vendon

vBox 2
Made in Latvia, EU
Vendon Ltd., www.vendon.net
Part number: VP-B2/4/4G
12-34V DC
250-100mA
9-24V AC
250-100mA
50-60Hz

Serial Number:
80123456789123 4G
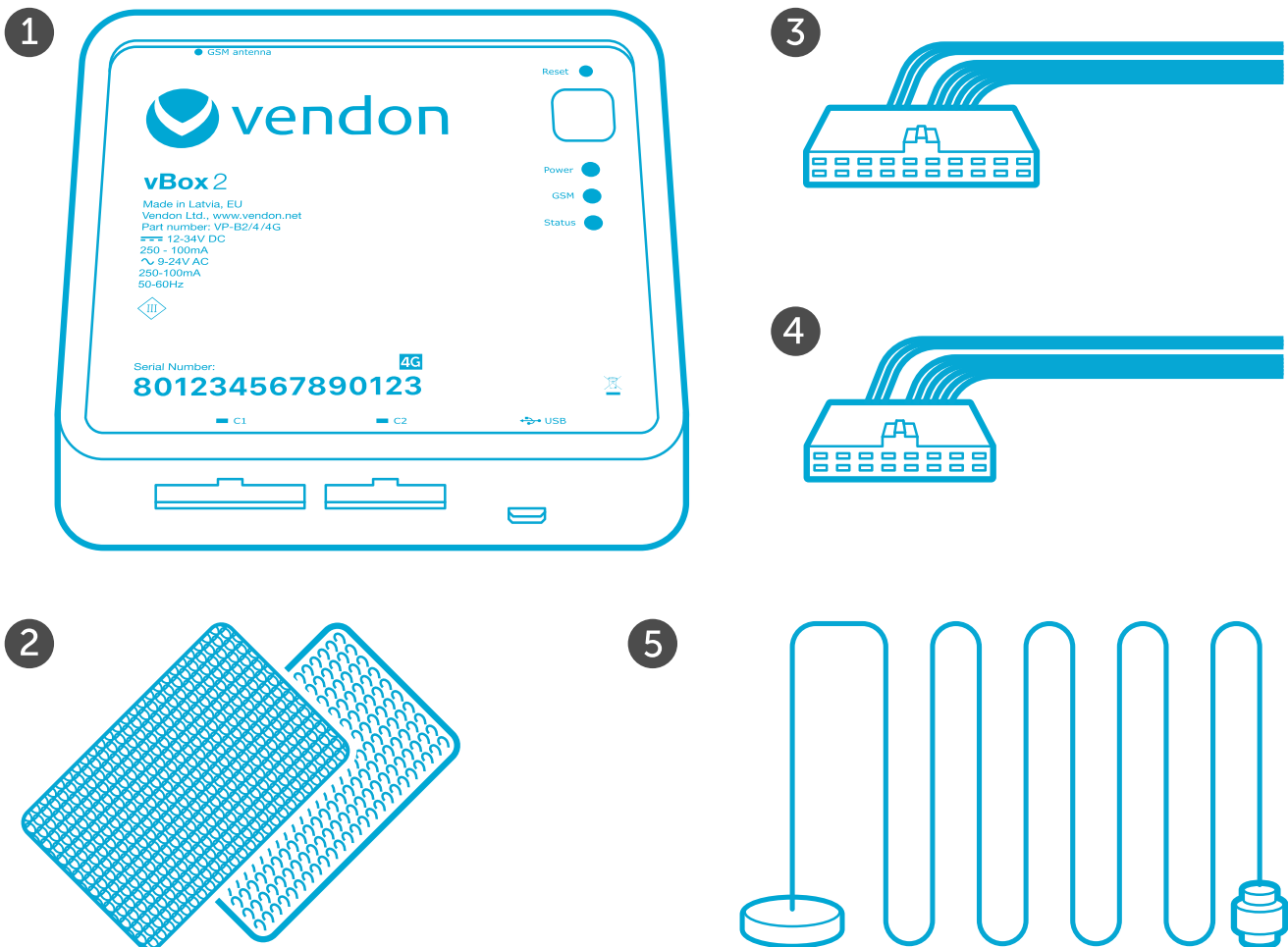
C1
C2

GSM antenna

Reset
Power
GSM
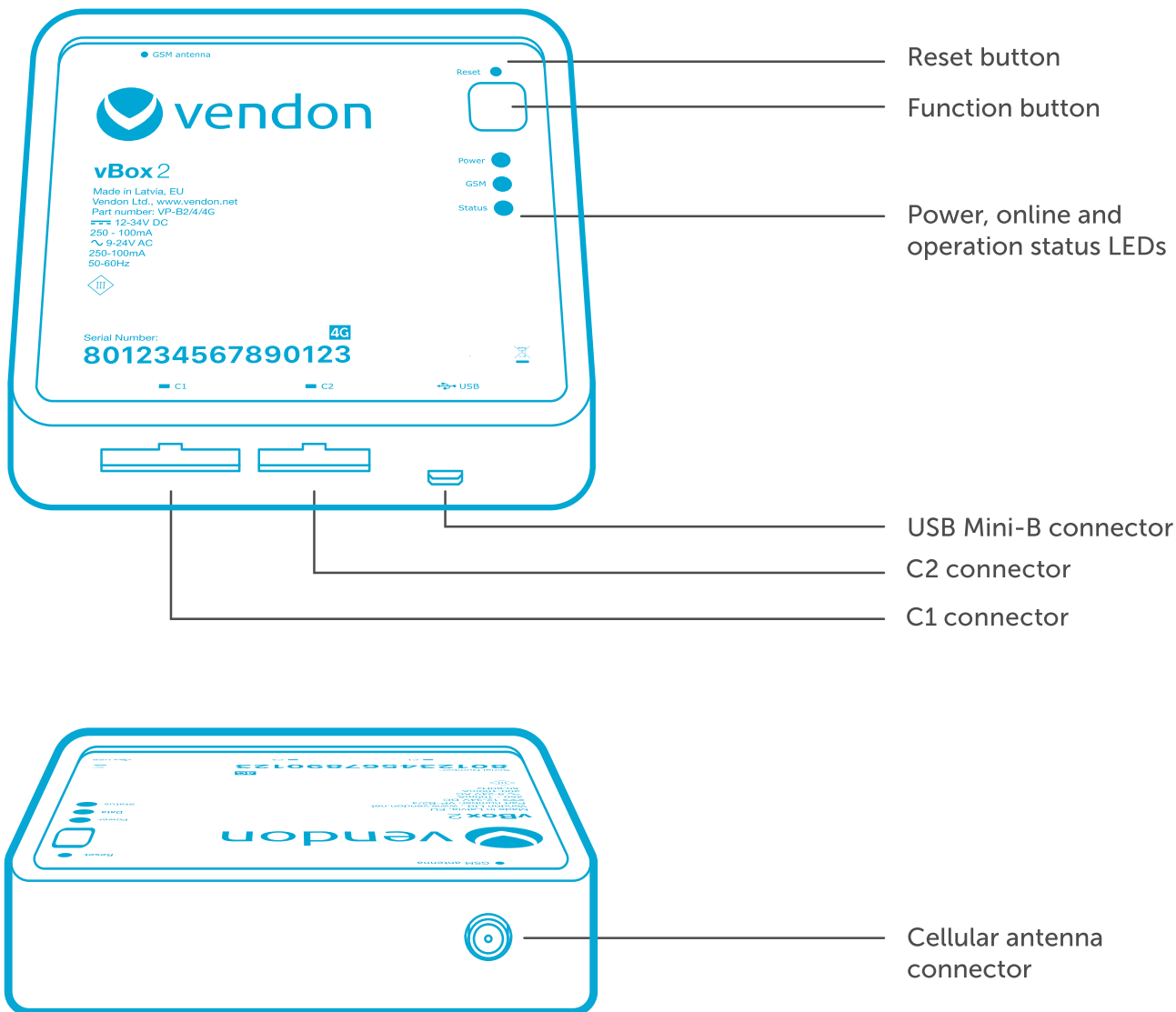Status

USB

vBox2

Installation Manual

vBox2

vBox2 is microprocessor driven IoT device for data collection from vending machine or coffee machine components using various standardised protocols. vBox2 transmits collected data over GPRS network to Vendon server gateway. Device firmware is preloaded and managed centrally using Over-TheAir technology. vBox2 supports user (operator) interaction via multi- purpose configurable function button. User operations are confirmed with sound signals. Device status indication LEDs are located on front panel.

Standart vBox2 set

1 1 pcs vBox2 device

2 1 pcs Velcro material

3 1 pcs C1 data and power cable

4 1 pcs C2 audit cable

5 1 pcs cellular antenna

vBox2 components

GSM antenna

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Reset

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GSM
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Serial Number: 4G
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C1   C2   USB

Reset button

Function button

Power, online and
operation status LEDs

USB Mini-B connector

C2 connector

C1 connector

Cellular antenna
connector

vBox2 size and weight

Height **98mm**, width **108mm**, depth **26mm**, weight **135g**

Reset button

- 1x — vBox2 device reset.

- ⓘ For the use by authorized Vendon representatives only.

Function button

- 1x (three beeps) — register refill.
- 2x (two beeps) — register encashment.
- 3x (one beep) — request EVA DTS audit.

LED indicators

Green — status of power supply

- ON — external power supply is connected.
- Blinking (fast) - WARNING operating voltage above 45V.
- Blinking (slow) - preparing cellular modem on vBox2 start up.
- OFF - vBox2 device is off.

- ⓘ If all LEDs are blinking (0,2 sec) synchronously - operating voltage below 8V (critical low).

Red - modem status

- ON - modem is connected and communicates with the server (online).
- Blinking (fast) - modem is ON, and is exchanging data with the server (online, processing).
- Blinking (slow) — vBox2 tries to connect to the network (offline).
- OFF — vBox2 is not able to transmit gathered data to the server (offline).

Orange — data transmission

- ON — at least one peripheral device is connected to vending machine (device operates/communicates).
- Blinking - at least one peripheral device is connected to vending machine (device does not operate/communicate).
- OFF — none of peripheral devices is connected, communication is not possible.

  *Peripheral device: Coin changer, Cashless #1, Cashless #2, Bill validator, Age verification etc.

C1 connector — for the connection of data and power cable

- Cable type options: EXECUTIVE, MDB, MDB Master, BDV

C2 connector — for the connection of audit cable

- Cable type options: AudioJack (CC Audit), AudioJack (VM Audit), DB9Male (CC Audit), DB9Male (VM Audit), DB9Female (CC Audit), DB9Female (VM Audit), DB15Male (CC Audit), DB15 Male (VM Audit), DB15Female (CC Audit), DB15Female (VM Audit).
  According to the specification, various combinations of cables are applicable.

USB Mini-B connector - for manual firmware and protocol upload

- ⓘ For the use by authorized Vendon representatives only.

vBox2 installation

vBox2 device should be used only for its intended use, following the technical specification and installation instructions. The user carries full responsibility of the installation and exploitation of the vBox2 device.

ⓘ Additional limitations and warnings ⓘ

- Do not dissemble or modify vBox2 device. Dismantling of the vBox2 (dismantling of the plastic casing or intervention in the PC board) can affect device's functioning or damage device.

- Avoid liquid penetration into vBox2 device.

- Install or relocate vBox2 device only when disconnected from the power supply.

- Only cables provided by Vendon must be used.

- Do not alter the cables provided with the vBox2.

- A visual inspection of the vBox2 device must be performed on a regular basis.

- Discontinue usage if the device looks deformed, broken or swollen.

- Built-in rechargable Li-Po battery 3.7V 560mAh.

- The battery withstands up to 300 full charge and discharge cycles under normal working conditions (temperatures 25°C $\pm$ 0.5°C). The cycle life is the cycle times when the discharge capacity is about 80% of the rated capacity.

- The battery warranty is aligned with the vBox2 warranty and it is 1 year.

- Only Vendon authorised and trained personnel may remove and change the battery.

- The battery must be replaced only by a battery custom made for Vendon.

- Never attempt to short-circuit the device or the battery.

- If the device is not used for a long time, fully recharge the device every half a year. Store the device in a cool and dry place.

- The device and battery must be recycled and disposed of properly.

- Disposal. Do not dispose vBox2 device with household waste.

- Do not dispose of the battery or the device in fire.

⚠ Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Environmental requirements

vBox2 operating temperature: **+5°** to **+50°C**

vBox2 operating relative humidity: **5%** to **95% (non-condensing)**

vBox2 power supply

vBox2 power supply is provided by connection C1 (see vBox2 components). Use only power source of type "PS1" with internal power limit up to 15W. Unit shall be supplied from LPS (Limited Power Source). Using a series fuse is recomended.

direct current **12V - 34V DC 250 - 100mA**

alternating current **9-24V AC 400-200mA**

50-60Hz

Contains:

● FCC ID: **2AZE3-VP-B244G**

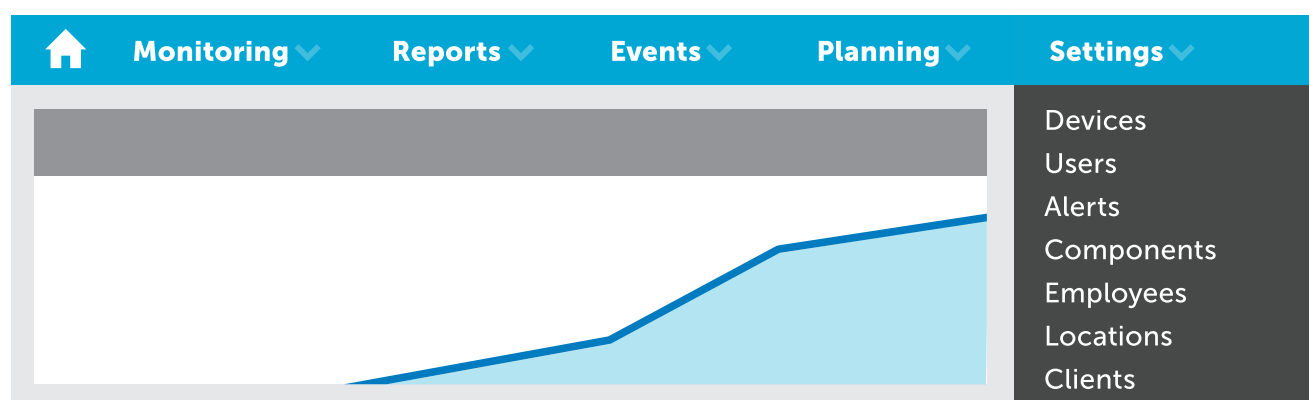● Contains Transmitter Module FCC ID: **2AJYU-8VC0001**

NOTE: 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Step 1

Before the first vBox2 installation, it is suggested to fill Vendon WEB user interface's **www.vendon.net** settings, e.g. user rights, product information, locations and also vending machine account setup.

By skipping device account setup, as soon as the vBox2 will receive its first data, the system will automatically generate account with vBox2 IMEI as a default machine's account name.

🏠	Monitoring ∨	Reports ∨	Events ∨	Planning ∨	Settings ∨
					Devices
					Users
					Alerts
					Components
					Employees
					Locations
					Clients

Step 2

Verify that the settings of the vending machine and its peripheral devices correspond with the settings of the vBox2 device (listed below). In case of incompatibility, data from the vending machine or the peripheral device will not be read.

Data protocols:
MDB (Multi-Drop Bus), EXECUTIVE, CCI/CSI BDV, MDB Master, EXECUTIVE/BDV Master, CCI/CSI Master

Audit (EVA DTS) protocols:
DDCMP, DEX, MDB FTL

Step 3

Switch OFF the vending machine. During the installation of the vBox2 power supply has to be disconnected.
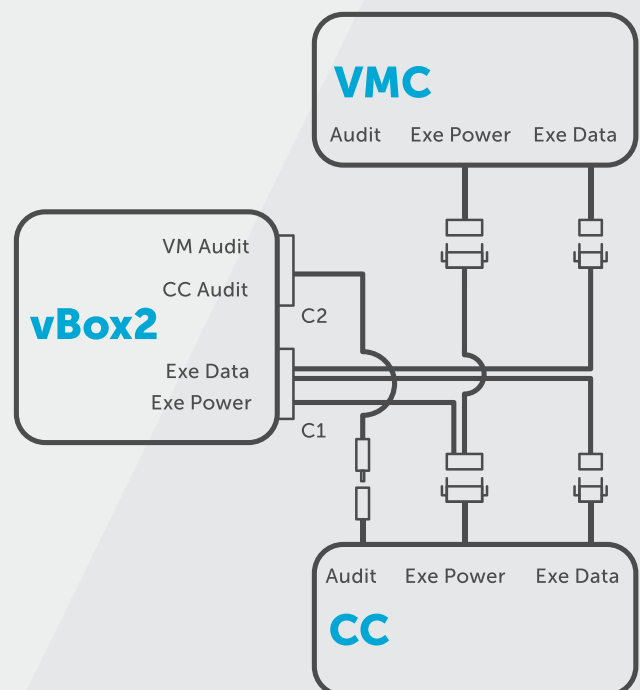
Step 4

According to the configured settings and given cables connect the vBox2:

4.1. EXECUTIVE Connection
* Various audit cable options (see vBox2 components)

CC – Coin Changer
CC Audit – EVA DTS audit reading from CC
VMC – Vending machine controller
EXE Power – EXE power supply
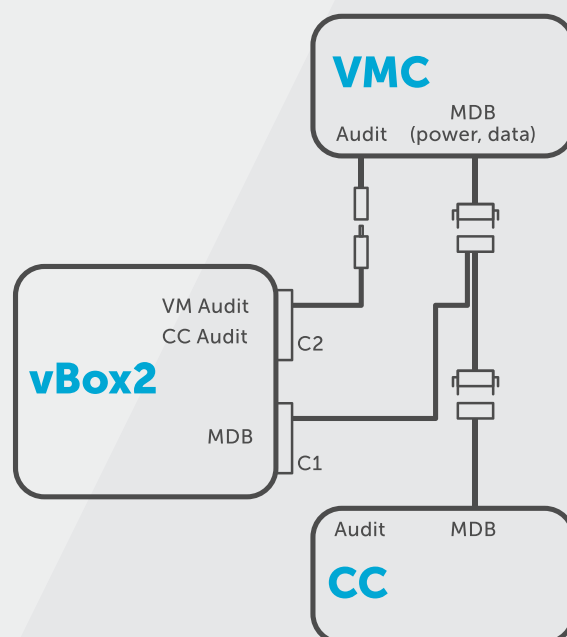**EXE Data** – EXE data reading

* Various audit cable options (see vBox2 components)

CC – Coin Changer

VM Audit – EVA DTS audit reading from vending machine controller

VMC – Vending machine controller

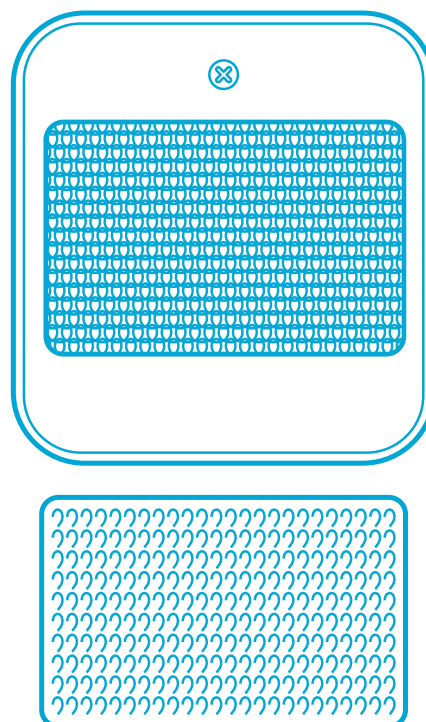**MDB Power & Data -** Power supply & MDB data reading

Step 5

Attach the vBox2 device inside of the vending machine (free and clean surface). Use velcro material.

Step 6

Attach an antenna. For better network reception place the antenna outside of the vending machine.

Step 7

Turn on the vending machine and verify that all vBox2 indicators are ON during the time period of 20 sec – 3 min (see vBox2 components – description of indicators).

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