

## vBox2 4G

### Description

vBox is a IoT device for data collection from vending and coffee machines (VM).

vBox2 transmits collected data over cellular network to Vendon Cloud. Device firmware is preloaded and managed centrally using Over-The-Air technology. vBox2 supports user (operator) interaction via function button. User operations are confirmed with sound signals. Device status indication LEDs are located on front panel. vBox2 device is designed for installation inside VM.

### vBox2 Functionality

Major VM and CM communication protocols supported by vBox2: MDB, Executive, BDV, CCI-CSI - protocols between VM and payment devices, and other peripherals.

Audit data is requested by server. vBox2 collects audit data from VM or payment device and responds to server request with collected data. VM or payment device initiated event reports are pushed to server. vBox2 supports many audit protocols including

- DDCMP (EVA-DTS, audit data transfer over RS232)
- DEX-UCS (EVA-DTS, audit data transfer over RS232)
- MDB CGW (EVA-DTS, audit data transfer over MDB)
- Other proprietary standards and protocols

### Offline data

Data is stored in vBox2 in case of network interruptions.

### Compatibility

The majority of VM models are supported by vBox2. The functionality depends on the technical capabilities of VM and peripherals.



### **MDB, Executive, CCI-CSI to MDB Master mode**

vBox2 takes over the control of the peripherals and allow to connect Executive, CCI-CSI machines to MDB peripherals. This provides full transaction information in real-time and option to store prices in vBox2 and manage them online.

### **MDB Communications Gateway** (verbose mode)

real-time transactions and event information forwarding to server.

### **Remote MDB, Executive, CCI-CSI Cashless mode**

vBox2 provides cashless device mode HTTP REST API (3<sup>rd</sup> party wallet or closed loop solutions may be implemented).

### **MDB, Executive, CCI-CSI to Free vend mode**

vBox2 tracks all free vend transactions in real-time.

### **MDB Sniffer mode**

vBox2 supports non-intrusive MDB connection where vBox2 only listens to VM. It detects if payment acceptance is enabled (VM is able to sell products). Supports real-time cashless purchases and in many cases also real-time cash purchases.

# SPECIFICATIONS

## Technical data

### Device inputs and outputs

- 5x analog, digital I/O
- 1x 5V digital output
- 2x executive, MDB master
- 2x executive, MDB slave
- 2x RS232 (DEX-UCS, DDCMP and others)
- 1x USB Mini-B service port
- 1x cellular antenna (SMA)

### System components

- Built-in rechargeable LiPo battery
- Power supply: 12V-34V DC, 100mA-250mA, 9V-24V AC 100mA

### vBox2 size and weight

- Height: 98 mm
- Width: 108 mm
- Depth: 26 mm
- Weight: 134 g

### System environmental requirements

- Operating temperature: +5° to +50°C
- Relative humidity: 5% to 95% (non-condensing)

### Modem

- SIM card (Mini-SIM) slot
- External cellular antenna (SMA)
- Multi Band CAT-M, NB-IoT and GPRS

Frequency bands	
Cat-M/NB-IoT	B1/B2/B3/B4/B5/B8/B12/B13/B14/ B18/B19/ B20/B25/B26/B27/B28/ B39/B66/B71/B85
GSM	850 / 900/ 1800 / 1900 MHz

### Support for optional peripherals such as

- Temperature sensor
- Door sensor
- Hydracs
- Barcode reader
- Test vend & free vend switch (if the switch is installed)
- Remote reboot
- Ethernet adapter

## Components

