Vokkero ELITE SMART GATEWAY FCC

User guide

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V1.0	Creation	VLR	07/10/2021

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- This guide describes the functionality of the system Vokkero® ELITE SMART GATEWAY FCC, options and accessories.

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ENGLISH

INFORMATIONS

Document Information	
Title	VOKKERO ELITE SMART GATEWAY FCC
Subtitle	US/CAN
Document type	User Guide
Version	Version 1.0

This document applies to the following products:

Name	Reference
VOKKERO ELITE SMART GATEWAY FCC	From : **VO8346B**

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VOKKERO ELITE SMART GATEWAY US/CANADA - VO8346B

COMPLIANCE TO FCC US/CAN

• This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause Harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radiocommunication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off
and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by VOGO could void the user's authority to operate the equipment.

This device complies with license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS standard(s).
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lower) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be chosen so that the equivalent isotropically radiated power (e.i.r.p.) is not superior than necessary for successful communication.

Ce dispositif est conforme aux règles de la FCC part 15.
Son fonctionnement est sujet aux deux conditions suivantes :
(1) le dispositif ne doit pas produire de brouillage préjudiciable, et
(2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux radiocommunications. Il est cependant toujours possible que des interférences se produisent dans le cadre d'une installation particulière.
Si cet appareil produit des interférences nuisibles à la réception des programmes de radio et de télévision –détectables lors de la mise hors tension ou en tension de l'appareil-l'utilisateur est encouragé à mettre en œuvre une ou plusieurs des mesures suivantes pour remédier à ces interférences :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Branchez le matériel à une sortie sur un circuit différent de celui auquel le récepteur est branché.

- Prendre conseil auprès du commerçant ou d'un technicien de radio/TV expérimenté.

Tout changement ou modification non expressément approuvé par la partie responsable des mesures de conformité peut amener l'utilisateur à se voir interdire l'usage de l'appareil.
Cet appareil est limité à l'exploitation des fréquences autorisées Partie 15, et ne peut pas être configuré par des utilisateurs finaux ou des installateurs professionnels à fonctionner en dehors des bandes autorisées.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with FCC and ISED RF radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil est conforme à l'exposition aux radiations RF de la FCC et de l'SIED. Cet appareil doit être installé à une distance d'au moins 20 cm des personnes et ne doit pas être situé ou fonctionner conjointement avec une autre antenne ou un autre émetteur.

Contains:
- FCC ID : 2AU6N-VO83644AA
- CANADA ID : 25704-VO8364AA

Contains :
- FCC ID : TFB-1004
- CANADA ID : 5969A-1004

Product reference: USA/CANADA:VO8346B

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ENVIRONMENTAL RECOMMENDATIONS

All superfluous packaging materials have been eliminated. We have done everything possible to make it easy to separate the packaging into three types of materials: cardboard (box), expanded polystyrene (filler material) and polyethylene (packets, foam protective sheets). Your device is composed of materials that can be recycled and reused if it is dismantled by a specialist company. Please observe local regulations concerning the manner in which waste packaging material, used batteries and your obsolete equipment are disposed of.

WARNINGS - Valid for VOKKERO ELITE SMART GATEWAY US/CANADA: VO8346B

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards.
These precautions include, but are not limited to, the following:

Read the instructions in the manual.

The safety of this product is only guaranteed when it is used in accordance with its purpose. The achievement of other operations not mentioned in this document is prohibited. Repairs and maintenance should only be carried out by qualified persons.

This equipment is not suitable for use in locations where children are likely to be present

Do not install the equipment close to a heat source or in damp conditions.

Do not place the device close to objects with naked flames such as lit candles, blowtorches, etc.

The device must not be exposed to harsh chemical agents or solvents likely to damage the plastic or corrode the metal parts.

VOKKERO ELITE SMART GATEWAY US/CANADA is intended for INDOOR USE ONLY.

Maximum working temperature of -0°C / +40°C.

Each connection must be Safety Extra Low Voltage kind (SELV)

Do not apply excessive pressure on connectors or any other part of the board. Do not touch the metallic sharp parts (pins) of the product

This product is electrostatic sensitive ; make sure you check this before touching or using it.

When connecting this product to accessories and/or another product, use only high quality shielded cables. Cable/s supplied with this product MUST be used

No disposal by fire or crushing. Risk of explosion due to the presence of an internal battery

Do not open the product as there is a risk of electrical shock. Voltage Current: 240Vac 2.3A.
This symbol on the device or its packaging means the use of a AC voltage.

The product must be powered through a switching mechanism so that the power can be cut. The electrical installation must be equipped with a 20A circuit breaker and a differential. It must be easily accessible. Any electrical connection of the product must be equipped with a device to protect against voltage spikes and short circuits.

For your own safety, you must ensure that the equipment is switched off before carrying out any work on it. prevent electric shock, all power sources shall be disconnected before handling. The disconnect devices of the Vokkero Smart Elite Gateway unit are the appliance inlet of the auxiliary power supply (option) and the appliance inlet on the rear side of the unit. These must be easily reachable.

For electrical safety reasons, the product must be earthed. Earthing mus be done done via the power cord connected to the equipment's power input. Reliable earthing of rack- mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Always use a power cable with a plug according to the current standards in the country of use

OBLIGATIONS REGARDING USE

This product is designed to be rack-mounted. Be sure to observe following installation rules of this kind of equipment:

- **Do not block the vents.** This device has ventilation holes on the both side to prevent the internal temperature from becoming too high. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- **Elevated Operating Ambient** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature specified by the manufacturer.
- **Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. In some cases, to be sure to ensure sufficient airflow, leave the rear and the front of the rack open, leave sufficient space (>5cm) on each side of the rack, and leave space above rack (>1cm). Or it can be better to have appropriate fan kit in the multi- unit rack
- **Mechanical Loading** - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- The device must be installed in a location that is sufficiently ventilated so that there is no risk of internal heating and it must not be covered with objects such as newspapers, cloths, curtains, etc.

DISPOSAL OF WASTE BY USERS IN PRIVATE HOUSEHOLDS WITHIN THE US/CANADA

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste.
Instead, it is your responsibility to dispose of your waste by taking it to a collection point designated for the recycling of electrical and electronic appliances. Separate collection and recycling of your waste at the time of disposal will contribute to conserving natural resources and guarantee recycling that respects the environment and human health. For further information concerning your nearest recycling centre, please contact your nearest local authority/town hall offices, your household waste collection company, or the shop where you bought the product

AVAILABLE CHANNELS AND USE RESTRICTIONS

To know the frequency channels available in the ELITE SMART GATEWAY FCC product, any restrictions on the use of certain channels, as well as the general operation of the ELITE system (terminals and configurator) please refer to the following documentation:

For the ELITE SMART GATEWAY FCC reference **VO8346B**, the relevant User Guide to refer is 211677_VOK_ELITE_FCC

1. Introduction

This ELITE SMART GATEWAY allows you to connect the VOKKERO ELITE system's audio conference to a wired intercom for VAR through analog or digital Dante audio protocol…
…as well as monitoring your ELITE system locally or distantly through a private network.

As our previous Wireless Interface, this ELITE SMART GATEWAY offers an integrated built-in radio terminal. An optional Remote antenna is available for ensuring safe positioning of the ELITE SMART GATEWAY

This ELITE SMART GATEWAY is merely a pitchside gateway reunited into a 2U box with audio and monitoring together. Engineered as a Stagebox Proaudio equipment for smooth integration in stadiums, it has:

- Ability to interface audio with different protocols/standards
- Ability to act remotely to maintain the best audio between VAR referees and pitch referees

The following paraphs will help you get familiar with the main features of this product that are described further in this document:

Audio features

- HD BROADCAST audio quality through analog or Dante digital audio protocol
- Bridge to other audio networks with full control over Dante network
- Multiple physical interfaces for audio: 4 wires XLR, RJ45 ethernet, monomode optical fiber
- Different VOKKERO audio mixes available : All terminals, only Central referee, All but Central referee...
- Possibility to connect a backup RRA headset for the Central referee just in case!

Built-in web-based System Monitoring (Monitoring Dashboard)

- Access to local monitoring through Wi-Fi, ethernet or optical fiber
- Close monitoring at the side of the pitch with a tablet or a laptop through Wi-Fi or ethernet
- Distant monitoring in the OB-Van in the Mediazone of the stadium through optical fiber
- Long Distance monitoring in the national Replay center through VAR optical fiber network
- Well-crafted and easy-to-use monitoring dashboard for monitoring live sport games with VAR, , set-up of audio gains,…

Monitoring Dashboard indicators

- Live Health status alerts and pop-ups for monitoring health of your ELITE system during the game and getting tips and advices to react
- Increased resilience to radio interferences with possibility to swap frequency
- Visualization of cross reception quality between terminals
- Ability to act and set-up audio gains
- Possibility to configure audio matrix of the ELITE system remotely
- Possibility to configure ELITE terminal roles remotely to correct any configuration mistake

- Possibility to configure audio gains (mic and speaker) for all ELITE terminals remotely to ensure the best audio clarity
- Possibility to adjust whistle emission remotely
- Visualization of battery life of every ELITE terminals

Possibility to extract VOKKERO event report of the whole game

- Built-in timestamps for labelling events and possible issues
- Manual Log report for adding user notes to the event report of the game
- Integrated live chat for simultaneous users

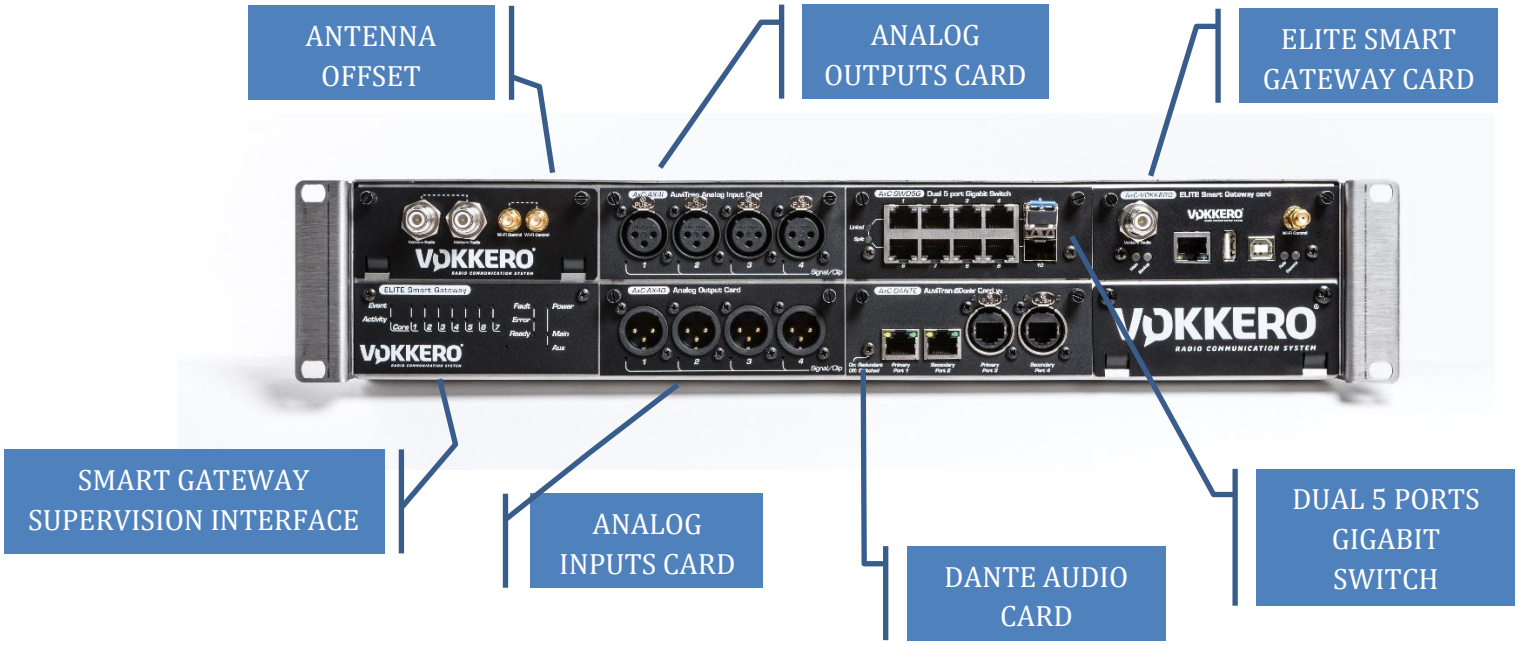
2. Composition of each ELITE SMART GATEWAY set

Qty	Description
1	Vokkero ELITE SMART GATEWAY
1	Vokkero radio antenna
1	Wi-fi antenna
2	Offset antenna cable
1	Power supply cable

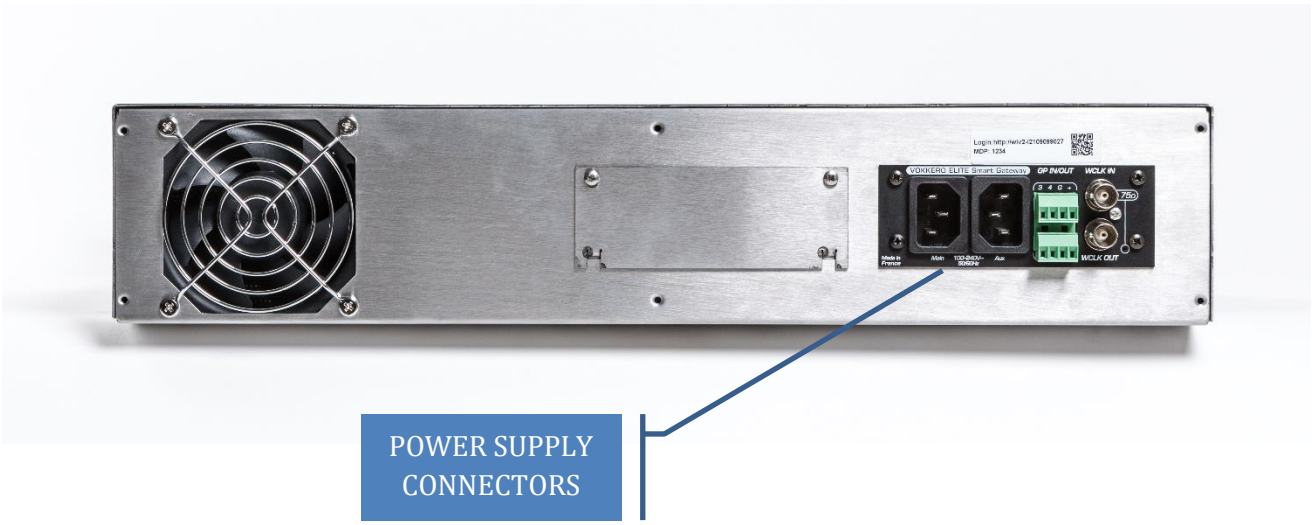
2.1. Description of the Vokkero ELITE SMART GATEWAY

2.1.1. Product views

Front view



Rear view



2.1.2. Product specifications

Size:	483 x 253x 88 mm
Integration:	2U - 19 inches
Main power supply:	100-240 VAC - Maximum 50 W
Temperature / Humidity (non-condensing) in non-operating:	-5 ° C to 70 ° C / Max 95%
Temperature / Humidity (non-condensing) operating:	0 ° C to 50 ° C / 5% to 90%

2.1.1. Description of the cards

• **Analog Input Card**

4 balanced 4-wire analog audio inputs

4 professional XLR male connectors

• **Analog Output Card**

4 balanced 4-wire analog audio outputs

Pre-configured audio mixes for VAR applications

4 professional XLR male connectors

Dynamic> 115 dB (A-weighted)

THD + N <-100 dB

• **ELITE SMART GATEWAY Card**

RJ45 connector for access to Monitoring data

USB-A and USB-B connectors for wired pairing and software updates

Wi-Fi antenna (for Monitoring control via tablet) and VOKKERO radio antenna

Main gateway identification led or BACKUP gateway.

Network role identification led

Remote monitoring confirmation led from a remote remote center (VOR)

• Dual 5 port Gigabit Switch

Two linkable 5 ports full speed gigabit Ethernet switches

8 x RJ45 Gigabit connectors

2 x SFP cages for two additional compact hot-pluggable SFP (mini-GBIC) transceivers available in many formats:

- Single mode or Multimode Fiber Gigabit SFP transceiver

- Single Fiber Bi-Directional Gigabit SFP Transceiver

- Copper / Ethernet Cabling Gigabit SFP transceiver

• Dante Card

Connectors: EtherCon RJ45-XLR and 2 x RJ45 connectors

Dante operating modes: Integrated redundant Gigabit switch with primary and secondary ports, replicated to ports 3 and 4

Audio outputs: Up to 64 channels

Audio inputs: Up to 64 channels

Sampling: 24 bits

Sampling rate: 44.1 kHz, 48 kHz, 88.2 kHz and 96 kHz

Synchronization: automatic from Dante network

• Antenna offset card

1 remote connector and a Wi-Fi antenna connector

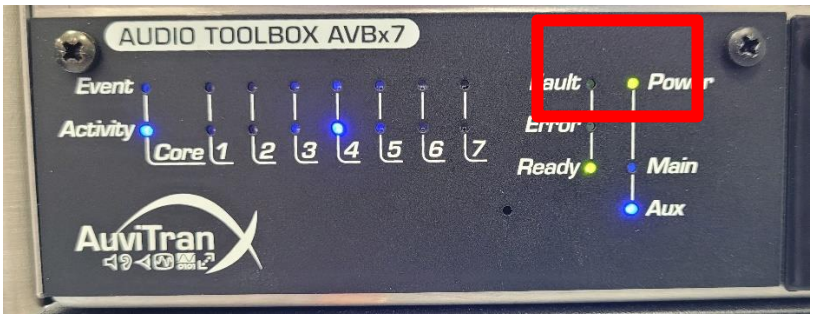
1 remote connector and a VOKKERO radio antenna connector

Designed to facilitate the radio performance of two ELITE SMART GATEWAY (MAIN & BACKUP) arranged in a field edge rack.

3. Installation of the Vokkero ELITE SMART GATEWAY

- Connect the gateway to the mains with the appropriate cables by using 1 or 2 of the dedicated inputs on the back of the product. The Aux input offers a redundancy.

Once connected to the main, the product will switch on automatically.
After a few seconds the Power led will light up fixed green and the corresponding led for Main or Aux will light up fixed blue.



- Connect both antennas to the corresponding antenna connector.

- Bind the Ethernet RJ45 connector of the AxC-Vokkero Card to your network through an Ethernet cable.

4. Configuration of the Vokkero ELITE SMART GATEWAY

4.1. Step-by-step procedure

- Connect the USB Cable between the Smart Gateway and the USB slot of the Elite configurator dock.

- Place all the Elite terminals on the configurator dock and launch a “Quick Config.”. Please refer to the Vokkero Elite User Guide for any details on how to launch a quick configuration

- After a quick configuration, power the system (the Vokkero Elite Gateway and the Elite terminals).

4.2. Understanding leds

5. Access to the Monitoring dashboard through the Vokkero ELITE SMART GATEWAY

5.1. Local access

5.1.1. Connexion to the Wi-Fi

Open the Wi-Fi menu on your tablet and search for Wi-Fi Network name (SSID) :
VokkeroESG-|serialnumber]_Wifi

Refer to the label on the back of the ELITE SMART GATEWAY for the serial number.

To connect, enter the Wi-Fi Security key (password):
VOKKEROWIFI

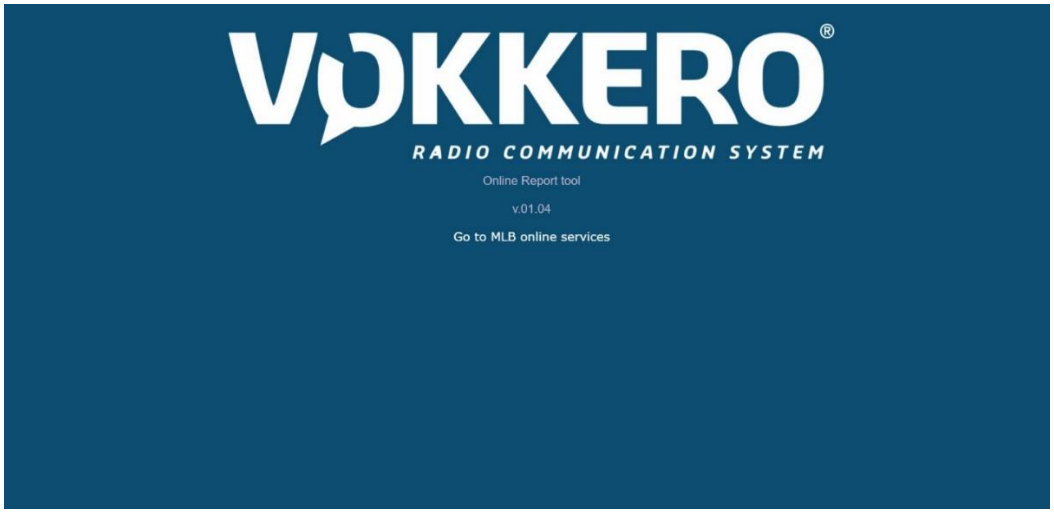
Important note: you may change the Wi-Fi Security key to avoid unwanted connections but take care to memorize somewhere you new Wi-Fi Security key.

5.1.2. Access to the Monitoring dashboard with a mobile tablet

Once the Wi-Fi connexion active between the ELITE SMART GATEWAY, open a web browser on your tablet and enter the address:
http://VokkeroESG-[serialnumber].local/

Refer to the label on the back of the Smart Gateway for the serial number.

The following page should appear.



Click on « Go to dashboard » in order to access the Application through the following screen:

Important note:
The WEB Application may take a few seconds to start to get started. You must wait until the Remote Led stops blinking.

If you try to access the WEB Application while the starting process has is not finished, the error page below will appear. Wait a few minutes and refresh the page.

502 Bad Gateway

nginx/1.13.3

5.2. Remote access

5.2.1. Connexion to the network

The serial number of the Smart Gateway and the number of Elite terminals paired with the Smart Gateway are indicated on the top of the page.

In this example, there is no Elite terminal connected (or the Master Elite terminal is switched off).

In this example, there are 2 terminals connected with the Smart Gateway

5.2.1. Access to the Monitoring dashboard with a remote computer

5.2.2. Understanding leds

6. Game-time use of the Monitoring dashboard

6.1. Principles

6.2. Health status

6.2.1. The alerts

6.2.2. Get tips and advices

6.3. Table frequency menu

6.4. Audio matrix menu

6.5. Devices cards

6.6. The PLUS menu

6.6.1. Generating a match report

6.6.2. Adding manual notes

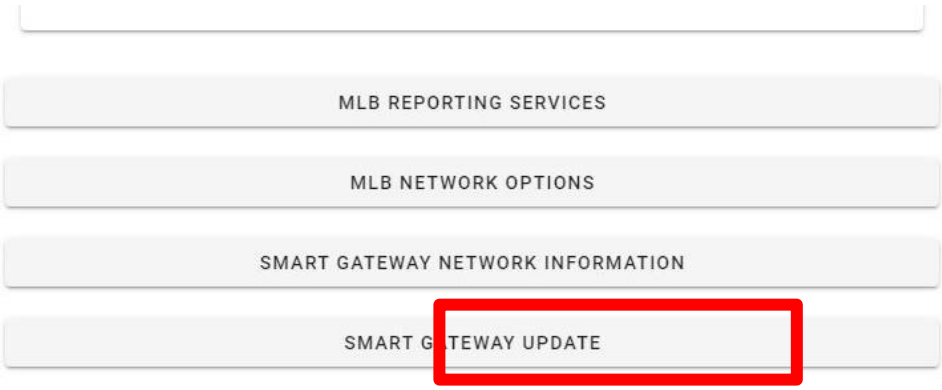
6.6.3. Chatting with other Monitoring dashboard users

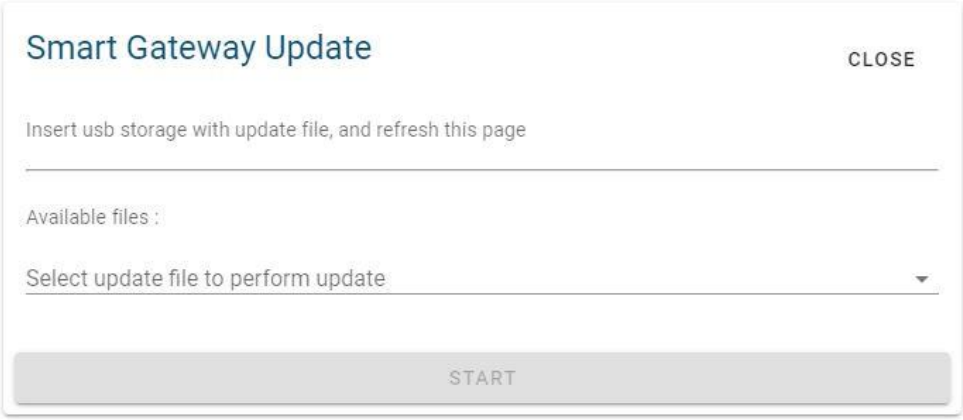
7. Supporting functionality of the Vokkero ELITE SMART GATEWAY

7.1. Renew annual license key of the ELITE SMART GATEWAY

7.2. Update firmware of the ELITE SMART GATEWAY

Click on the title to open the box



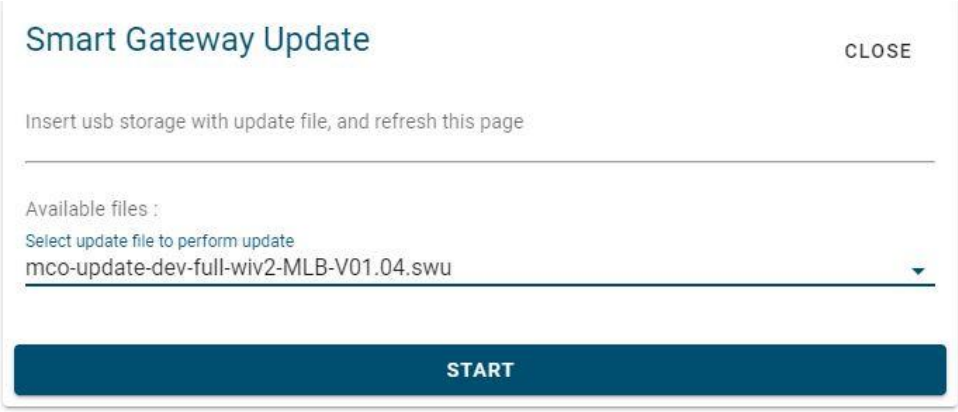


To update your ELITE SMART GATEWAY, take the dedicated file provided by Vogo Support team and copy and paste it in a USB dongle
Note: a Smart Gateway updating file always ends with '.swu'

Insert it into the USB port of the ELITE SMART GATEWAY as shown below.

Refresh the web page to see the update file in the web application.

The file should appear in the drop down list. Select it and click on start.



Please note that at the end of the update the product will automatically restart.

Information :

The product does not display the progress of the update, but will only display errors in case problems occur.