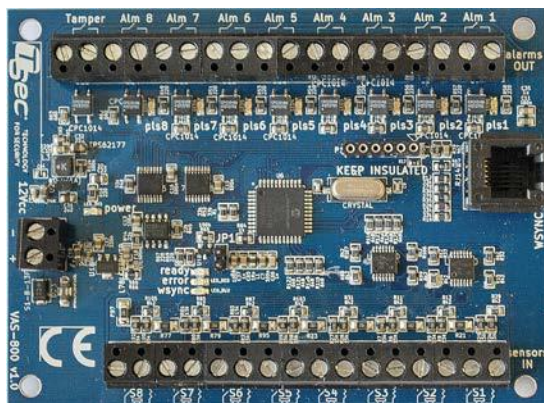


### 1. TECHNICAL FEATURES

- \* **Dimensions:** 111x82mm
- \* **Input Voltage:** 12 VDC
- \* **Current Consumption:**
  - \* VAS-400: 55/65/135mA (min/med/peak)
  - \* VAS-800: 60/75/145mA (min/med/peak)
- \* **Analysis Mechanism:** digital w/ 16bit micro-controller
- \* **Compatibility:** Normally closed, passive vibration/impact detectors
- \* **Input:** 4 ports (VAS-400) / 8 ports (VAS-800), from 1 to 5 detectors in series on each port - Automatic detection of EOL resistor values from 2.2k to 11k Ohm.
- \* **Output:** 4 alarm (VAS-400) / 8 alarm (VAS-800) + 1 tamper – solid state relays, normally closed
- \* **Configuration:** wireless WSync™ system



VAS-800

### 2. CABLING

- \* Connect vibration detectors to each port before powering the board
- \* If you are using CLIC CLV-02 or CLV-03 detectors, you can optimise the installation operating as follows:
  - \* White/red – vibration detector; Yellow/green - tamper.
  - \* The tamper circuit is normally closed. It will open in case the cable is cut or in case of magnetic tampering attempts on the detector.
  - \* The tamper circuit can be connected directly to a 24h port of the central alarm panel, or it can be linked in series to the white/red circuit and then connected to an input port of the VAS board. In this case the VAS will be able to signal both a tamper attempt and an alarm.
  - \* A tamper attempt on an input port will be signalled by the blinking of the corresponding led on the output port.
- \* The board detects automatically the presence of EOL resistors in series to each port. The optimal configuration is reached with 2.2 kOhm resistors, one for each sensor. In this case it is possible to connect in series up to 5 sensors with individual 2.2k EOL resistors, and still retain full tamper protection on each sensor.
- \* After connecting the sensor, you can power up the board, connecting it to a 12 VDC power source. After the boot phase, the *power* and *ready* leds will be steadily active.

### 3. PREPARING THE WSYNC SYSTEM

- \* You can download the TSec App from the official Google Play or Apple App Store [Apple App Store version available from Dec. 2014]
- \* In case the official stores should not be available, you can always download the latest official version of the App from the following addresses. Please note that in this case you will be required, during installation, to manually authorise the use of you phone's Bluetooth and wireless interfaces by the App:
  - \* Android: [http://www.tsec.it/media/tsec-vas\\_app.apk](http://www.tsec.it/media/tsec-vas_app.apk)
  - \* iOS: [http://www.tsec.it/media/tsec-vas\\_app.ipa](http://www.tsec.it/media/tsec-vas_app.ipa)
- \* Before you can use a factory-default WSync dongle, you need to pair it with your phone.
- \* **Pairing procedure for a factory-default WSync dongle**
  - \* Plug the dongle on the RJ socket of the VAS board. All LEDs, except the power one, will start to blink. At the same time, all output ports will open, and will stay open until the dongle will be removed.
  - \* The blue WSync LED and the green ready LED will both blink, indicating that the dongle has not been paired yet.
  - \* Launch the App, which will automatically look for the last WSync dongle that it has been paired with. When the dongle is detected, click on its name to begin the pairing procedure. During the pairing procedure, input the default "0000" PIN.
  - \* You can also assign a name to each dongle, making it easier to distinguish it at a later time.
  - \* Once a dongle has been paired to a specific smartphone, you will not be asked for a PIN when you connect to it: **from now on, only the paired smartphone can connect to this specific dongle.**
  - \* The presence of a paired dongle in the WSync port is signaled by the blinking of the WSync blue LED, while the green ready LED remains steadily lit.
- \* **Resetting a WSync dongle to factory-default configuration**
  - \* In order for a dongle to be paired to a new smartphone, you need to reset it to factory default. In this case, simply plug the dongle into a powered VAS board, extract the JP1 jumper, wait for 1sec, and then put back the jumper in position.
  - \* At this point all pairing data is erased from the dongle, and a new pairing procedure can begin.

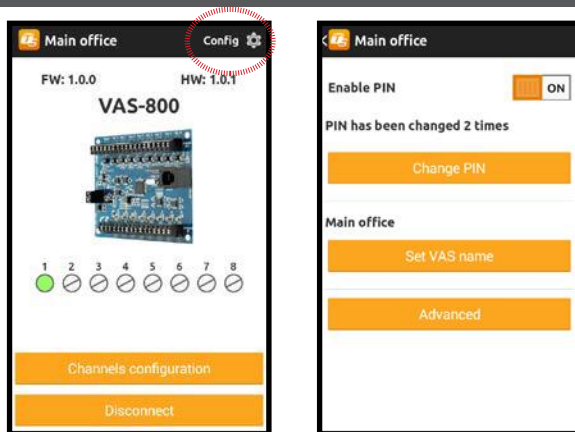
### 4. CONNECTING TO ALTERNATE DONGLES

- \* The TSec App will show on its main page the last paired dongle.
- \* In case you want to connect to alternate dongles, click on the "Update" icon (top right). The App will scan for all existing dongles, and you will be able to select the one you want to connect to.



### 5. CONFIGURATION: GENERAL PARAMETERS

- Once connected to a VAS board, the App will show its main page. There you will find:
  - The name of the board ("Main office" in this example)
  - the board model
  - HW and FW releases
  - Real time status of each channel.
- By clicking on the top right "Configuration" icon, you will access the main configuration panel, which will allow you to:
  - Set the name of the board
  - Enable the board's security PIN
  - Access the advanced configuration, which includes the FW upgrade procedure

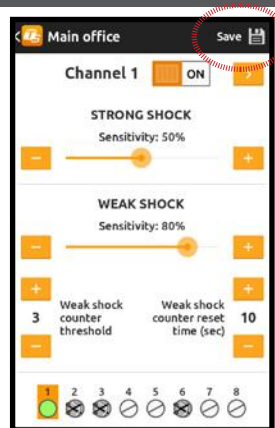


### 6. SETTING AND RESETTING THE BOARD'S SECURITY PIN

- Besides the inherent protection afforded by the industry standard Bluetooth encryption, WSync allows you to enforce an additional layer of protection, a security PIN. If enabled, only knowing the security PIN of a specific board will allow a technician to access its parameters.
- If you forget the security PIN, you can reset it when connecting to the board.
- In this case, for security reasons, the board will irrevocably record the number of times its security PIN has been reset.**

### 7. SETTING SENSITIVITY PARAMETERS

- Click on the "Channel configuration" button on the main page to enter each channel's configuration panel.
- VAS boards analyse signals based on four main parameters:
  - Strong shock sensitivity:** the sensitivity of the threshold that signals an alarm when a single, isolated shock is detected
  - Weak shock sensitivity:** the sensitivity of the threshold that detects a small, weak shock (in a series of shocks)
  - Weak shock counter threshold:** the number of weak shocks necessary to trigger a "weak shock alarm" (1-8 shocks).
  - Weak shock counter reset time:** the time interval after which, if no weak shocks events were triggered, the weak shock counter is reset (5-300sec)
- When the board detects an event that goes beyond the sensitivity thresholds, the App visualises it and an acoustic signal is signalled.
- Once you are happy with the settings, you can save them by clicking on the "save" icon in the top right corner.
- If you do not save the parameters, they will revert to the values they previously had once you return to the main App page



### 8. CHANNEL STATE

- The App visualises in real time the state of each channel, as shown in the table.
- PLEASE NOTE:** when the configuration of a port is changed (changing EOL values, connecting/disconnecting a new sensor, etc.), you need to deactivate and then activate the relevant channel in order to let the board learn the new configuration.

CHANNEL OFF	
CHANNEL ACTIVE, SENSOR NOT DETECTING ANY VIBRATIONS	
WEAK SHOCK DETECTED	
WEAK SHOCK COUNTER THRESHOLD EXCEEDED	
STRONG SHOCK DETECTED	
TAMPER CONDITION: INPUT CABLE WAS SEVERED AND/OR MAGNETIC TAMPERING ATTEMPT (CLIC CLV-SERIES)	
TAMPER CONDITION: EOL RESISTOR	
TAMPER CONDITION: SHORT CIRCUIT	

### 9. NORMAL OPERATION MODE

- Unplug the WSync dongle: the LEDs will stop blinking and the board will start operating normally.
- Output relays Alm 1..8 will open for 2 seconds when an alarm condition is detected on the relevant input port.
- The tamper relay will open for 2 seconds when a tamper condition is detected on anyone of the input ports.
- The LEDs of the output ports will indicate an alarm state (steady lit), a tamper state (blinking), or normal operation (turned off)

### 10. FIRMWARE UPGRADE

- Available FW updates can be browsed and downloaded on your smartphone from the main App page, if the Internet is reachable.
- This will allow FW upgrades operations in the field even without Internet connectivity.
- To perform a FW update, just connect to a VAS board, go to its main configuration page and select the "Advanced" button.
- FW updates are performed using the wireless connection provided by the WSync dongle, and typically will require 2 minutes to complete.