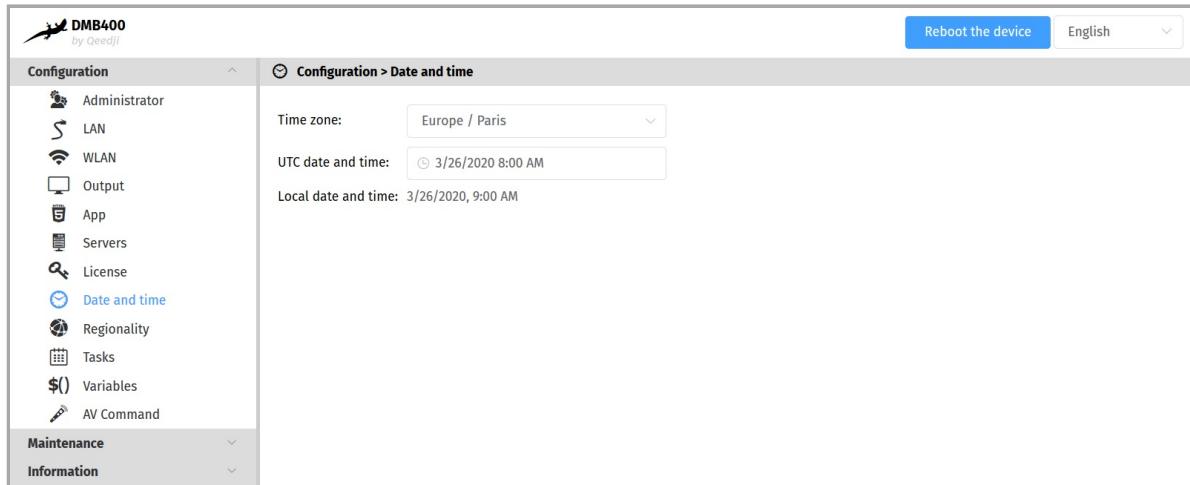


This license number is registered at the factory when the device is ordered. It is then sent to you by e-mail. If it has disappeared due to a handling error or after formatting your device, an error message indicating that the license is invalid will appear on your screen. In this case, please re-enter the license for your device.

3.1.8 Configuration > Date and time

In the Configuration tab, select the **Date and Time** menu to check the time configuration:

- timezone,
- system date of your device (day and time).



To update the date and time of your device, click on the **UTC Date and Time** value and then click on the **Now** button.

- ☞ The **Date and time** set by the user can be taken into account only if the NTP server is not activated, or if the NTP server is not accessible.
- ☞ Setting a new date and time involves to restart the device immediately. If you have several configuration settings to change, it is advisable to adjust the date and time at last.
- ☞ It is advised that your device is on time. If your device is connected to the Internet, it is advised to synchronize the date and time on a web NTP server. For further information, refer to the chapter § [Configuration > Servers](#).

3.1.9 Configuration > Regionality

In the Configuration tab, select the **Regionality** menu to choose the language in which information messages or error messages related to the device need be displayed on the screen.



The supported languages are:

- *English,*
- *Spanish,*
- *German,*
- *French.*

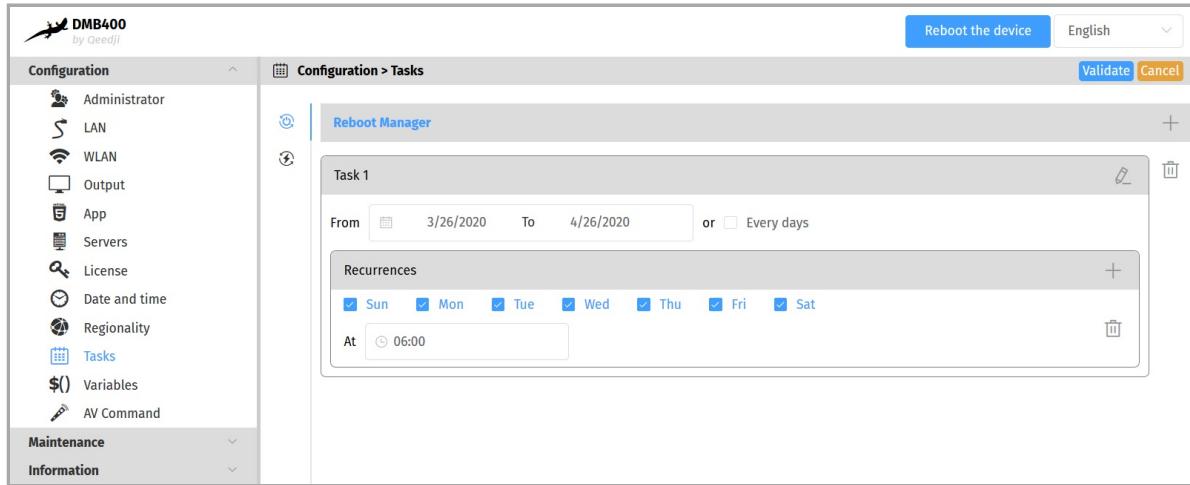
3.1.10 Configuration > Tasks

In the Configuration tab, select the **Tasks** menu to:

- program a reboot manager task,
- program a power manager task for the appliance to reduce the device energy consumption.

Device restart tasks

To create a reboot manager task, click on the  button then click on the  button.

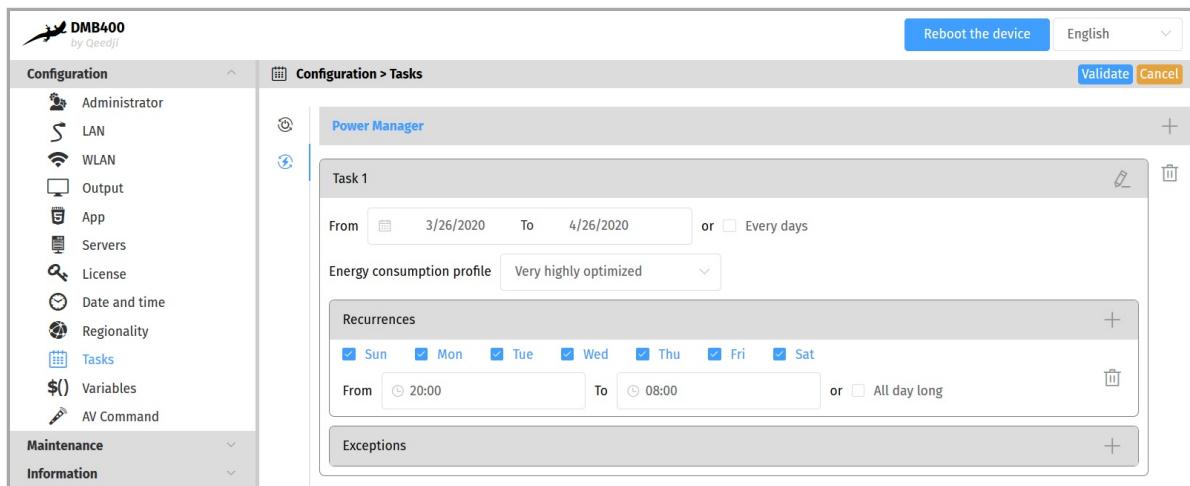


It is possible to program several reboot occurrences.

 The reboot tasks parameters are stored in an ICAL format in the user preference `innes.reboot-manager.calendar`.

Device power manager task

To create a power manager task, click on the  button then click on the  button.



The possible values programmable in time are

- *Very highly optimized*,
- *Highly optimized*,
- *Optimized means*,
- *Nominal mode*.

It is possible to create several power manager tasks in the same day.

 The power manager tasks parameters are stored in ICAL format in the user preference `innes.power-manager.calendar`.

In this version, here is the state of the device when the power manager is in the *Very highly optimized* state:

Function	Associated User Preferences
Sound: deactivated	innes.power-manager.level.min.<>.mute = true
Screen: off	innes.power-manager.level.min.<>.power-mode = 0
Volume: 0%	innes.power-manager.level.min.<>.volume = 0
Opacity: 100%	innes.power-manager.level.min.<>.opacity = 100
Brightness: 0%	innes.power-manager.level.min.<>.brightness = 0
Backlight: 0%	innes.power-manager.level.min.<>.backlight = 0

In this version, here is the state of the device when the power manager is in the *Highly optimized* state:

Function	Associated User Preferences
Sound: activated	innes.power-manager.level.low.<>.mute = false
Screen: on	innes.power-manager.level.low.<>.power-mode = 1
Volume: 10%	innes.power-manager.level.low.<>.volume = 10
Opacity: 80%	innes.power-manager.level.low.<>.opacity = 80
Brightness: 10%	innes.power-manager.level.low.<>.brightness = 10
Backlight: 10%	innes.power-manager.level.low.<>.backlight = 10

In this version, here is the state of the device when the power manager is in the *Medium Optimized* state:

Function	Associated User Preferences
Sound: activated	innes.power-manager.level.high.<>.mute = false
Screen: on	innes.power-manager.level.high.<>.power-mode = 1
Volume: 80%	innes.power-manager.level.high.<>.volume = 80
Opacity: 20%	innes.power-manager.level.high.<>.opacity = 20
Brightness: 80%	innes.power-manager.level.high.<>.brightness = 80
Backlight: 80%	innes.power-manager.level.high.<>.backlight = 80

In this version, here is the status of the device when the power manager is in the *Nominal mode* state, meaning the default mode when no other power manager task is running.

Function	Related User Preferences
Sound: activated	innes.power-manager.level.max.<>.mute = false
Screen: on	innes.power-manager.level.max.<>.power-mode = 1
Volume: 100%	innes.power-manager.level.max.<>.volume = 100
Opacity: 0%	innes.power-manager.level.max.<>.opacity = 0
Brightness: 100%	innes.power-manager.level.max.<>.brightness = 100
Backlight: 100%	innes.power-manager.level.max.<>.backlight = 100

- Some running App may automatically not take into account the Power manager task scheduled in the OS. In this case, only the power manager task scheduled in the App is taken into account.
- When there is no running App or when there is a system information message displayed on the display device, the Power manager task programmed in this pane is not taken into account by the middleware.
- The values of these user preferences are all modifiable.

3.1.11 Configuration > Variables

In the Configuration tab, select the **Variables** menu to set variable (or TAG) values for this device.

The screenshot shows the DMB400 configuration interface. On the left, there is a sidebar with icons for various settings like Administrator, LAN, WLAN, Output, App, Servers, License, Date and time, Regionality, Tasks, and AV Command. Below this is a 'Maintenance' section and an 'Information' section. The main area is titled '\$() Configuration > Variables'. It contains a heading 'Custom device variables:' followed by five input fields labeled 'field1' through 'field5'. At the top right of the main area, there are buttons for 'Reboot the device' and language selection ('English').

The variable names are:

- field1 ,
- field2 ,
- field3 ,
- field4 ,
- field5 .

These variable values can then be used in Apps to perform specific processing for devices having specific variables values.

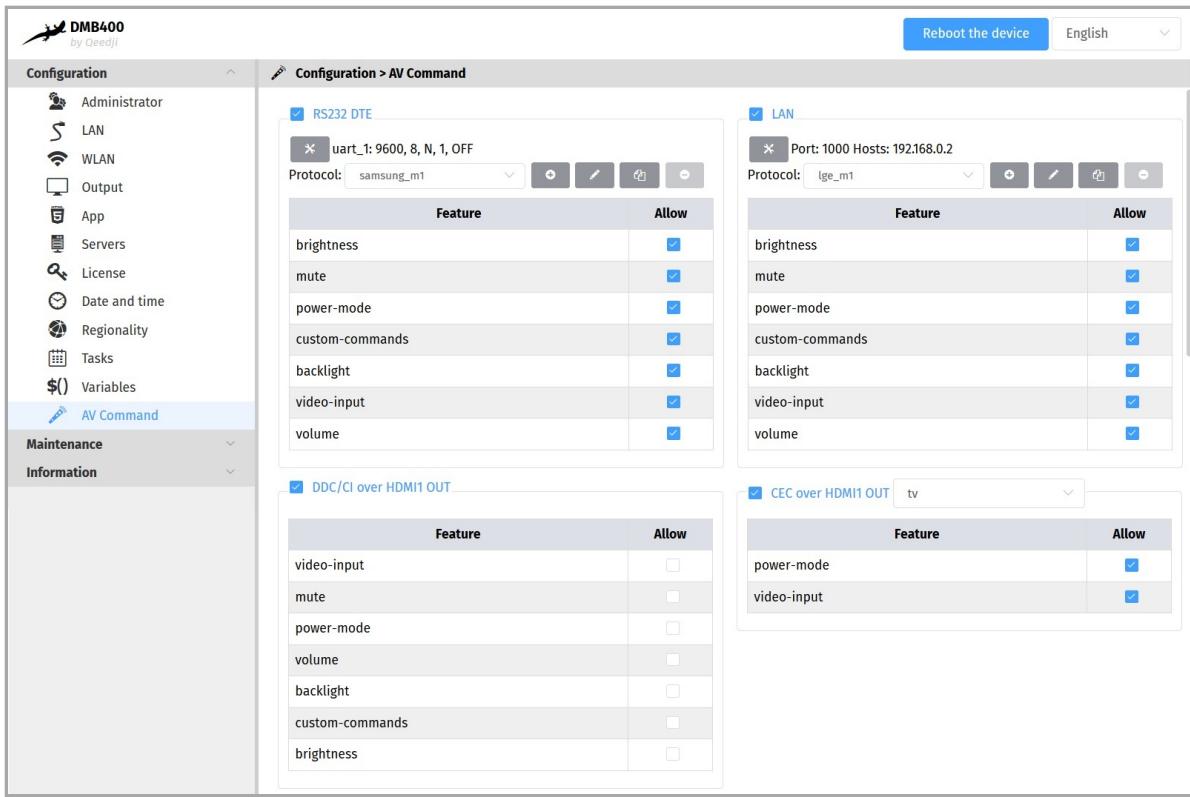
3.1.12 Configuration > AV commands

In the Configuration tab, select the **AV Commands** menu to enable the control of screens by AV (Audio-Video) commands through the connectors:

- RS232 ,
- ETHERNET ,
- HDMI .

AV Command name	Description
<i>brightness</i>	screen brightness control
<i>mute</i>	screen mute control
<i>power-mode</i>	screen saver control
<i>back-light</i>	screen backlight control
<i>video-input</i>	screen audio-video source selection control
<i>volume</i>	screen volume control
<i>custom-commands</i>	control of specific display devices (projectors, ...) via support for user-implemented AV commands

When the *power-mode* AV control is enabled through the specified connectors, it is automatically used when the App goes into screen saver mode or when a screen saver task is scheduled through the Web-based configuration interface.



Depending on the connectors, not all AV commands are supported.

RS232

For screen control via AV Command RS232 DTE, select the **RS232 DTE** option.

First check in the datasheet that your screen supports AV Command via RS232. Using the screen configuration menu, activate the support of AV Command via RS232 on your screen (example for a SAMSUNG screen: Menu Multicontrol then MDC Connection then select RS232 MDC).

In order for your screen to be able to receive AV commands, connect a crossover serial cable between your device and your screen.

With the **X** button, configure the RS232 interface of your device to match the RS232 configuration of your screen.

Choose the appropriate protocol according to your screen.

First check in the datasheet of your screen or audio-video device which AV Command protocol is supported.

If none of the protocols are suitable, you can create your own protocol with the button **+** or duplicate an existing protocol with the button **copy** and adapt it with your own AV Commands.

LAN

For screen control via AV Command LAN, select the `LAN` option.

With the  button, configure the LAN interface of your device by adding:

- the IP address(es) of the screen(s) to drive,
- the port to be used (for example, port 1015) for sending AV commands.

 Check beforehand in the datasheet that your screen supports AV Command over Ethernet. Using the screen configuration menu, activate the support of AV commands over Ethernet on your screen (for example for a SAMSUNG screen: Menu `Multicontrol` then `MDC Connection` then select `Ethernet MDC`).

 In order for your display to receive AV commands over Ethernet, make sure that your device and display are in the same local network.

Choose the appropriate protocol based on your screen.

 First check in the datasheet of your screen or audio-video device which AV Command protocol is supported.

 If none of the protocols are suitable, you can create your own protocol with the button  or duplicate an existing protocol with the button  and adapt it with your own AV Commands.

DDC/CI on HDMI-OUT

For AV Command DDC/CI screen control through the HDMI-OUT connector, select the `DDC/CI on HDMI-OUT` option.

 Some displays do not support AV Command DDC/CI properly. If your screen does not exit from standby after activating AVCommand despite an App that is properly programmed, consider disabling DDC/CI AV Commands for that screen as it probably does not support standby output AV commands properly.

CEC on HDMI-OUT

For screen control by AV Command CEC through the HDMI connector, select the `CEC on HDMI-OUT` option.

 Some screen do not properly support AV commands by CEC. If your screen does not come out of standby after activating AVCommand despite an App that is properly programmed, consider disabling CEC AV Commands for that screen as it probably does not support standby output AV commands properly.

Next, to control your screen with the AV Controls, load and play an appropriate App. It is possible to create your own App that uses the AVCommand APIs available here: [github AVCommand API](#).

3.1.13 Maintenance > Test card

In the Maintenance tab, select the **Test card** menu to enable or disable the test pattern. The test pattern is often enabled during:

- installing devices on the network,
- the configuration of the output resolution and overscan.

To display the test pattern at device start-up, set the **Test card** toggle button to *activated*. To not display the test pattern App at device start-up, set the **Test card** toggle button to *deactivated*.

☞ The test pattern content is displayed by the DMB400 device at start-up when it is coming straight from factory. For further information about the test pattern content, refer to the chapter § [Test card](#).



☞ When the test card is activated, the content of the App is not played.

Activation of the test pattern through your screen supporting CEC

If your screen supports the CEC¹² on HDMI, you can enable or disable the test pattern by pressing a key combination on the screen's remote control:

- [left Arrow, Right Arrow, Left Arrow, Right Arrow] key combination in less than ten seconds.

☞ Make sure that no menus or banners are displayed on the screen.

☞ Before applying the keystroke combination, some screen requires to unselect and then select the HDMI source of the display to which the device is connected to force a CECSetInput_Source.

¹ For SAMSUNG screen, CEC is usually activated by activating the Anynet function.² for LG screen, CEC is usually activated by using the Simplink key on the remote control.

Function	Linked User Preference
Support for test pattern activation by key combination	innes.player.test pattern.key-event.*.authorized (default= true)

☞ The displaying of the IP V6 address value starting with the prefix fe80:: is not supported in the Test Card content. For further information, contact your IT department so that your network is advertising the IP V6 address with another prefix (ex: fc00::).

3.1.14 Maintenance > Middleware

In the Maintenance tab, select the **Middleware** menu to view the version of the middleware installed on your device.



Corrective and evolutive maintenance software versions are regularly made available on the http://www.innes.pro/en/support/index.php?DMB400/Firmware_and_documentation_for_DMB400. It is therefore advised to regularly update the device middleware. From this website, download the latest version available for your device model. Unzip the .zip archive and get the .frm file.

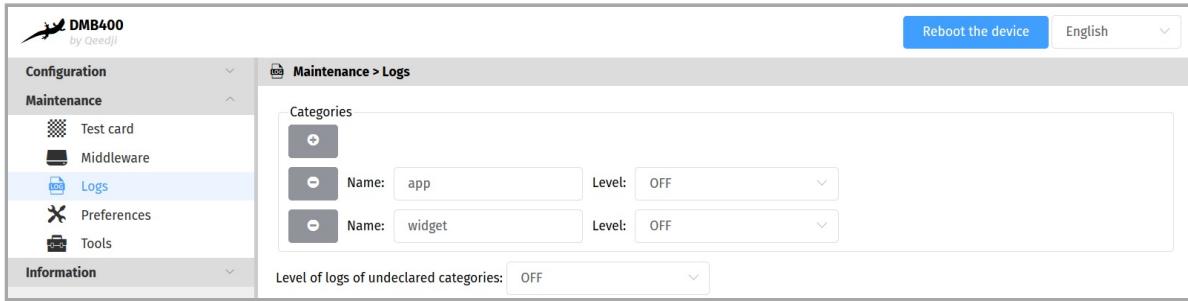
It is possible to upgrade the device from a version Gekkota OS 4.YY.ZZ to a version Gekkota OS 5.YY.ZZ. But it is not possible to downgrade the device from a version Gekkota OS 5.YY.ZZ to a version Gekkota OS 4.YY.ZZ.

Drop your .frm file in the Drop file here location or click on it to add one, then click on the Send button to update the Gekkota os version of your device. Wait a few minutes, the time to load and install the new middleware version. Go back to the device configuration console web user interface and check the new Gekkota os version number of the device.

⚠ Do not electrically disconnect the device during the middleware upgrade. For further information, refer to the chapter § [LED behaviour](#).

3.1.15 Maintenance > Logs

In the Maintenance tab, select the **Logs** menu to activate logs.



The log levels are:

- DEBUG : activation of level logs: ERROR + WARN + DEBUG,
- WARN : activation of level logs: ERROR + WARN,
- ERROR : activation of level logs: ERROR,
- OFF : disabling logs.

Logs are compartmentalized according to software functions such as:

- app : App debug,
- widget : HTML widget debugging,
- network : debug of the network related layer,

☞ These logs may be activated on support request in exceptional debug cases.

☞ These logs can only be interpreted only by software developers who are familiar with the software bricks that have been developed.

Activating the logs with a level other than OFF should only be done after a request from Qeedji support.

⚠ Enabling traces All trace levels of undeclared categories with a DEBUG or WARN level can significantly disrupt the operation of the device.

⚠ After a debug session with support, in nominal operation, all levels should be reset to OFF .

3.1.16 Maintenance > Preferences

In the Maintenance tab, select the **Preferences** menu to view all the preferences.

The filter allows to display only the preferences whose name contains the string entered in the filter. All the preferences have optimal default values. Double click on a preference to change its value.

At the bottom right of the page, the `Restore factory preferences` button resets a subset of preferences allowing the device to reprogram its factory preferences.

Here are some user preferences that may be useful.

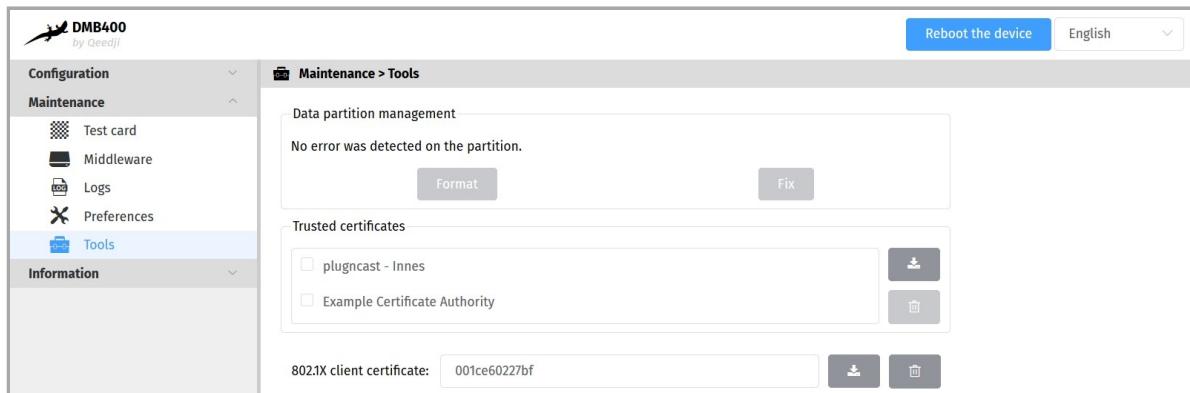
user preference	value	description
<code>innes.video.renderer.default</code>	<code>overlay</code> (default value)	Supports 1 UHD video + 1 H265 video simultaneously. This also supports the HDMI input which is treated as an additional video decoding. This allows to process the text scrolling overlay 60Hz. Allows to support video decoding at the HDMI input. Supports the enhanced hardware deinterlacing filter as well as the display of Mpeg-TS interlaced video.
<code>innes.video.renderer.default</code>	<code>gpu</code>	Allows to support 2 simultaneous 1080p video decoding + 2 simultaneous 720p decoding or to support interlaced video in very small areas.
<code>innes.video.decoding-group.enabled</code>	<code>true</code>	Allows to decode multiple videos at the same time.
<code>media.mediasource.enable</code>	<code>false</code>	Disabling the DASH MSE.
<code>innes.hid.pointer-event.*.authorized</code>	<code>true</code>	Allows to support for HDMI/USB touchscreens.
<code>innes.video.has.max-bitrate</code>	<code>5</code>	(Mbps) setting the maximum bitrate of a DASH Mpeg stream.
<code>media.cache_size</code>	<code>16384</code> (default) to <code>65536</code>	(in KB) Allows to support higher bitrate for DASH Mpeg streams.
<code>innes.webserver.providers.http.enabled</code>	<code>true</code>	Allows to support access to the device in <code>http://</code> .
<code>innes.webserver.providers.https.enabled</code>	<code>true</code>	Allows to support access to the device in <code>https://</code> .
<code>system.clock-sync.enable</code> <code>system.clock-sync.ptp.timeout.lock-on-master</code> <code>system.clock-sync.ptp-domain</code> <code>system.clock-sync.source</code>	<code>true</code> <code>30</code> <code>0</code> <code>ptp-l2</code>	Allows to activate the PTP/IEEE1588 synchronization on a master device, PTP/IEEE1588 Master device finding timeout ¹ in seconds (30 by default), PTP/IEEE1588 domain id (0 by default), PTP/IEEE1588 Synchronization modes: <code>ntp</code> (default value) or <code>ptp-l2</code> .

¹ After this timeout, the DMB400 device becomes PTP/IEEE1588 master device.

3.1.17 Maintenance > Tools

In the Maintenance tab, select the **Tools** menu to:

- Fix errors detected on the SSD card data partition,
- format the SSD card data partition,
- add Trusted certificates,
- add 802.1X client certificate (.p12).



The encryption algorithms supported to decrypt the .p12 certificates are:

- 128 bits RC4 with SHA1,
- 40 bits RC4 with SHA1,
- 3 keys 3DES with SHA1 (168 bits),
- 2 keys 3DES with SHA1 (112 bits),
- 128 bits RC2-CBC with SHA1,
- 40 bits RC2-CBC with SHA1.

☞ The format and fix buttons are only active if the Gekkota OS middleware has actually detected writing or reading errors on the partition.

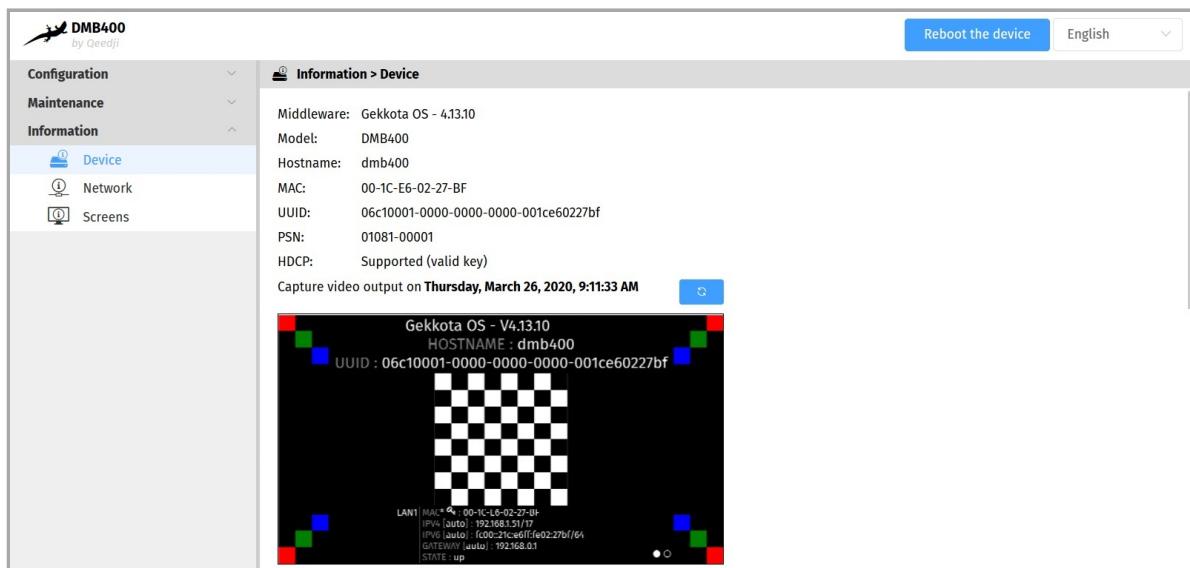
A message indicates on the screen that an error has occurred on the partition and that a device reboot is necessary.

If the Fix button is accessible, clicking on the Fix button will repair the content without purging the App. If the problem persists, and the Format button is available, clicking on the Format button will format the content. It is then necessary to publish again the App.

☞ If the problem persists after formatting the SD card, contact your Qeedji support.

3.1.18 Information > Device

In the **Information** tab, select the **Device** menu to view system information about the device.



- Middleware : label and version of the embedded middleware,
- Model : model of the Qeedji device,
- Hostname : name of the device on the network,
- MAC : MAC address (value used in particular to generate the license key of the device),
- UUID : Universal Unique IDentifier,
- PSN : Product Serial Number.
- HDCP :
 - *Supported (valid key)*: Indicates that HDCP is supported by the device and that it has a valid HDCP key,
- video output capture on <day date> : last video output capture.

Press the button to refresh the screenshot.

The width of the screenshot is set by the `innes.screenshot.width-max` preference (default: 960 pixel). If the width of the device's display resolution is less than this value, the width of the screenshot fits this narrower resolution width.

3.1.19 Information > Network

In the **Information** tab, select the **Network** menu to view a summary of the device's network configuration.

The screenshot shows the DMB400 device interface with the 'Information' tab selected. Under the 'Information' tab, the 'Network' menu is chosen. The main content area displays network configuration details under three sections: 'Delivery, status and installation servers', 'NTP time server', and two LAN interfaces ('LAN_1' and 'WLAN_1').

Delivery, status and installation servers:

Delivery server (G3):	http://custom-domain-url/	Heartbeat: 00:01:00
Status server:	http://custom-domain-url/.device-status/	Heartbeat: 00:01:00
Softwares and configurations installation server:	http://custom-domain-url/.setup/	Heartbeat: 00:01:00

NTP time server

NTP Server:	fr.pool.ntp.org
-------------	--

LAN_1

Mac address:	00-1C-E6-02-27-BF
Ip v4 address:	192.168.1.51/17 [DHCP]
Ip v6 address:	fc00::21c:e6ff:fe02:27bf/64 [AUTO]
Default gateway:	192.168.0.1
State:	connected
DNS Servers:	192.168.0.4, 8.8.8.8, 8.8.4.4

WLAN_1

Mac address:	00-0E-8E-83-10-F7
Ip v4 address:	192.168.1.225/17
Ip v6 address:	
Default gateway:	192.168.0.1
State:	not connected
DNS Servers:	

3.1.20 Information > Screens

In the **Information** tab, select the **Screens** menu to view information about the display device connected on the HDMI connector and the rotation angle.

DMB400
by Qeaja

Configuration

Maintenance

Information

Device

Network

Screens

Reboot the device English

Information > Screens

Screen #1

Connected: on HDMI1 OUT (hdmi_2)

EDID:

```
00 FF FF FF FF FF 00 4C 2D 82 0D 01 00 00 00 0E 1A 01 03 80 46 27
78 2A EE 5F A9 53 47 97 23 1E 4C 58 BF EF 80 71 4F 81 00 81 C0 81 80 95
00 A9 C0 B3 00 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 AD 11 32 00
00 1E 7F 21 56 AA 51 00 1E 30 46 8F 33 00 AD 11 32 00 00 1E 00 00 00
FD 00 18 4B 1A 51 11 00 0A 20 20 20 20 20 00 00 00 FC 00 53 79 6E
63 4D 61 73 74 65 72 0A 20 20 01 C6
02 03 23 F1 4B 90 1F 05 14 04 13 03 12 20 21 22 23 09 07 07 83 01 00 00
E2 00 0F 67 03 0C 00 10 00 80 22 01 1D 80 18 71 1C 16 20 58 2C 25 00
AD 11 32 00 00 9E 01 10 80 D0 72 1C 16 20 10 2C 25 80 AD 11 32 00 00
9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 AD 11 32 00 00 1E 01 1D 00 BC
52 D0 1E 20 B8 28 55 40 AD 11 32 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10
3E 96 00 AD 11 32 00 00 18 00 00 5F
```

Part IV

Configuration by script

4.1 Configuration by script

The DMB400 device can auto-configure with a configuration script. The configuration script can be either:

- hosted on a remote WebDAV server or
- broadcasted by your DHCP server (code 66) or
- injected through an USB storage device or
- dropped in the device `.extension` WebDAV directory with a WebDAV client.

For further information, refer to the [configuration-by-script](#) application note.

In case the script is containing an error, the syntax error is reported in the `http://<device-ip-addr>/.status/status.xml` file.

Part V

Technical information

5.1 Technical specifications

Model	Manufacturer
DMB400	Qeedji
Processors	
CPU	Quad core cortex-A9, 1.2GHz
GPU	MALI-400
Peripherals	
1x USB 2.0 Host (Low/Full/High Speed)	
1x USB 3.0 Host (Low/Full/High/Super Speed)	
1x Jack 3.5 mm configurable in GPIO or Infrared	
1x RS232 DTE	
Storage	
Internal Flash Memory for OS	
SSD mSata	
Middleware	
Gekkota OS 4	
Audio output	
1x Jack 3.5 mm connector (analog stereo L+R)	
Embedded with HDMI output	
Video output	
1x HDMI 2.0	
Display resolutions¹ for video output	
640x480 60Hz, 800x600 60Hz VESA, 1024x768 60Hz VESA, 1024x768 60Hz XGA, 1024x576 60Hz VESA, 1024x576 50Hz VESA, 1024x600 60Hz DENSITRON 84-0188-001T, 1280x720 60Hz CEA-861, 1280x720 50Hz CEA-861, 1280x720 60Hz VESA, 1280x720 50Hz VESA, 1280x720 60Hz SMPTE (720p), 1280x720 50Hz SMPTE (720p), 1280x720 60Hz CEA, 1280x720 50Hz CEA, 1280x720 60Hz SONY, 1280x720 60Hz CGV CPLine AV-HD, 1280x720 60Hz SAMSUNG, 1280x768 60Hz VESA, 1280x768 50Hz VESA, 1280x800 60Hz VESA, 1360x768 50Hz VESA, 1360x768 60Hz VESA, 1376x768 60Hz VESA, 1376x768 50Hz VESA, 1376x768 60Hz PC, 1920x1080 60Hz CEA-861, 1920x1080 50Hz CEA-861, 1920x1080 60Hz VESA, 1920x1080 50Hz VESA, 1920x1080 60Hz SMPTE (1080p), 1920x1080 50Hz SMPTE (1080p), 1920x1080 60Hz CEA, 1920x1080 50Hz CEA, 3840x2160 59.94Hz, 3840x2160 60Hz CEA-861, 3840x2160 50Hz CEA-861, 3840x2160 50Hz VESA, 3840x2160 45Hz VESTEL, 3840x2160 30Hz CEA-861, 3840x2160 25Hz CEA-861, 2560x1440 60Hz CEA-861, 3840x600 60Hz VESA, 1920x540 60Hz VESA, 1920x540 60Hz Samsung, 1920x360 60Hz Iiyama, 1920x300 60Hz VESA, 768x2560 60Hz LINSN, 128x96 60Hz, 112x96 60Hz, 96x96 60Hz,	
¹ The rotation is not supported for the resolution upper than 1920x1080.	
Video input	
1x HDMI 1.4b	
Preferred resolutions of EDID for Video input	
1920x1080p 59.94Hz, 1920x1080p 60Hz, 1920x1080p 50Hz, 1280x720p 59.94Hz, 1280x720p 60Hz, 1280x720p 50Hz, 1920x1080i 59.94Hz, 1920x1080i 60Hz, 1920x1080p 29.97Hz, 1920x1080p 30Hz	
Network	
1x Ethernet 10/100/1000 BaseT	

Options	Information
GPRS/EDGE/HSDPA Modem	Mini-SIM card (25 mm x 15 mm)
WIFI 802.11a/b/g/n (WIFI 4)	SPARKLAN WPEA-152GN(BT) module
Power supply	
12 V DC (1.2 A)	
Operating temperature	Storage temperature
0 °C to +40 °C	-20 °C to +60 °C
Operating humidity	Storage humidity
< 80 %	< 85 %
Weight	Dimensions (W x H x D)
With WIFI: 0,992 Kg (2,18 lb) Without WIFI: 0,971 Kg (2,14 lb)	213 x 39,5 x 137,5 mm (8,38" x 1,53" x 5,39")
Warranty	
3 years	

5.2 Conformities

In conformity with the following European directives:

- LVD 2014/35/EU ,
- EMC 2014/30/EU .

Part VI

Contacts

6.1 Contacts

For further information, please contact us:

- **Technical support:** support@qeedji.tech,
- **Sales department:** sales@qeedji.tech.

Refer to the Qeedji Website for FAQ, application notes, and software downloads: <https://www.qeedji.tech/>

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Part VII

Appendix

7.1 Appendix: Device status (status.xml)

The DMB400 device is updating regularly its device status stored in its `/.status` WebDAV directory:

```
http://<device-ip-addr>/.status/
```

This file can be periodically sent to a remote WebDAV server for monitoring purpose.

Status.xml example:

```
<device-status xmlns="ns.innes.device-status">
<device>
<id-type>MAC</id-type>
<mac>00-1c-e6-02-20-e2</mac>
<hostname>dmdb400</hostname>
<uuid>05c00002-0000-0000-0000-001ce60220e2</uuid>
<modelName><gekkota_os-model></modelName>
<modelNumber>4.13.12</modelNumber>
<serialNumber>00920-00002</serialNumber>
<middleware>gekkota-4</middleware>
<field1/>
<field2/>
<field3/>
<field4/>
<field5/>
<ip-addresses>
<ip-address>
<if-type>LAN</if-type>
<origin>dhcp</origin>
<value>192.168.1.119/17</value>
</ip-address>
<ip-address>
<if-type>LAN</if-type>
<origin>auto</origin>
<value>fc00::21c:e6ff:fe02:20e2/64</value>
</ip-address>
</ip-addresses>
<addons/>
</device>
<status>
<date>2020-03-31T17:40:16.055055+02:00</date>
<launcher>
<power-manager level="MAX"/>
<manifest-metadata xmlns:pzpm="ns.innes.gekkota.manifest">
<pzpm:publish-size>0</pzpm:publish-size>
<pzpm:publish-generator>gekkota_ui</pzpm:publish-generator>
<pzpm:publish-date>2020-03-30T06:45:26.759Z</pzpm:publish-date>
</manifest-metadata>
<state>NO_CONTENT</state>
</launcher>
<storage>
<total unit="byte">1912532992</total>
<used unit="byte">22161408</used>
</storage>
<display-outputs/>
<setup>
<configuration>
<metadatas/>
<version>2019-06-21T13:25:25Z</version>
</configuration>
</setup>
</status>
</device-status>
```

7.2 Appendix: Qeedji PowerPoint Publisher for Media Players

This appendix explains how to publish .pptx MS-Powerpoint presentation on DMB400 devices using your MS-Office PowerPoint, on which the Qeedji PowerPoint Publisher For Media Players PowerPoint Add In is installed.

☞ The Qeedji PowerPoint Publisher For Media Players PowerPoint Add In can deal with several DMB400 devices with the same MS-PowerPoint presentation.

Prerequisite:

☞ The DMB400 device needs to be purged from any existing App. It is advised to set the App mode to the Push WebDAV value. For further information, refer to the chapter § [Configuration > App](#).

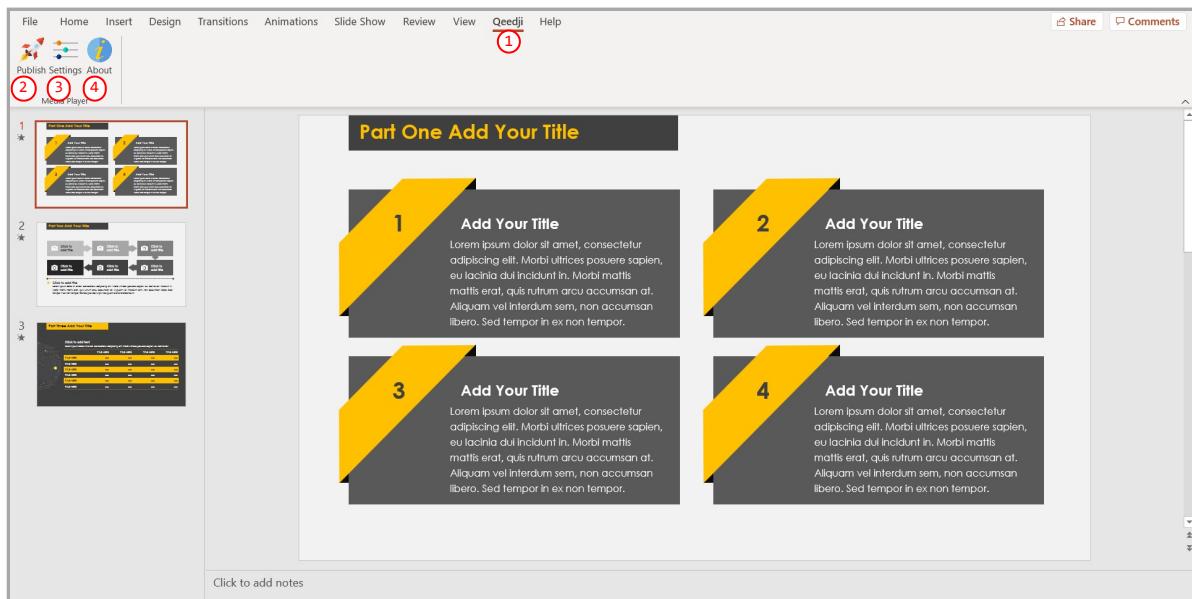
Qeedji PowerPoint Publisher For Media Players: installation

The Qeedji PowerPoint Publisher For Media Players PowerPoint Add In needs to be installed once:

- download the appropriate installer (.msi file):
 - [Qeedji PowerPoint Publisher For Media Players \(nt_ia64\)](#) for your MS-Office (nt_ia64),
 - [Qeedji PowerPoint Publisher For Media Players \(nt_ia32\)](#) for your MS-Office (nt_ia32).
 - execute the installer and choose the Everyone or Just for me installation according to your needs. For example, choose Just me ,
 - click on Next button at each step by checking the default installation settings.
- Choosing Everyone may require to run the PowerPoint with the Administrator rights to be able to deactivate the Qeedji PowerPoint Publisher For Media Players PowerPoint Add In afterwards.
- Warning: one of the installation steps is quite long and can take several minutes (for example, 2 minutes) and may depend on the computer.

Open MS-Office PowerPoint and check that a Qeedji **①** menu has appeared. Clicking on it makes appear a Qeedji ribbon which has 3 items:

- Publish **②**,
- Settings **③**,
- About **④**.



- If the Qeedji menu **①** does not appear after a successful installation, contact support@qeedji.tech.
- In the Qeedji ribbon, click on the About **④** item to see the version of the Qeedji PowerPoint Publisher For Media Players PowerPoint Add In.
- For older computer, it may be requested to install first .NET framework version 4.x.Y before installing the Qeedji PowerPoint Publisher For Media Players PowerPoint Add In.
- The same language is used for Qeedji PowerPoint Publisher For Media Players PowerPoint Add In interface and MS-Windows.
- In case you need to upgrade Qeedji PowerPoint Publisher For Media Players PowerPoint Add In, it is required to close MS-Office PowerPoint and open it again to use the new version.
- In some rare cases, the warning message PowerPoint has problems with the Qeedji complement. If the problem persists, disable this add-on and check for updates. Do you want to disable it now? (yes/no) could be prompted when opening a MS-Office PowerPoint. In this case, do ignore the message by clicking No . It should not prevent the Qeedji PowerPoint Publisher For Media Players to work properly.

Qeedji PowerPoint Publisher For Media Players: uninstallation

To remove the Qeedji PowerPoint Publisher for Media Players addin from your MS-Windows, use the Add or remove programs MS-Windows menu, then remove the program Qeedji PowerPoint Publisher for Media player .

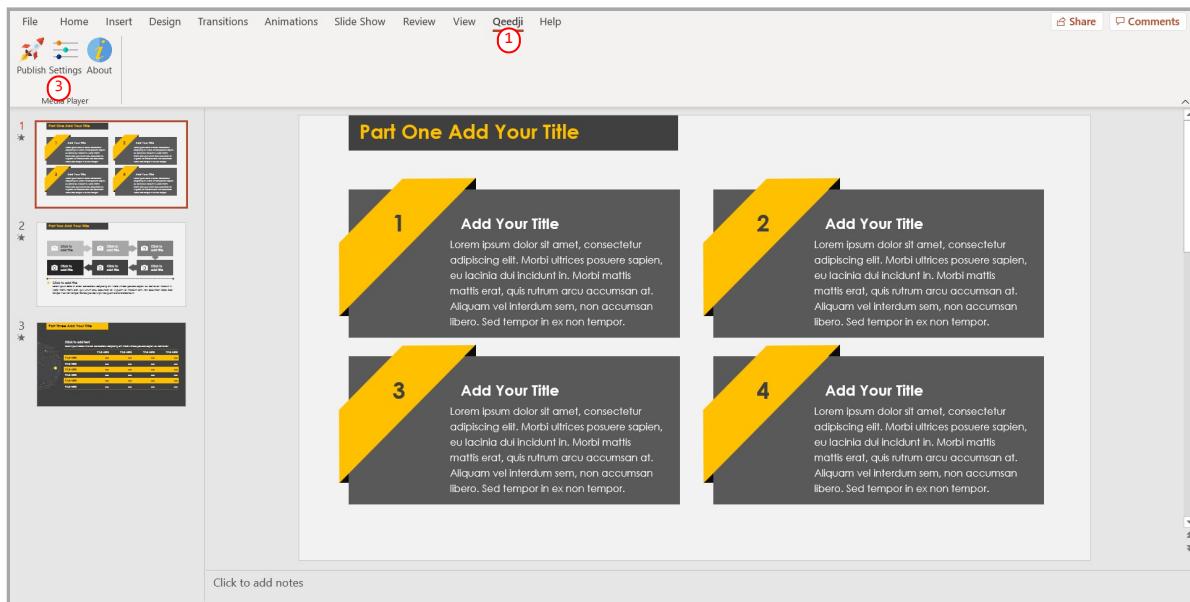
Qeedji PowerPoint Publisher For Media Players: upgrade/downgrade

Before installing a new Qeedji PowerPoint Publisher For Media Players version, it is advised to:

- close MS-PowerPoint then,
- uninstall the previous MS-PowerPoint add-in version.

- In case the version in the About pane of the Qeedji PowerPoint Publisher For Media Players is not corresponding the Qeedji PowerPoint Publisher For Media Players version just installed, disconnect from Office 365 then sign in again.

Qeedji PowerPoint Publisher For Media Players: register one or several devices

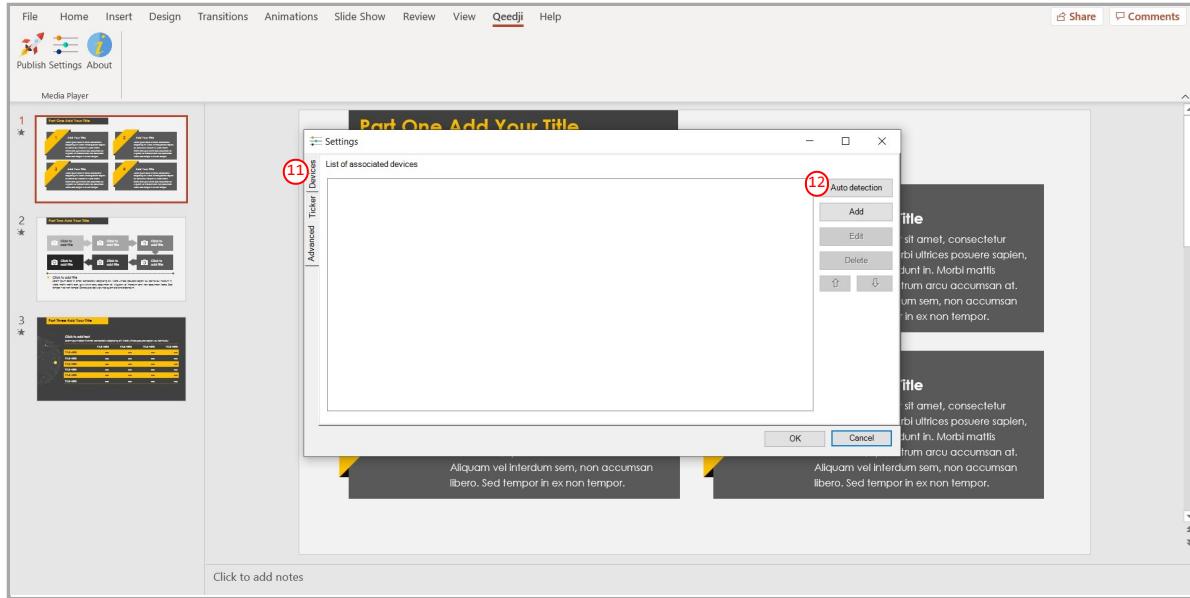


To register one or several DMB400 devices, open your MS-PowerPoint presentation then:

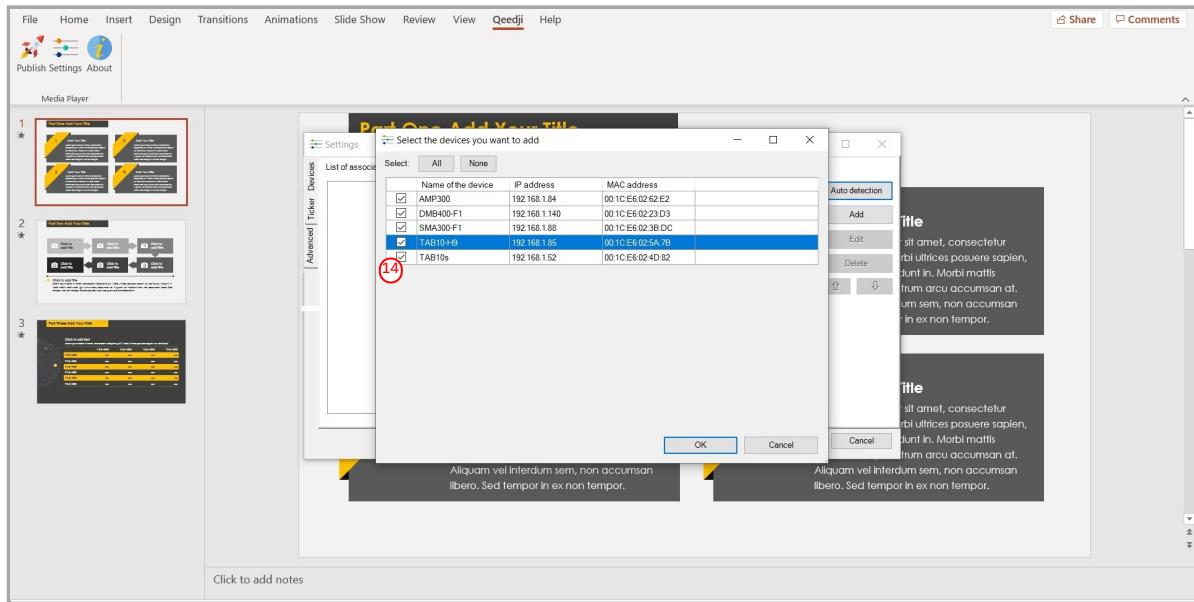
- click on the **Qeedji** (1) menu,
- on the **Qeedji** ribbon, click on the **Settings** (3) item then select the **Devices** tab.

⚠ Some of the MS-PowerPoint transition effects may be not yet supported. For further information, refer to the media player release note.

On the **Devices** (11) tab, click on the **Auto detection** (12) button to detect the DMB400 devices available on your local network.



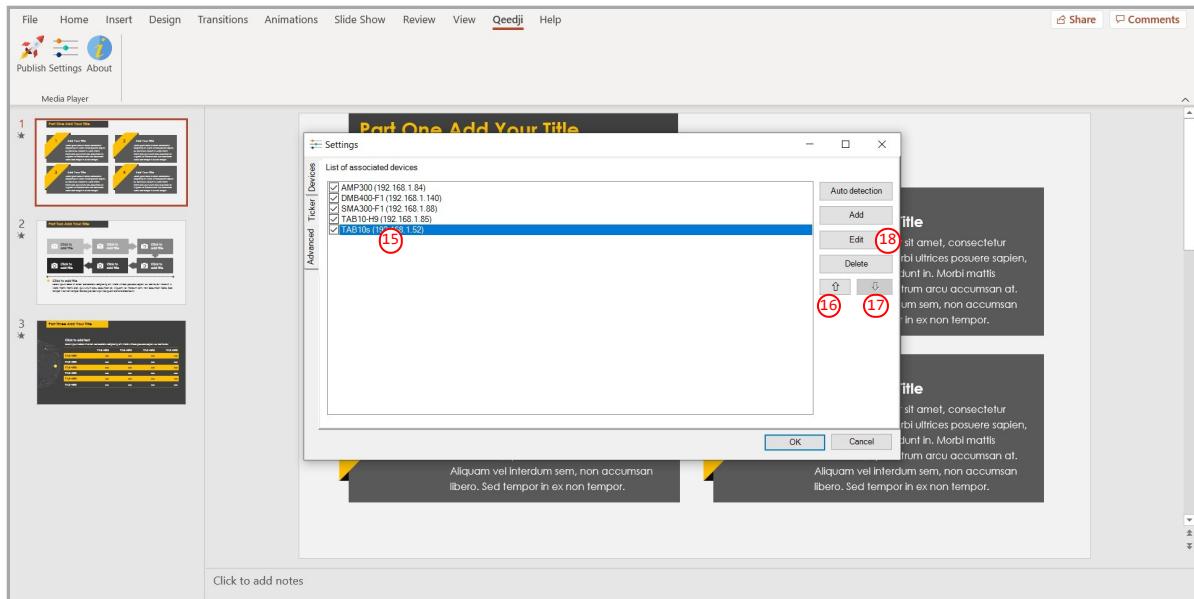
Select ⑭ the appropriate DMB400 devices to create a list of appropriate DMB400 devices as possible applicant for the MS-Powerpoint presentation.



Select then the only DMB400 devices on which you want to publish, by double clicking on them.

☞ The DMB400 devices sorting order in the list is decisive because it is taken into account during the publication. The slides of the first section, or the first ten slides, are always affected to the DMB400 device located at the top of the list. Then the publication is continuing with the next DMB400 device located immediately below, and so on.

Select a DMB400 device and use the up ⑯ arrow or the down ⑰ arrow to sort them in the right order to match the MS-PowerPoint sections.

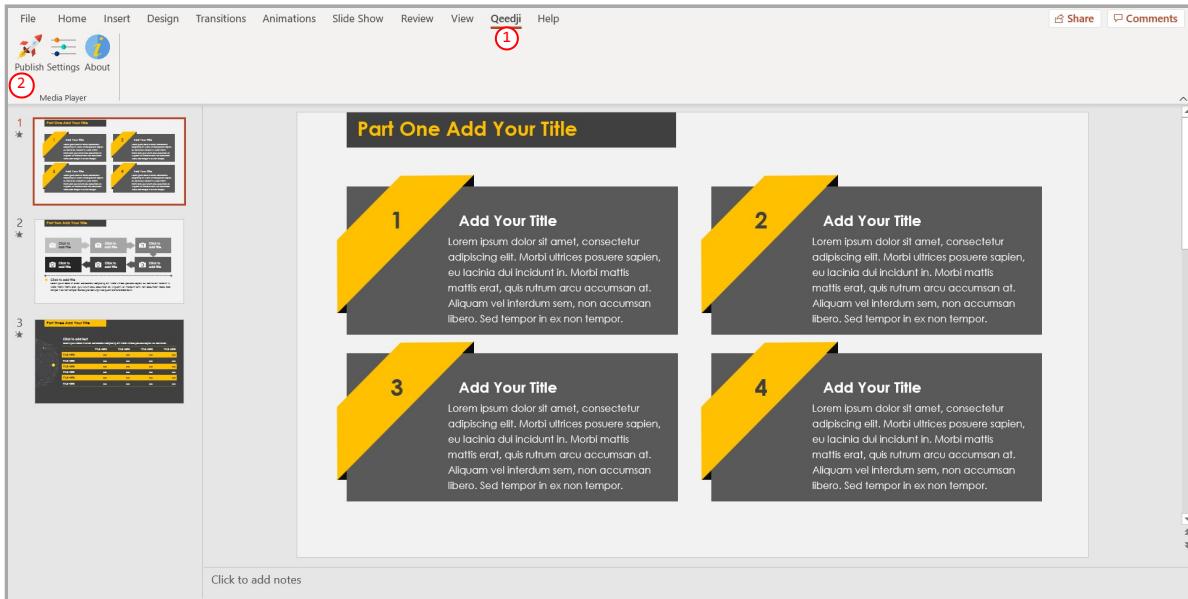


The default *administrator name/password* credentials to access to the DMB400 device's web server is `admin / admin`. After an UPnP detection, the DMB400 devices are by default registered in Qeedji PowerPoint Publisher For Media Players With the default *user/password* `admin / admin` credentials to access to their web server. If you must publish your Qeedji PowerPoint Publisher For Media Players App on a device with some *administrator name/password* credentials that are not the default one, select this DMB400 device in the list, press on the *Edit* button, and change the *user/password* by the appropriate *administrator name/password* credentials.

Qeedji PowerPoint Publisher For Media Players: publish

To publish a MS-Powerpoint content on your media player, open your MS-Powerpoint presentation with MS-Office. Then:

- click on the Qeedji (1) menu,
- on the Qeedji ribbon, click on the Publish (2) item.



Before publishing with the `Publish` item, it is advised to check in the `Settings` item, that the registered DMB400 devices are consistent and sorted in the right order.

The `Publishing status report` is showing whether the publishing on each DMB400 devices has succeeded or not:

- Publishing succeeded : the publication has succeeded
- Publishing failure (Error: 503) : the publishing has failed. In this case, check the network connection between your computer and the DMB400 device.

`Publishing status report` example:

```
1/5 - Publishing on device: AMP300 (192.168.1.84)
    Publishing succeeded

2/5 - Publishing on device: DMB400-F1 (192.168.1.140)
    Publishing succeeded

3/5 - Publishing on device: SMA300-F1 (192.168.1.88)
    Publishing succeeded

4/5 - Publishing on device: TAB10-H9 (192.168.1.85)
    Publishing succeeded

5/5 - Publishing on device: TAB10s (192.168.1.52)
    Publishing succeeded

Publishing completed
Warning - Unable to find the following fonts:
    Arvo, Montserrat Black
```

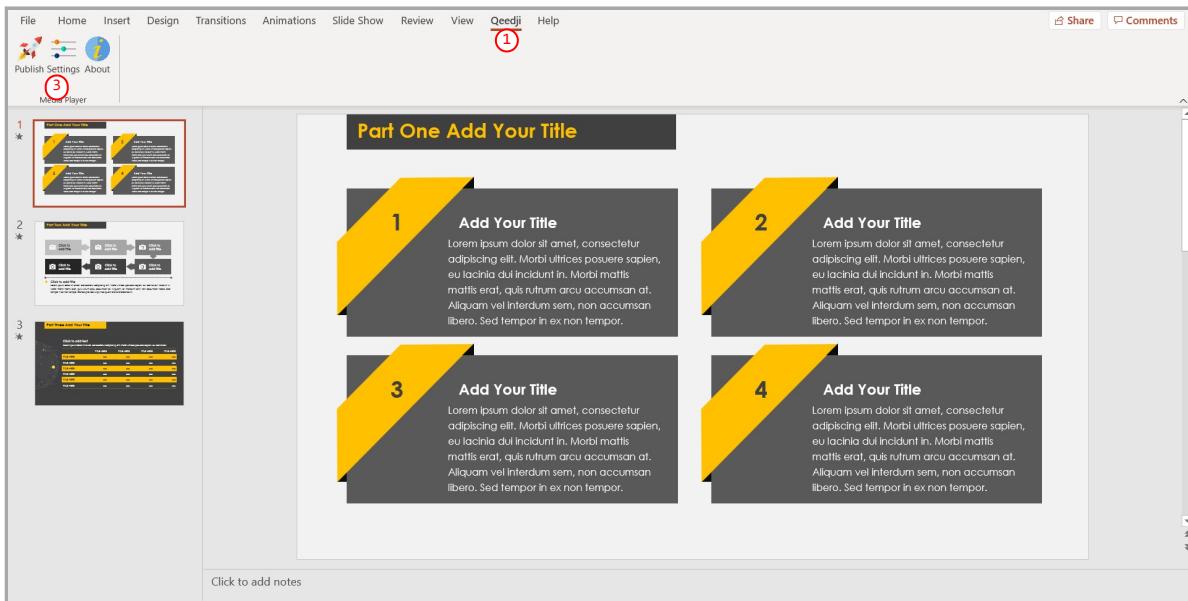
The `Publishing status report` is showing also whether the MS-PowerPoint medias can be rendered with the right fonts. In case some fonts can not be found on the Windows OS, a message `Warning - Unable to find the following fonts` is displayed followed by the missing fonts names. To solve the rendering issue, install the missing fonts on your Windows OS and publish again.

The PowerPoint presentation is now running on your media player.

Qeedji PowerPoint Publisher For Media Players: define a default duration per page

To define a default duration per page to your MS-PowerPoint presentation, open you MS-PowerPoint presentation with MS-Office then:

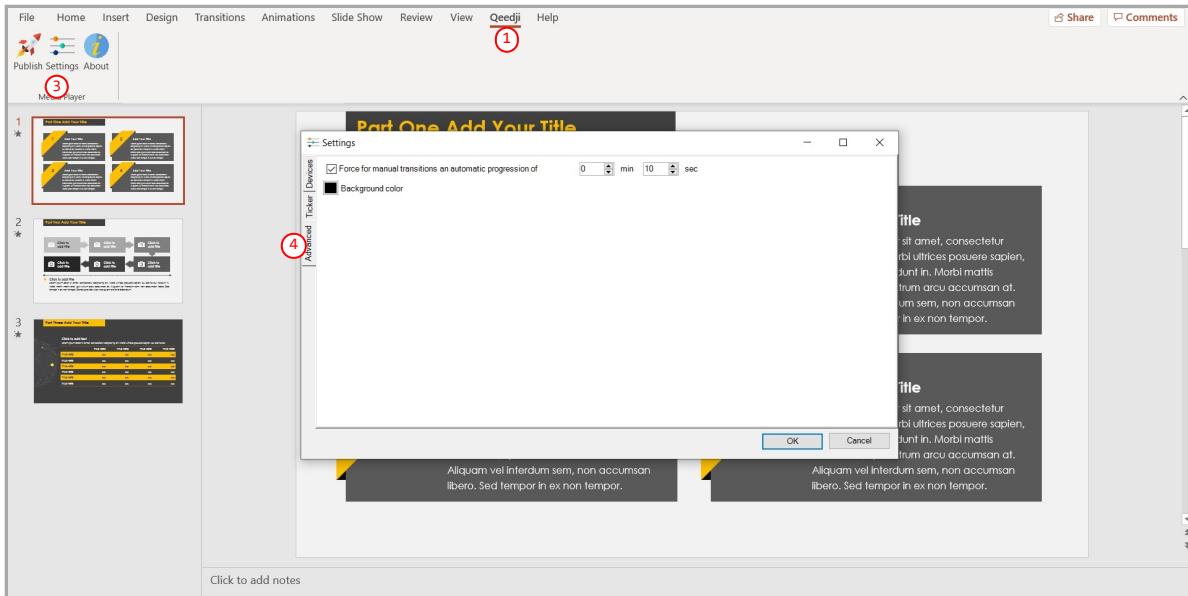
- click on the Qeedji (1) menu,
- on the Qeedji ribbon, click on the Settings (3) item then select the Advanced (4) tab.



Check the Force for manual transitions an automatic progression of option and adjust its duration:

- <m> min, <n> sec.

This default duration will be applied for slides having no duration per slide defined.



Note: The Background color is used here only when the slide aspect ratio (Slide Size in MS-PowerPoint) is not 16:9.

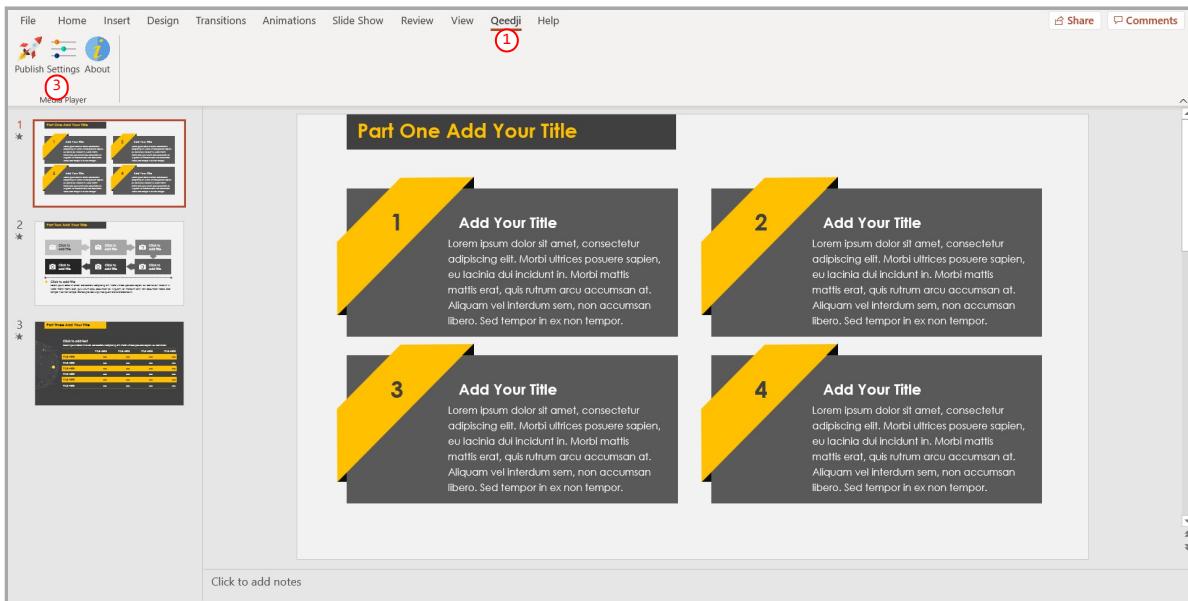
When the Force for manual transitions an automatic progression of option is not checked, to ensure a page progression, open your Powerpoint presentation with MS-Office, select the first slide, select the Transition menu. In the Transition ribbon, look at the Advance slide and check that After option is checked and check that the slide duration is more than 00:00:00. Check that point for all the slides of your Powerpoint presentation. If your slide contains a video media, check the After option and set the slide duration for this slide to 00:00:00 to automatically go to the next page when the video has ended.

Note: An PowerPoint example illustrating the last point is available in the [Qeedji PowerPoint publisher for Medias players release note](#).

Qeedji PowerPoint Publisher For Media Players: add a scrolling text in a bottom banner

To activate a scrolling text in a bottom banner to your PowerPoint presentation, open your Powerpoint presentation with MS-Office then:

- click on the Qeedji (1) menu,
- on the Qeedji ribbon, click on the Settings (3) item.



Then select the Ticker (5) tab.

Select the Scrolling text in the bottom banner (6) option to activate the scrolling of a text at the bottom of the PowerPoint presentation.

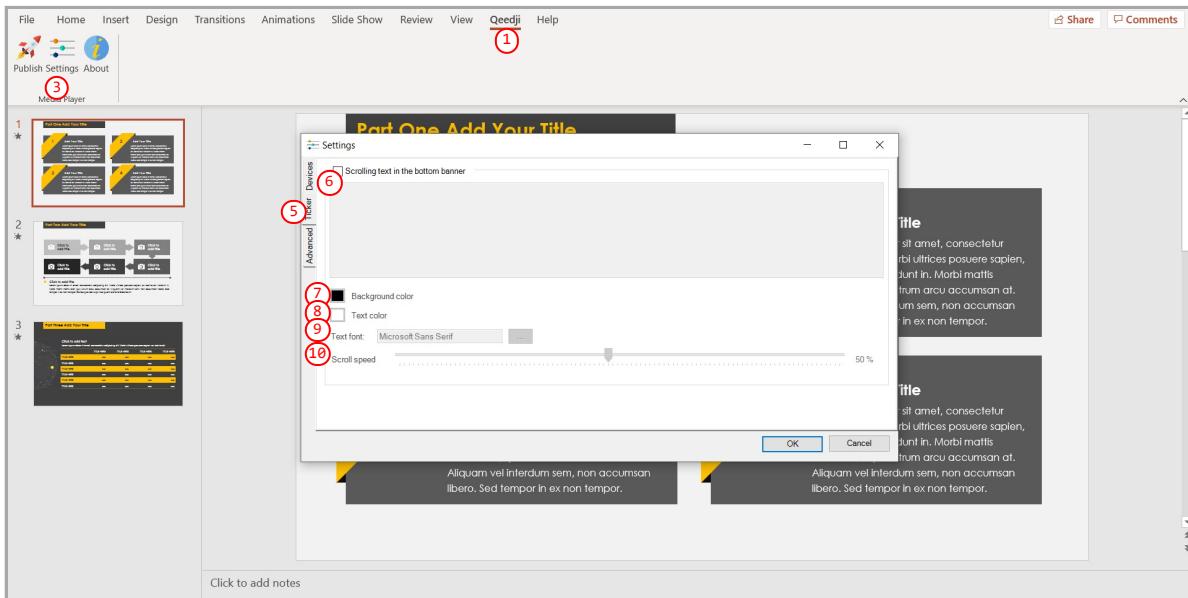
These scrolling text properties can be modified:

- Background color (7),
- Text color (8),
- Text font (9),
- Scroll speed (10).

■ The text is scrolled in overlay automatically.

■ The banner height is 9.26% of the PowerPoint slide height.

■ When the scrolling text overlay is supported by the DMB400 device, the max. number of character per line is depending on the display resolution of the DMB400 device and the chosen font. Outside this limit, the scrolling text cannot be displayed.



Qeedji PowerPoint Publisher For Media Players: information on fonts

- The default Windows font are installed here: C:\Windows\Fonts
- The custom fonts installed by the user are installed here: C:\Users\<username>\AppData\Local\Microsoft\Windows\Fonts

To add a font to your Windows, retrieve the appropriate custom font (.ttf most of time) where you can, double click on it to install it on your Windows OS. Publish the PowerPoint again.

If you don't manage to retrieve a custom font, you can decide to replace the missing custom font by another one, existing this time, in the whole PowerPoint document. In this case, use the Home > Replace > Replace Fonts PowerPoint menu.

Qeedji PowerPoint Publisher For Media Players: miscellaneous

The scheme https:// is not supported in this version.

When the App Qeedji PowerPoint Publisher for Media Players is not supported by a device (older OS, Smart monitor), the message below is displayed

Information

The App "Qeedji Powerpoint Publisher for Media player" is not supported on this device

⚠ The protected view may prevent to publish properly by returning this error: Publishing failure (Error: Unable to save a copy of the current document) ① To work around, click on the Enable editing ② button before publishing.



Qeedji PowerPoint Publisher For Media Players: user interactivity with USB keyboard or remote control

The user interactivity with USB keyboard and remote control key pressed is supported as soon as the PowerPoint presentation is played on the media player.

If the CEC is activated on your screen, and the CEC passthrough properly supported:

- Press on the RIGHT ARROW key of the screen remote control to go to the next slide,
- Press on the LEFT ARROW key of the screen remote control to go to the previous slide,
- Note: some screen may require to select again the video input so that the CEC works properly.

If not, you can plug an USB keyboard:

- Press on the RIGHT ARROW key of the USB keyboard to go to the next slide,
- Press on the LEFT ARROW key of the USB keyboard to go to the previous slide,
- Enter the slide number (for example: the number 4) then press ENTER to go ahead to a specific slide no.

⚠ Gekkota 4 allows to display/undisplay automatically the test card when pressing the key combination: LEFT ARROW , RIGHT ARROW , LEFT ARROW , RIGHT ARROW in less than ten seconds and could lead to unexpected along the PowerPoint presentation. To deactivate this feature, set the user preference innes.player.mire.key-event.*.authorized to false.

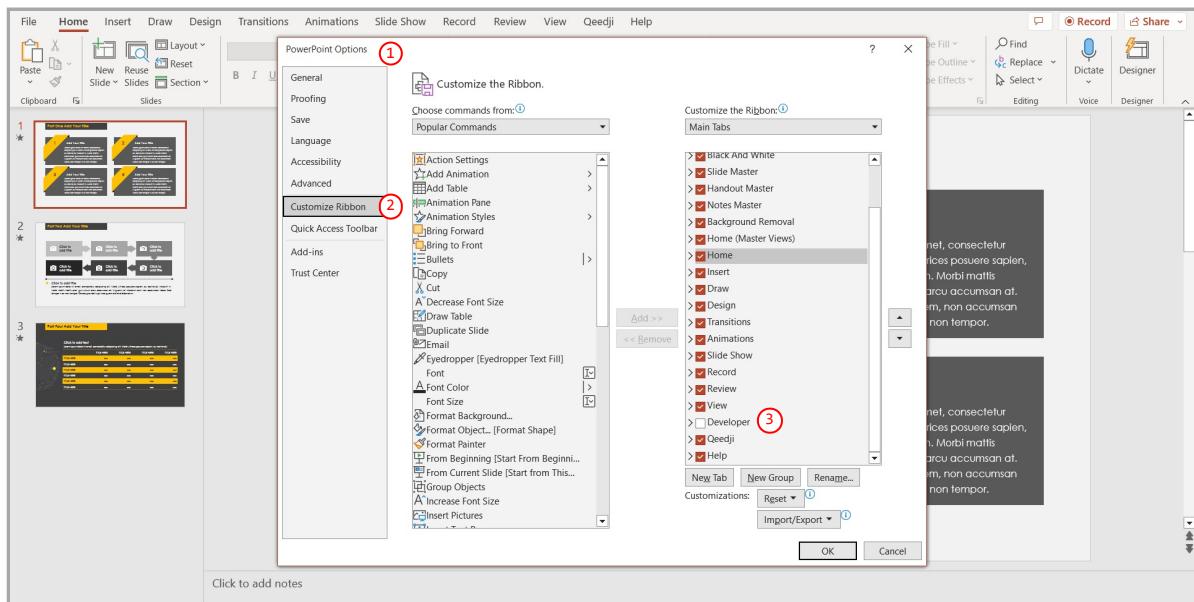
Qeedji PowerPoint Publisher For Media Players: custom script

Qeedji PowerPoint Publisher for Media Players (V1.14.10 or above) allows to load a *configuration.xml* with the *Import* feature of the optional *Developer* tab in the MS-PowerPoint ribbon.

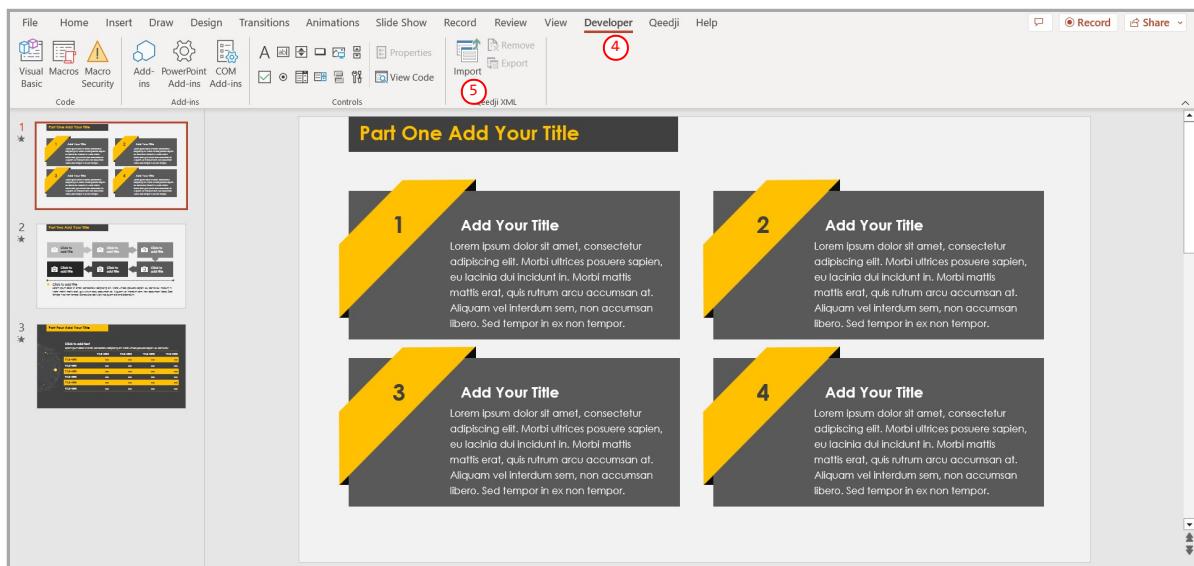
The *configuration.xml* can, for example, allow to navigate through your PowerPoint presentation page by sending specific UDP messages. In this case, it is advised to set a manual transition policy for slides where a user interactivity by UDP message is required. It is also advised to uncheck the option *force for manual transitions a automatic progression of <m> min <n> sec*. Some .xml configuration file examples are available [here](#).

Open your MS-PowerPoint presentation (.pptx) in MS-PowerPoint and click on the *Options* item of the *File* menu.

In the *PowerPoint Options* pane (1), scroll the *Customize the ribbon* (2) list to see the *Developer* (3) option. Check the *Developer* option that is not checked by default. Then validate.



Click on the *Developer* (4) tab that has just appeared. Click then on the *Import* (5) button of the Qeedji XML ribbon part.

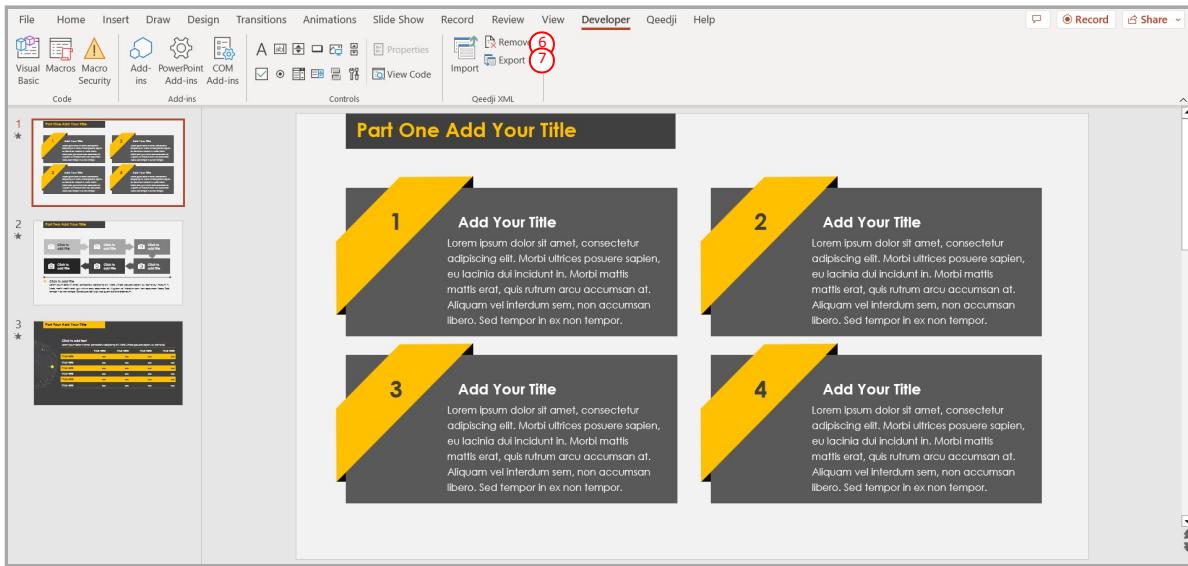


Each time the .xml file is modified, it must be imported again to be taken into account.

Select your .xml file (e.g. *configuration.xml*).

When the .xml file is successfully loaded, two buttons appear:

- Remove (6) allows to remove your .xml file,
- Export (7) allows to export your .xml file to check its content.



Save your MS-PowerPoint presentation and publish the [Qeedji PowerPoint publisher for Medias players App](#) on the device.

Qeedji PowerPoint Publisher For Media Players: screen standby

To program a screen standby task with recurrency, for example from 8.00 PM to 7.00 AM the day after, use the device [Power Manager](#) feature. For further information, refer to the chapter § [Configuration > Task](#).

Qeedji PowerPoint Publisher For Media Players: aspect ratio

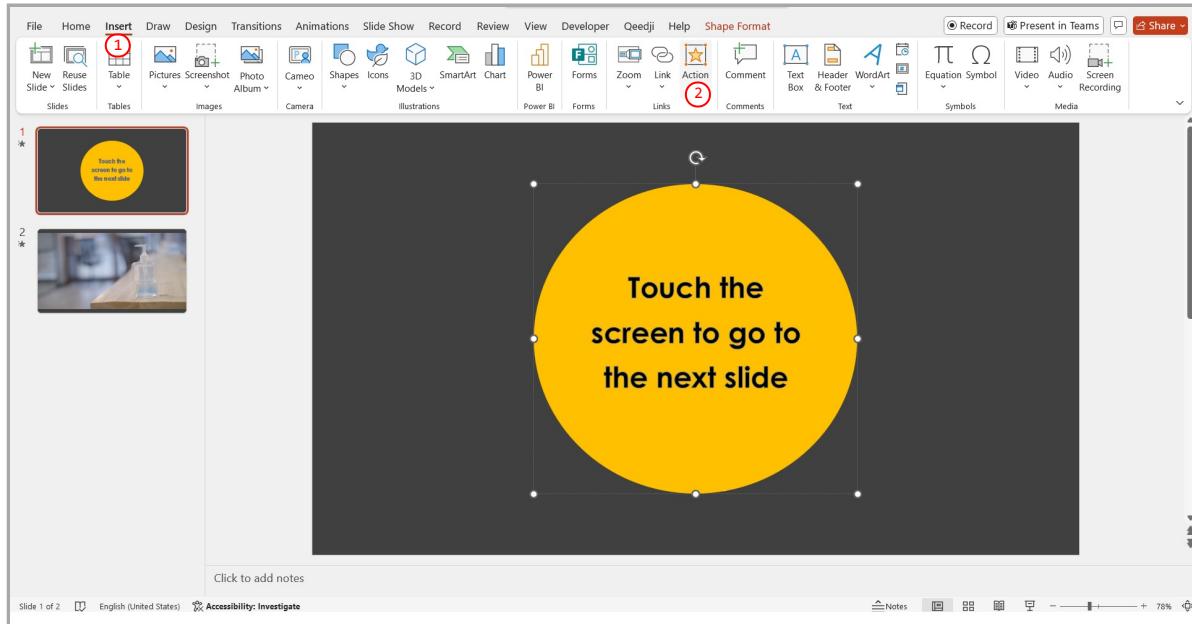
For devices, the recommended aspect ratio for MS-PowerPoint slides is 16/9.

Qeedji PowerPoint Publisher For Media Players: user interactivity with touch screen device

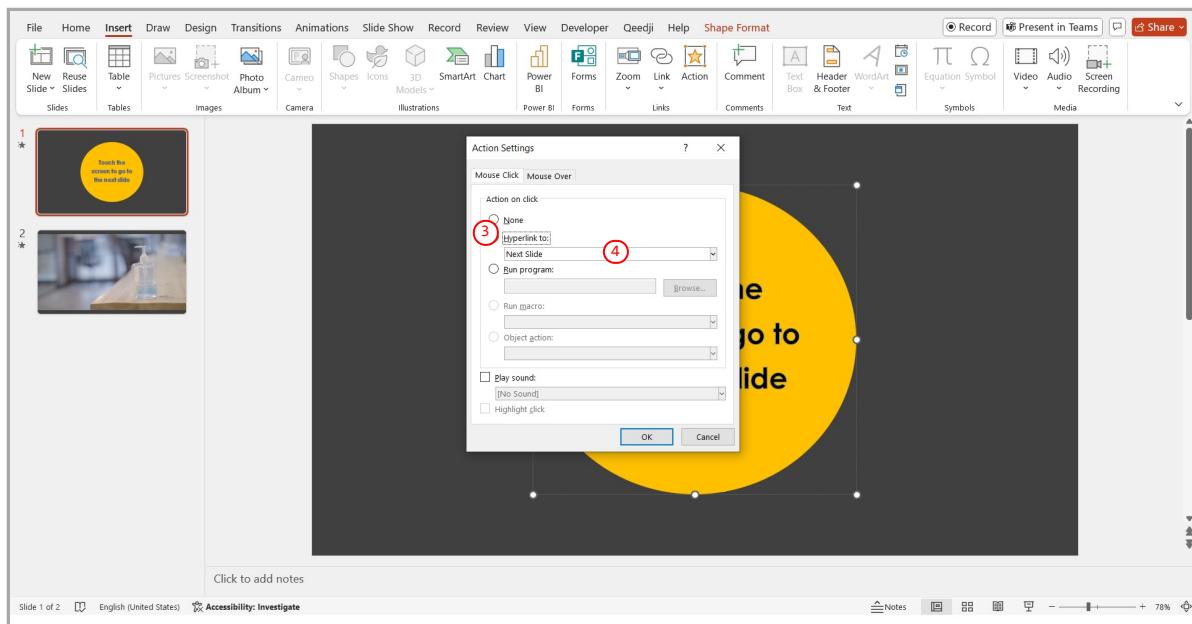
It is possible to bring touch screen interactivity to your PowerPoint presentation. This is an example to go to the next slide when the user has pressed the touch screen.

Select the slide that must support the touch screen interactivity. For this slide:

- insert an image or a text zone object whose the surface represents the interactive area,
- in this area, add a text inviting to press the screen (e.g: *Touch the screen to go to the next slide*),
- select the object of the interactive area to make appear handlers on edges and corners.
- in the ① Insert ribbon, select the ② Action item.



In the Action panel, select the Hyperlink to ③ radio button. In the drop down list, select Next slide ④.



An PowerPoint example is available in the [Qeedji PowerPoint publisher for Medias players release note](#).

For the interactive slide, to keep it displayed until user interaction, think to not define a value for the After item in the Transition menu. Think to also not check the Force for manual transitions an automatic progression of option.

7.3 Appendix: Playfolder with services accounts

The credential cache for CIFS and Microsoft 365 service account is reset each time a new App is written in the `/.playout` WebDAV directory.

When the folder synchronization with the remote folder is broken, the playfolder continue to play the last content synchronized with success. To delete the content of the local directory, image of the remote folder content when the folder synchronization is working, you need to remove the App and publish again.

The NetBIOS name resolution is not supported in this OS version.

7.4 Appendix: Scrolling text overlay

When the scrolling text is displayed in overlay in the full HD resolution, the device supports until 1226 characters per line (*Arial* font) in the text file.

When the scrolling text is displayed in overlay in the ultra HD resolution, the device supports until 688 characters per line (*Arial* font) in the text file.

 *When the text is scrolled in overlay, using another font than *Arial* may lead to a lower max number of characters per line.*

The max height for the banner in which a scrolling text is played must be lower than 20% of the screen height.

7.5 Appendix: Video-input playback inside a MS-PowerPoint slide thanks to the MS-PowerPoint Cameo object insertion

The Gekkota OS (4.14.12 or above) allows to play the video coming from the HDMI-input inside a MS-PowerPoint slide thanks to the MS-PowerPoint Cameo object.

Only the recent Desktop versions of MS-PowerPoint support the insertion of a MS-PowerPoint Cameo object type in a slide. For further information about MS-PowerPoint Cameo object, contact your Microsoft support.

To insert a MS-PowerPoint Cameo object in a MS-PowerPoint slide, click on the Insert tab of the MS-Powerpoint ribbon then click on the Cameo item.



Connect a video source on the HDMI-input connector of the DMB400 device.

Publish the App containing the MS-PowerPoint media on the DMB400 device. Once done, the slide having the Cameo object should play automatically the video coming from the HDMI-input.

7.6 Appendix: Identifier and password self-filling and self-confirmation in a web page form

List of supported input properties to auto-fill properly the *identifier* field

email type input

*user i name** input

email autocomplete input

*user i id** input

*login i id** input

*email i id** input

List of supported input properties to auto-fill properly the *password* field

password input type

List of supported validate button properties to self-confirm the credential values and access to the web page content

submit type input

submit type button

button type input

*sign id** input

*submit id** input

7.7 Appendix: Devices configuration using Powershell

Your park of Qeedji devices can be configured and maintained using the `PSDevice` Powershell module.

Introduction

This set of *Powershell* functions allows to:

for AQS devices :

- retrieve general information of device, with the `Get-AqsInfos` , functions,
- to retrieve all installed APPs, with the `Get-AqsApps` function,
- install new App with the `Install-AqsApp` function,
- remove an App with the `Remove-AqsApp` function,
- restart new App with the `Restart-AqsApp` function,
- stop new App with the `Stop-AqsApp` function,
- install a new firmware with the `Install-AqsFirmware` function.
- install a configuration script with the `Install-AqsConfiguration` function.

for Bm0032 devices :

- retrieve general information of device, with the `Get-Bm0032Infos` , functions,
- install a new firmware with the `Install-Bm0032Firmware` function.
- install a configuration script with the `Install-Bm0032Configuration` function.

for Gekkota devices :

- retrieve general information of device, with the `Get-GtkInfos` , functions,
- install a new firmware with the `Install-GtkFirmware` function,
- install a configuration script with the `Install-GtkConfiguration` function.

These functions are defined in the `PSDevice` PowerShell module stored in the `Modules\PSDevice\` directory.

Security

By default, the execution of local *Powershell* scripts are not allowed. You can change their execution rights by changing the *PowerShell* security policy. This modification has to be done once with the `Set-ExecutionPolicy` *Powershell* function. Your organization may have to change it according to your security rules.

For example, to authorize the execution of all scripts, launch a *Powershell* console with administrator rights, and type:

```
PS > Set-ExecutionPolicy -ExecutionPolicy Unrestricted -scope CurrentUser
```

For further information, look at the cmdlet `Set-ExecutionPolicy` help page.

If you cannot allow the execution of unsigned local scripts, you can install the provided certificate in the list of authorized root certificates with the command:

```
PS > cd <your_path_to_the_scripts>\Powershell_Innes_Device\Certificate\  
PS > Import-PfxCertificate -FilePath InnesCodeSigningRootCA_1.pfx -CertStoreLocation  
cert:\CurrentUser\Root -Password $(ConvertTo-SecureString "1234" -AsPlainText -Force)
```

To import the `.pfx` certificate, you can also use the MS-Windows application `certmgr.msc`, select the `Trusted Root Certification Authorities`, right clic on `All Tasks`, select the `Import` item, select the file and enter the password `1234`. When ended, close the current Powershell console.

Usage

To use Device *Powershell* modules, you have 3 possibilities:

1. Either copy the directories under `Modules\` into a standard *Powershell* module installation directory, for example "C:\Program Files\WindowsPowerShell\Modules". Then launch a *Powershell* console
2. Redefine the search variable for *Powershell* modules (the `$Env:PSModulePath` *Powershell* variable) each time you will use these functions. In this case, launch a *Powershell* console, and type the line below, adapting it to your path. Each time you will launch a new *Powershell* console, you will have to enter it again

For example:

```
PS > $Env:PSModulePath="$Env:PSModulePath;<your_path_to_the_scripts>\Powershell_Innes_Device\Modules"
```

3. Or redefine the search variable for *Powershell* modules in the Windows environment variables. For that, add the path `<your_path_to_the_scripts>\Powershell_Innes_Device\Modules` to the environment variable `PSModulePath`. Then, launch afterwards a *Powershell* console.

To use the functions or get help, you must then import the module(s) with the `Import-Module` function. Example:

```
PS > Import-Module PSDevice
```

Depending on how you get the scripts, you may have this following warning:

```
Security Warning Run only scripts that you trust. While scripts from the Internet can be useful,
this script can potentially harm your computer. Do you want to run \device\scripts\my.ps1?
[D] Do not run [R] Run once [S] Suspend [?] Help (default is "D"):
```

To avoid this message, you can unblock the script files (to do only once):

```
PS > cd <your_path_to_the_scripts>\Powershell_Innes_Device\
PS > dir -Recurse | Unblock-File
```

The `Get-Command` function allows you to list the functions defined in a module. Example:

```
PS > Get-Command -Module PSDevice
```

Answer example:

CommandType	Name	Version	Source
-----	----	-----	-----
Function	Disable-AqsApp	1.10.10	PSDevice
Function	Enable-AqsApp	1.10.10	PSDevice
Function	Get-AqsApps	1.10.10	PSDevice
Function	Get-AqsInfos	1.10.10	PSDevice
Function	Get-Bm0032Infos	1.10.10	PSDevice
Function	Get-GktInfos	1.10.10	PSDevice
Function	Install-AqsApp	1.10.10	PSDevice
Function	Install-AqsConfiguration	1.10.10	PSDevice
Function	Install-AqsFirmware	1.10.10	PSDevice
Function	Install-Bm0032Configuration	1.10.10	PSDevice
Function	Install-Bm0032Firmware	1.10.10	PSDevice
Function	Install-GktConfiguration	1.10.10	PSDevice
Function	Install-GktFirmware	1.10.10	PSDevice
Function	LogWrite	1.10.10	PSDevice
Function	Remove-AqsApp	1.10.10	PSDevice
Function	Restart-AqsApp	1.10.10	PSDevice
Function	Stop-AqsApp	1.10.10	PSDevice
Function	Test-AqsDevice	1.10.10	PSDevice
Function	Test-Bm0032Device	1.10.10	PSDevice
Function	Test-GktDevice	1.10.10	PSDevice

You can get help on each function of the module by using the standard cmdlet `Get-Help` with options:

- `-detailed`,
- `-full`,
- `-examples`.

Example:

```
PS > Get-Help -detailed Install-AqsApp
```

Examples

To use the examples, copy the directories `Examples\` into a standard *Powershell* module installation directory, for example "C:\Program Files\WindowsPowerShell\Modules".

In the directory `Examples`, you can find different powershell scripts which uses the functions of the modules.

You can get help on each example scripts, for example:

```
PS > Get-Help -detailed .\Examples\Example1\Get-DevicesInfos.ps1
```

Example 1: Get-DevicesInfos

The script `Examples\Example1\Get-DevicesInfos` is an example to retrieve informations about a pool of devices described in a json file. It uses the module `PSDevice`.

Example:

```
PS > cd <your_path_to_the_scripts>\Examples\Example1\  
PS > .\Get-PSDevice.ps1 -LogFile result.json
```

If any error occurs, look at the logfile (`result.json` in the example) to see what the problem may be.

This is an example of report:

```
[  
  {  
    "host": "192.168.0.74",  
    "info": {  
      "Psn": "01540-00657",  
      "Platform": "AMP300",  
      "Version": "9.10.19",  
      "Hostname": "AMP300-floor1",  
      "runningApps": [  
        {  
          "Label": "PowerPoint Publisher",  
          "Version": "1.15.10"  
        },  
        {  
          "Label": "PowerPoint Publisher UI",  
          "Version": "1.15.10"  
        }  
      ]  
    }  
  },  
  {  
    "host": "192.168.0.92",  
    "info": {  
      "Psn": "01320-00039",  
      "Hostname": "sbl10-floor2",  
      "Firmware": "bm0032_m365_user-sbl10e-1.12.10",  
      "Platform": "SBL10e"  
    }  
  },  
  {  
    "host": "192.168.0.91",  
    "info": {  
      "Psn": "00910-00216",  
      "Hostname": "DMB400-hall1",  
      "FirmwareVersion": "5.11.13",  
      "Platform": "dmb400"  
    }  
  },  
  {  
    "host": "192.168.10.91",  
    "error": "Not responding"  
  }  
]
```

Example 2.1: upgrade firmware

The script `Examples\Example1\Install-Devices` is an example to install firmware, an app, or a configuration script on a pool of devices described in a json file. The type of component to install is specified with the `-installType` option which can be "install", "app" or "configuration". The components to be installed are stored in the directory specified by the `"installDirPath"` option. Each type of device has an associated subdirectory:

- `aqs` for Aqs device,
- `gekkota` for Gekkota device,
- `bm0032` for Bm0032 device.

It uses the module `PSDevice`.

Open the `Examples\Example2\devices.json` and update with the values corresponding to the devices concerned:

- IPV4 adress,
- WebDAV server login,
- WebDAV server password.

In case you wish to upgrade the firmware of your park of AQS devices, do copy the appropriate firmware `.fqs` into the following directory:

- `Examples\Example2\install\aqsl`

In case you wish to upgrade the firmware of your park of Gekkota devices, do copy the appropriate firmware `.frm` into the following directory:

- `Examples\Example2\install\gekkota\`

In case you wish to upgrade the firmware of your park of Bm0032 devices, do copy the appropriate firmware `.bin` into the following directory:

- `Examples\Example2\install\bm0032\`

Command line example:

```
PS > cd <your_path_to_the_scripts>\Examples\Example2\  
PS > .\Install-Devices.ps1
```

If any error occurs, look at the logfile (`result.json` in the example) to see what the problem may be.

Example 2.2: change device configuration

In case you wish to change the configuration of your park of AQS devices, do copy the appropriate `<MAC>.js` configuration script into the following directory:

- `Examples\Example2\install\aqsl`

In case you wish to change the configuration of your park of Gekkota devices, do copy the appropriate `<MAC>.js` configuration script into the following directory:

- `Examples\Example2\install\gekkota\`

In case you wish to change the configuration of your park of Bm0032 devices, do copy the appropriate `<MAC>.js` configuration script into the following directory:

- `Examples\Example2\install\bm0032\`

Copy the `Install-Devices.ps1` file, paste it in the same directory and rename it `Configure-Devices.ps1`. Replace in it the part `[string] $installType = "install"`, by the part `[string] $installType = "configuration"`,

Open the `Examples\Example2\devices.json` and update with the values corresponding to the devices concerned:

- IPV4 adress,
- WebDAV server login,
- WebDAV server password.

Example 2.3: install APK

In case you wish to install some APK in your park of AQS devices, do copy the appropriate `.apk` into the following directory:

- `Examples\Example2\install\aqsl`

Copy the `Install-Devices.ps1` file, paste it in the same directory and rename it `InstallApk-Devices.ps1`. Replace in it the part `[string] $installType = "install"`, by the part `[string] $installType = "app"`,

Open the `Examples\Example2\devices.json` and update with the values corresponding to the devices concerned:

- IPV4 adress,
- WebDAV server login,
- WebDAV server password.

7.8 Appendix: RPC API

The Gekkota OS supports the RPC API.

Extract of PowerShell script to get device information

```
$pwd = ConvertTo-SecureString myPassword -AsPlainText -Force
$credential = New-Object System.Management.Automation.PSCredential ($mylogin, $pwd)
$data=@(
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.version"},
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.hostname"}
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.platform"}
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.uuid"}
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.mac"}
    [PSCustomObject]@{args=@();target="nsISystemGeneralSettings.psn"}
)
$body = $data | ConvertTo-Json -Depth 5
$ExecutedRequest = Invoke-WebRequest -SessionVariable session -Body $body -Credential $credential -Method 'POST'
-ContentType "application/json+rpc" -Uri "http://<MyGktDeviceIpV4Addr>/.admin/"
```

For further information about API and examples, refer to the [Gekkota Github](#).