

ACT365-VCU / ACT365-VCU2A / ACT365-VCUPoE

Installation and Operating Instructions



VANDERBILT

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ACT365-VCU & ACT365-VCUPoE

Hereby, Vanderbilt International (IRL) Ltd declares that this equipment type is in compliance with the following EU Directives for CE marking:

- Directive 2014/30/EU (Electromagnetic Compatibility Directive)
- Directive 2011/65/EU (Restriction of the use of certain hazardous substances Directive)

The full text of the EU declaration of conformity is available at: <http://van.fyi?Link=DoC>

ACT365-VCU2A

Hereby, Vanderbilt International (IRL) Ltd declares that this equipment type is in compliance with the following EU Directives for CE marking:

- Directive 2014/30/EU (Electromagnetic Compatibility Directive)
- Directive 2014/35/EU (Low Voltage Directive)
- Directive 2011/65/EU (Restriction of the use of certain hazardous substances Directive)

The full text of the EU declaration of conformity is available at: <http://van.fyi?Link=DoC>



http://van.fyi?Link=VCU_IG

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1 Overview

An ACT365-VCU is a 4 camera IP controller with a 1TB hard disk for CCTV storage. The controller includes a rich set of IP video features including automatic camera discovery, automatic camera configuration and full HD streaming.

ACT365-VCUs can be registered with and monitored from ACT365, a cloud-based, integrated access control and video management solution. ACT365 can be used to manage CCTV security from a single site or multiple sites. The ACT365 app allows you to:

- View the status of doors
- Lock and unlock doors
- View video footage associated with access events or alarms
- Enable and disable cardholders
- View a list of all the cardholders currently on a site

If you are new to ACT365, Vanderbilt recommend you view the training videos which can be found on the ACT365 Installer Portal at ACT365.eu.

1.1 Requirements

Cloud-based products depend on a reliable connection to the internet with adequate bandwidth. This is especially important in the case of CCTV products like ACT365.

The ACT365-VCU is designed for occasional viewing of cameras and to view footage in response to incidents. The ACT365-VCU uses bandwidth when cameras are being viewed (live or replay) on the ACT365 Installer Portal or from an Android/iOS mobile app. Bandwidth constraints will limit the type of camera that can be connected to the ACT365-VCU.

By default, each camera stream will consume approximately 1Mbps of bandwidth while being viewed in standard resolution. To view 4 cameras in standard resolution, 4Mbps of bandwidth is required. Cameras can be set for higher resolution which will further impact bandwidth requirements. The ACT365-VCU supports high stream settings, which will set the camera content bit rate to 2Mbps, effectively doubling the bandwidth requirements.

Typical bandwidth requirements are outlined in the table below.

Number of camera streams being viewed	Stream Size	Upload (from ACT365-VCU to ACT365)	Download (from ACT365 to browser)
4	Standard (1Mbps)	4Mbps	4Mbps
4	High (2Mbps)	8Mbps	8Mbps
8	Standard (1Mbps)	8Mbps	8Mbps
8	High (2Mbps)	16Mbps	16Mbps

Vanderbilt recommend that you conduct a network speed test to verify that a customer site has adequate bandwidth to meet requirements, for example, using speedtest.net. Note that a speed test provides a snapshot of the network performance at the time of the test; network performance will vary over time and may degrade with increasing demands.

1.2 Product Comparisons

	ACT365-VCU	ACT365 System
Cameras per ACT365-VCU	4 (ONVIF 2.0 Profile S compliant)	Unlimited
Recording Channels per ACT365-VCU	4	Unlimited
Concurrent Live View per ACT365-VCU	Unlimited	Unlimited
Concurrent Replay View per ACT365-VCU	4	4
NetBIOS Name	Yes	N/A
DHCP/Static IP Addressing	Yes	N/A

1.3 Product Specifications

	ACT365-VCU	ACT365-VCU2A	ACT365-VCUPoE
Voltage Range (Controller)	12±4V DC	12±4V DC	12±4V DC
Current Consumption (Controller)	1A (Max)	1A (Max)	1A (Max)
Controller Dimensions (H x W x D mm)	165 x 235 x 55	275 x 330 x 80	275 x 330 x 80
Controller Weight (kg)	0.6	2.2	2.2
Operating Temperature	-10 to +50° C	-10 to +40° C 75% RH non-condensing	-10 to +40° C 75% RH non-condensing
Operating Environment	Surface mounting Internal use only	Surface mounting Internal use only	Surface mounting Internal use only
Enclosure Material	ABS	1.2mm steel grey powder coated	1.2mm steel grey powder coated
LED Status Indicators	Yes	Yes	Yes
PSU Fault Output	n/a	Yes	Yes
Lid Opening Tamper Detection (Front)	No	Yes	Yes
Rear Tamper Detection	No	Yes	Yes

The ACT365-VCU includes a 1TB HDD for CCTV storage. Under normal conditions, the HDD provides enough storage for approximately 20 days for 4 cameras at Standard stream size, or 10 days for 4 cameras at High stream size.

**IMPORTANT NOTE:**

The ACT365-VCU only operates with IP cameras that comply with ONVIF 2.0 Profile S or later. Vanderbilt recommend checking the ONVIF conformant devices list on www.onvif.org to ensure that your cameras are compliant. Alternatively, contact the camera manufacturer directly.

Vanderbilt also provide an ONVIF test tool on the ACT365 Installer Portal at ACT365.eu.

1.3.1 Electrical specification

	ACT365-VCU	ACT365-VCU2A	ACT365-VCUPoE
PoE 802.3bt input (PoE++)	N/A	N/A	13.8V at 3A output + 0.5A battery charge
PoE 802.3at input (PoE+)	N/A	N/A	13.8V at 1A output + 0.5A battery charge
PoE 802.3af input (PoE)	N/A	N/A	13.8V at 0.3A output + 0.5A battery charge
Battery charging	N/A	Yes	Yes
Standby Battery	N/A	12V 7Ah Battery	12V 7Ah Battery
Battery Deep Discharge Protection	N/A	No	Yes
Input: Voltage Rated	N/A	100–240V AC	N/A
Input: Voltage Operating	N/A	90–264V AC	N/A
Input: Frequency	N/A	50–60Hz	N/A
Input: Max Current	N/A	1.0A (@ 90V AC)	N/A
Input: Mains input fuse	N/A	T2.0A	N/A
Input: Max standby power	N/A	0.5W (no load and no battery connected)	N/A
Output: Voltage	N/A	13.4–14.2V DC (13.8V DC Nominal) on mains power 10.0–12.3V DC on battery standby	N/A
Output: Max load current	N/A	2.0A	N/A
Output: Ripple	N/A	150mA pk–pk max	N/A
Output: Load output fuse	N/A	F2.0A	N/A
Output: Overload	N/A	Electronic shutdown until overload or short circuit removed (Under mains power only)	N/A

1.4 Ordering Details

ACT365-VCU	V54502-C140-A100	ACT365-VCU Video Controller
ACT365-VCU2A	V54502-C141-A100	ACT365-VCU2A Video Controller with 2A PSU
ACT365-VCUPoE	V54502-C142-A100	ACT365-VCUPoE Video Controller with PoE++ PSU

2 Installation

Installation Instructions

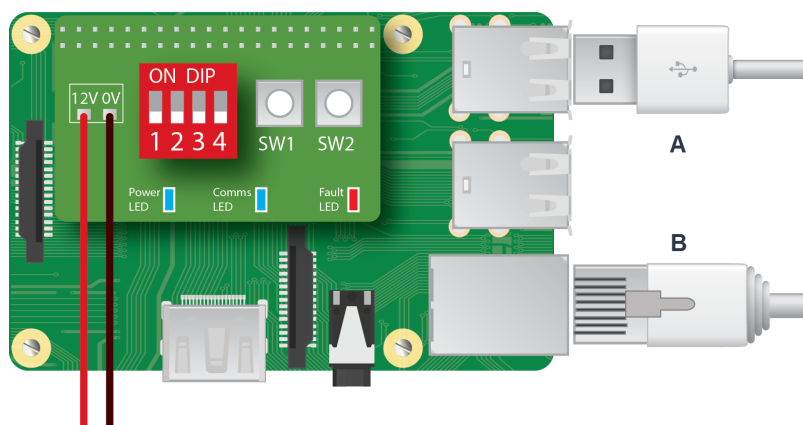
ACT365-VCUs are for indoor installation **only** and must be installed as permanently connected equipment. Each ACT365-VCU supports up to four IP cameras.

Mounting

Mount the ACT365-VCU to a solid surface using the supplied screws. The unit should be installed in a ventilated area that allows for easy access after installation.

2.1 ACT365-VCU Connections

The ACT365-VCU requires an external 12V DC power supply connected to the +12V and 0V terminals on the ACT365-VCU.



A Hard Disk / SSD	B RJ45 Ethernet
--------------------------	------------------------

2.1.1 Ferrite bead installation for the ACT365-VCU

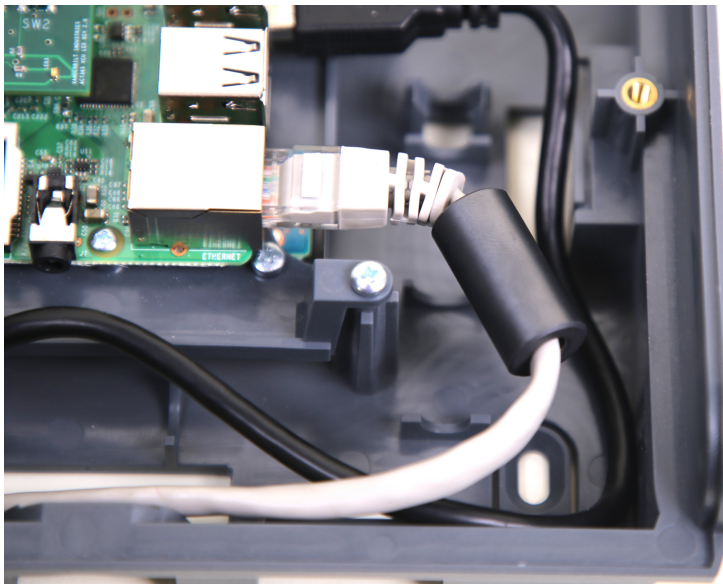
After you install the ACT365-VCU, Vanderbilt recommend that you place the provided ferrite bead (a noise-suppression device) around the Ethernet cable near the RJ45 connector to attain a desired level of electromagnetic compatibility (EMC). The ferrite bead is provided along with a screw kit in a clear ziplock bag inside the unit enclosure.



Adding the ferrite bead to the Ethernet cable

1. Place the ferrite bead around the un-crimped Ethernet cable.

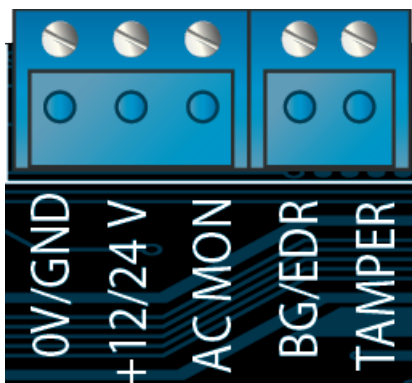
The ferrite bead should be positioned inside the enclosure, close to the RJ45 connector of the ACT365-VCU unit, as shown below.



2. Once the ferrite bead is in place, crimp the Ethernet cable at the terminating end.

2.1.2 Power supply

The ACT365-VCU requires an external 12V DC or 24V DC power supply. The supply should be connected to the +12/24V DC and 0V/GND connections.



2.2 ACT365-VCU2A

This unit is only suitable for installation as permanently connected equipment.

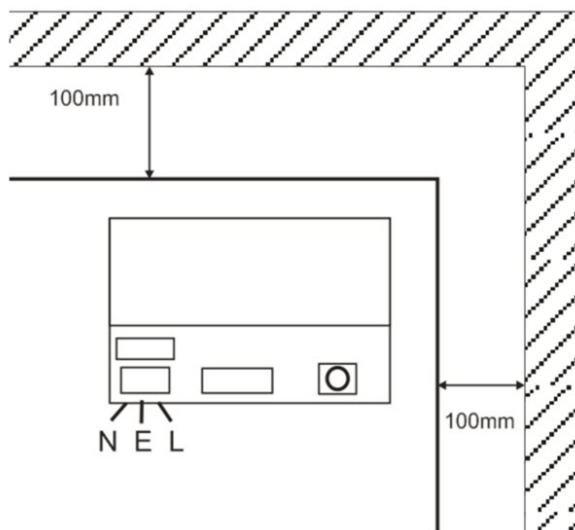


- The PSU is not suitable for external installation.
- Equipment must be earthed.

Before installation, ensure that external disconnect device is OFF. The PSU should be installed via a 3A fused spur according to all relevant safety regulations applicable to the application.

2.2.1 Mounting

1. Mount securely in correct orientation allowing minimum clearance – see diagram.



2. Route mains and low voltage output cables via different knockouts and/or cable entry holes.
3. Use bushes and cable glands rated to UL94 HB minimum.

2.2.2 Mains power up

1. Attach correctly rated mains cable (minimum 0.5mm² [3A], 300/500V AC) and fasten using cable ties.
2. Apply mains power and:
 - Check for 13.8V DC on load outputs.
 - Check green Mains LED is on.
3. Disconnect mains power.

2.2.3 Load Output

1. Attach correctly rated load cable and fasten using cable ties. Note polarity.
2. Apply mains power and check green Mains LED is on.

Note: Red LED may be illuminated (dependent upon model) to indicate that no battery has been connected. This is normal.
3. Verify load is operating correctly.
4. Disconnect mains power.

2.2.4 Standby Battery

Note: Ensure batteries being fitted to this unit are in good condition

1. Connect battery leads to battery, ensuring correct polarity of battery connections. Vanderbilt recommend using a 7Ah battery.
2. Apply mains power and check that the green Mains LED is on.
3. Check there is no fault indication on Red LED (dependent on model).
4. Disconnect mains power.
5. Check that the batteries continue to supply voltage and current to the load.
The Green LED should be off.

Note: Batteries must have sufficient charge to supply the load.

6. Reconnect mains power.

Green LED should be on.

7. Remove Load fuse and check that the red Fault LED is on (dependent on model).

2.2.5 Tamper

A tamper condition is reported in software.

1. Check that the tamper switch is:
 - Closed when the enclosure is mounted on the wall, lid is closed, and the lid screw is fitted.
 - Open when the lid is open.
2. Close cover and secure using fastening screw(s) provided.

2.2.6 Ferrite bead installation for the ACT365-VCU2A

While installing the ACT365-VCU2A, Vanderbilt recommend that you place the provided ferrite cores (noise-suppression devices) around the Ethernet and power cables to attain a desired level of electromagnetic compatibility (EMC).



Power cable ferrite core (A)
Inner diameter 19.05mm, outer diameter
31.12mm, length 15.93mm



Ethernet ferrite core (B)
Inner diameter 12.83mm, outer diameter
25.91mm, length 28.58mm

To install the ferrite cores:

1. Wind the power cable around ferrite core **A** with two turns.
2. Wind the Ethernet cable around ferrite core **B** with two turns.

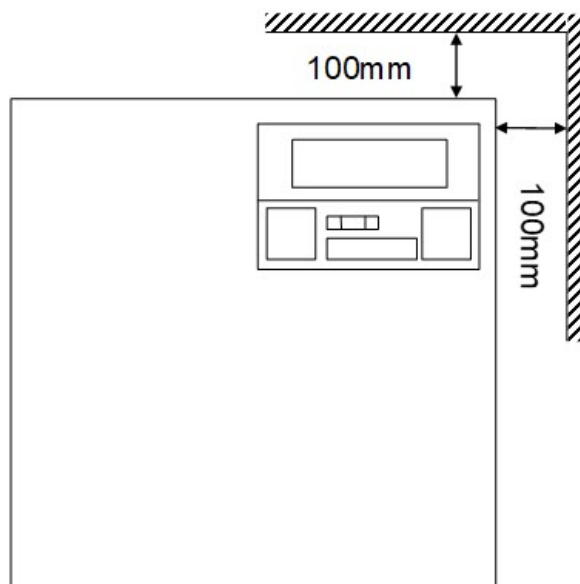


2.3 ACT365-VCUPoE

This unit must be fed from a compliant PoE (power over Ethernet) power source (PoE 802.3bt for 3A power output).

2.3.1 Mounting

1. Mount the boxed module securely using the enclosure mounting points in the correct orientation, allowing 100mm clearance around the enclosure – see diagram.



2. Route cables via knockouts and/or rear cable enclosure entry holes.

2.3.2 Power Up

1. Attach correctly rated load cable to load equipment and fasten using cable ties.
Note polarity.
2. Attach suitable Ethernet cable from PoE++ source to POE IN RJ45 connector (100m max from PSE).
3. Attach suitable Ethernet cable between IP device and DATA RJ45 connector (if required).
4. Connect charged 12V battery 7Ah to the other end of battery cable.
Note: Ensure correct polarity of battery connections: + use Red lead, - use Black lead.
5. Observe Green LED is ON when PoE is present.
6. Observe Load equipment indicates power is present.
7. Remove POE IN cable and observe load equipment continues to indicate power is present.
8. Reconnect PoE INPUT cable.

2.3.3 Troubleshooting

In the event of loss of PoE++ to the ACT365-VCUPoE, the PoE Fault signal contact will open and the Green LED will turn off, the ACT365-VCUPoE will continue to deliver up to 13.8V 3A of power to the load until the battery reaches its Deep Discharge protection limit.

If the output of the ACT365-VCUPoE fails, the cause of the failure should be investigated, for example, a short circuit load, or connection of a deeply discharged battery. The fault should be rectified before restoring power to the ACT365-VCUPoE. If any of the fuses require replacing, ensure the correct fuse rating and type is used. A spare fuse is supplied with the controller.

Battery charging will only start after a compliant PoE power source is connected to ACT365-VCUPoE, it will not start up on battery. Ensure only a healthy 12V battery is fitted to the system.

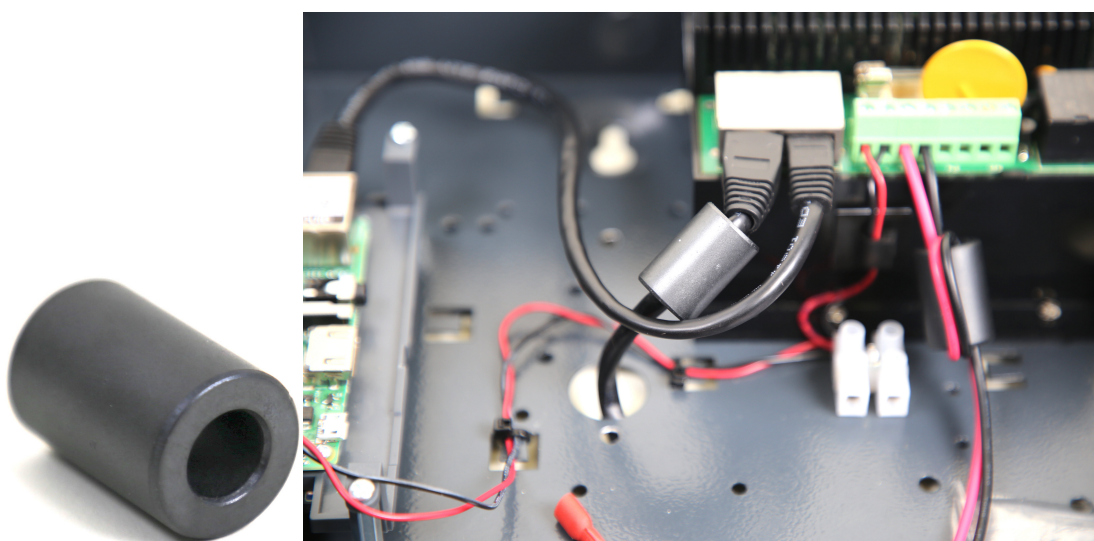
2.3.4 Tamper

A tamper condition is reported in software.

1. Check that the tamper switch is:
 - Closed when the enclosure is mounted on the wall, lid is closed, and the lid screw is fitted.
 - Open when the lid is open.
2. Close cover and secure using fastening screw(s) provided.

2.3.5 Ferrite bead installation for the ACT365-VCUPoE

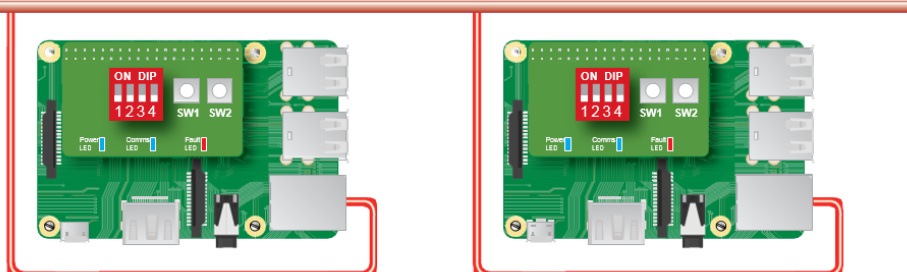
While installing the ACT365-VCUPoE, Vanderbilt recommend that you place the provided ferrite core (a noise-suppression device) around the Ethernet cable to attain a desired level of electromagnetic compatibility (EMC).



3 Connecting ACT365-VCUs to a Customer LAN

Each ACT365-VCU can be connected directly to the customer network.

LAN



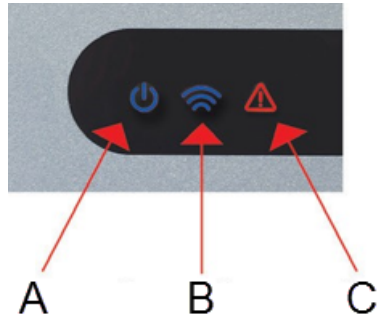
3.1 Cabling Chart

From	To	Network Type	Cable Type	Comments
LAN	ACT365-VCU	TCP/IP	Cat5/6	Max distance between network devices is 100m.

4 Status Indicators

4.1 ACT365-VCU

Status indicators appear on the front of the ACT365-VCU.



The meaning of each indicator is described below.



(A) Power / System Running

This indicates that the ACT365-VCU has power.



(B) Communications

Constant illumination indicates that the ACT365-VCU is connected to the ACT365 server.

Flashing indicates there is an issue connecting to the ACT365 server.



(C) Fault

Illuminates to indicate a fault on the ACT365-VCU.

Possible causes are:

- Ethernet was connected after power up.
- The ACT365-VCU cannot connect to the ACT365 server.
- A low power condition was detected.

4.2 ACT365-VCU2A and ACT365-VCUPoE



Fault indication



Mains present

5 Configuring ACT365-VCU

This section describes:

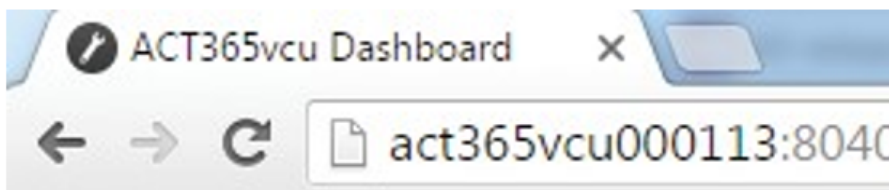
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5.1 Accessing the ACT365-VCU web interface

The ACT365-VCU web interface runs on port 8040 of the ACT365-VCU.

To access the ACT365-VCU web interface:

1. In your preferred web browser, enter `http://{NetBIOS name}:8040` (NetBIOS name is printed on the label on the PCB), or `http://{IP address}:8040`.



The ACT365-VCU home page may take up to a minute to load.

If you do not know the ACT365-VCU NetBIOS name or IP address, see *How do I find the address of the ACT365-VCU?* on page 33.

2. Enter the password and click **Login**.



The default password is **999999**.

3. If this is the first time you have logged in, you are prompted to change the password. Enter a new password and click **Change**.

Please change password:

999999

Password must:
 - Be at least 6 characters in length
 - Contain one lower-case letter
 - Contain one upper-case letter
 - Contain one numeric character
 - Contain a symbol character (e.g. * or !)

Change



This enforced password change is best practise to ensure the service stays secure. If you lose your password, perform a factory reset of the unit (see *Factory Reset* on page 26). Note that resetting the unit will remove any settings, cameras and previous recordings.

Once the password is successfully changed, you may continue with the setup of ACT365-VCU.

5.2 Adding Cameras using Discovery

To add a camera using discovery, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on the previous page), then:

1. Click the **Cameras** tab.

Automatically discovered cameras are listed in the **Discovered Cameras** section.

2. Select a camera in the **Discovered Cameras** list, then click **Add**.

The **Probe Device** dialog box displays.

3. **(Optional)** If the camera has a custom username and/or password, enter these custom details into the **Username** and **Password** fields provided.
4. Click **Probe**.

When the probe has finished, a camera snapshot displays.

5. Enter an appropriate **Name** for the camera.

Vanderbilt recommend using a name that describes the camera location, for example, Front Door.

6. Select the **Record** check box if the ACT365-VCU should record camera footage. The ACT365-VCU will record approximately 20 days of camera footage (dependent on the type of scene the camera is viewing). Once the ACT365-VCU data storage limit is reached, data is recycled. When data is recycled, the oldest data is removed first.

If you do not select **Record**, the ACT365-VCU will support live view only.

7. Click **Add**.

The camera is added to the ACT365 Installer Portal at ACT365.eu.

A summary of the camera settings is displayed on the **Cameras** tab.

After a camera has been added, it appears in the **Selected Cameras** list and is accessible on ACT365.

5.3 Adding Cameras Manually

If a camera has not been discovered automatically, or is on a different IP subnet, you can add the camera manually.

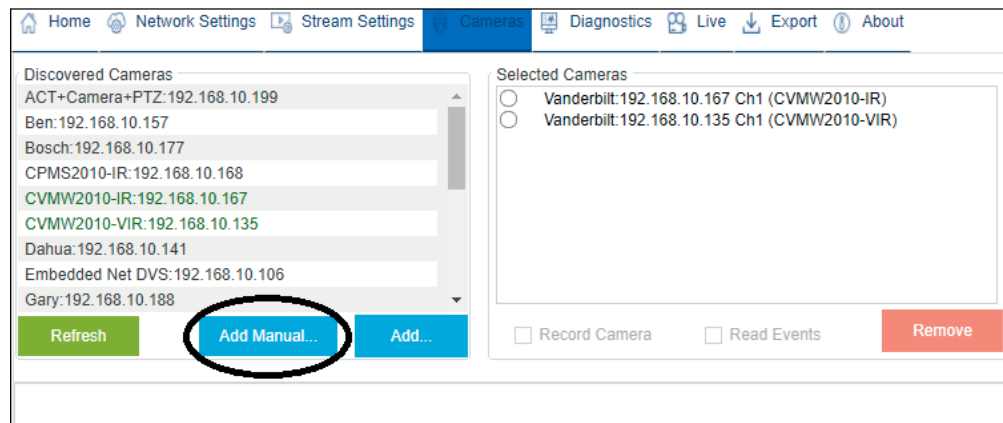


Note: Only expert users should manually add cameras. A camera stream URL must be entered manually, and any inaccurate data entered could adversely affect the ACT365-VCU operation.

To add a camera manually, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

1. Click the **Cameras** tab.
2. Click **Add Manual**.

The **Probe Device** dialog displays.



3. Enter the following details in the **Probe Device** dialog:

- **Username:** Camera login username
- **Password:** Camera login password
- **IP:** IP address of the camera, for example, 192.168.1.1.
- **RTSP URL:** Camera first stream URL, for example, rtsp://192.168.1.1/firststream.
- **Snapshot URL:** Camera snapshot URL, for example, http://192.168.1.1/firststream/snapshot.



Camera URLs can be found on the manufacturer's websites or in the technical documentation.

4. Click **Probe**.

When the probe has finished, a camera snapshot displays.

5. Enter an appropriate **Name** for the camera.

Vanderbilt recommend using a name that describes the camera location, for example, Front Door.

6. Select the **Record** check box if the ACT365-VCU should record camera footage. The ACT365-VCU will record approximately 20 days of camera footage (dependent on the type of scene the camera is viewing). Once the ACT365-VCU data storage limit is reached, data is recycled. When data is recycled, the oldest data is removed first.

If you do not select **Record**, the ACT365-VCU will support live view only.

7. Click **Add**.

The camera is added to the ACT365 Installer Portal at ACT365.eu.

A summary of the camera settings is displayed on the **Cameras** tab.

After a camera has been added, the camera details appear in the **Selected Cameras** list and the camera is accessible on ACT365.

5.4 Installing ACT365-VCU on the ACT365 Installer Portal

To add an ACT365-VCU to a customer site on the ACT365 Installer Portal:


1. Log in to the ACT365 Installer Portal at ACT365.eu.



ACT365 is only available to registered installers. You can register at ACT365.eu.

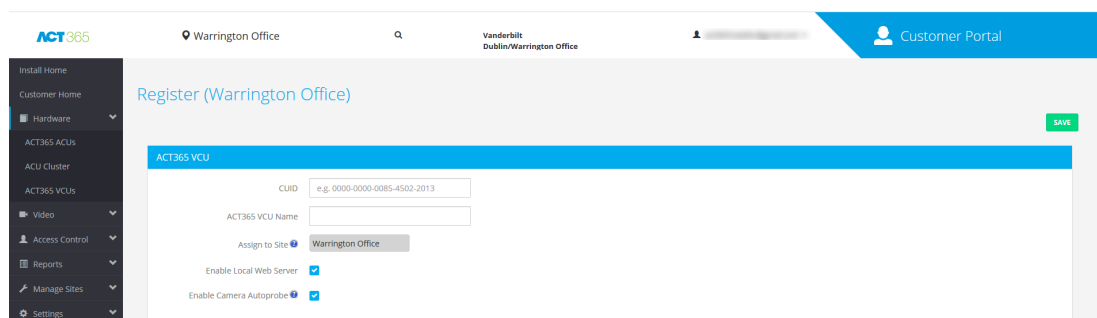
2. Enter the customer portal from the ACT365 Installer Portal.

To do this:

- a. Click **Customers** to open a list of customers.
- b. Click the **Enter Customer Portal** icon  beside a customer name to enter the customer portal.

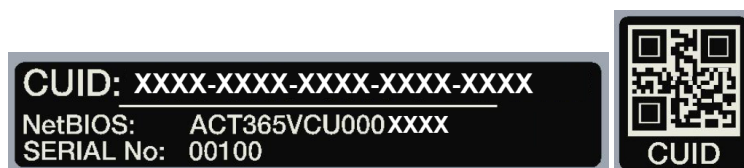
3. Click **Hardware > ACT365 VCUs**.

4. Click **ADD ACT365 VCU**.



5. Enter the ACT365-VCU details.


- a. Enter the Controller Unique Identifier (CUID). This is printed on the label on the bracket beside the PCB.



- b. Enter the name of the ACT365- VCU. Vanderbilt recommend that you enter a name that




describes the ACT365-VCU location.


- c. Select the site where the ACT365-VCU will be installed.
- d. Click **Save**.

The ACT365-VCU is added to the customer site. A green tick mark  appears in the **Connected** column if the connection is successful.

Actions

APPLY

	CUID	ACT365 VCU Name	IP Address	Connected	Status	Version	Site ID	Configure	Diagnostics
<input type="checkbox"/>	1314-1500-0070-7019-3928	ACT Warrington Office	192.168.10.189		Connected	v8.0 r11	Warrington Office		

6. To verify the ACT365-VCU status, select the diagnostics icon  for the ACT365-VCU and select the hyperlink for the ACT365-VCU in the first panel.

ACT365 VCU

ACT365 VCU ID

1314-1600-0113-

NetBIOS Name

ACT365VCU000113

ACT365 VCU Name

MM Viquet 1314-1600-0113-2654-4517

Local Webserver (if enabled)

 [ACT365VCU000113](#)

See *Diagnostics on ACT365-VCU* on page 32 for information on ACT365-VCU diagnostics.

See *Configuring ACT365-VCU* on page 17 for information on configuring cameras on ACT365-VCU.

5.5 Associating cameras to doors

Associating cameras to a door enables customers to view recorded footage. Log events for the footage can be replayed from the **Reports > Log Events** menu.

1. Log in to the ACT365 Installer Portal at ACT365.eu.
2. Click **Access Control > Doors**.
3. Click the name of the door for which you wish to make the camera association.
4. In the **Door Camera Associations** panel, click the field to open a drop-down list from which you can select the cameras to be associated with the door.
5. Click **Save**.

5.6 Configuring motion detection for a camera

If motion detection is enabled on a camera, motion events detected by that camera are recorded in the event log, and appear on the recorded footage timeline for that camera (see *Viewing recorded footage on the ACT365 Installer Portal* on page 29).

To configure motion detection for a camera, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

1. Click the **Cameras** tab.
2. In the **Selected Cameras** panel, click the name of the camera for which you wish to configure motion detection.
3. Click **Motion**.

The **Motion Analytics Configuration** popup displays.

Motion Analytics Configuration

Alarms: Add Delete

Entry to PM

Schedule:

Mon-Fri: Active All Day

Sat/Sun: Active All Day

☒ Enabled

OK

- On the camera feed image, click the top-left and bottom-right points that define the area to be monitored for motion events.
- Use the drop-down lists in the **Schedule** area to configure when motion detection should be active or inactive during the work week and at weekends.
- Select the **Enabled** check box.
- Click **OK**.

5.7 Network Settings on ACT365-VCU

The ACT365-VCU is configured to use DHCP addressing by default. You can modify network settings through the ACT365-VCU web interface.

Current Network Settings	
DHCP Enabled	True
Gateway	172.27.72.1
IP Address	172.27.1.30
MAC Address	B827EB7FDCCD
NetBIOS Name	ACT365vcu000032
Subnet Mask	255.255.0.0
DNS Settings	
Preferred DNS	
Static IP Settings	
Gateway	192.168.1.254
IP Address	
Subnet Mask	255.255.255.0
VCU Information	
Site name	Head Office
VCU Description	Head Office VCU

To configure the ACT365-VCU to use a static IP address, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

- Click the **Network Settings** tab.
- Under **Static IP Settings**, set the required addresses for **Gateway**, **IP Address** and **Subnet Mask**.
- Click **Apply** to save changes.

The unit reboots. After reboot, the new IP address is in effect.

To configure the ACT365-VCU to use DHCP addressing, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

1. Click the **Network Settings** tab.
2. Under **Static IP Settings**, delete values for **Gateway**, **IP Address** and **Subnet Mask**.
3. Click **Apply** to save changes.

The unit reboots. After reboot, DHCP addressing is in effect.



You can optionally enter a **Site Name** and **VCU Description** in the **VCU Information** section on the **Network Settings** tab. This information helps to identify the units and may assist Vanderbilt support if you need help.

5.7.1 Reset the ACT365-VCU hardware to use DHCP

If an ACT365-VCU has an invalid IP address, or the unit is no longer accessible on its known IP address, the red LED will flash on unit boot. You can reset the ACT365-VCU to use DHCP using the following procedure:

1. Set the DIP switches as follows:



When the blue lights start to flash, this indicates that the IP reset is complete.

2. Set the all DIP switches to OFF.

The unit reboots automatically.

After reboot, the unit is back on DHCP.

5.8 Stream Settings on ACT365-VCU

Video quality can be configured from the **Stream Settings** tab in the ACT365-VCU web interface. The settings apply to all cameras connected to the ACT365-VCU. If a particular camera does not support the selected values, the next available values will be used instead on that camera.

To configure stream settings, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

1. Click the **Stream Settings** tab.

2. Select one of the following options:

- **Standard** stream profile (default setting: 720p, H264, 25fps, 1024 Kbps)
- **High** stream profile (1080p, H264, 25fps, 2048 Kbps)
- **Manual** stream profile. This profile option is only recommended for experienced camera installers. Customize this streaming profile by editing the **Values**. Ensure that your manual settings are supported by your connection bandwidth.

3. Under **Recording**, select the number of cameras you will connect to the VCU. You can connect a maximum of four cameras, and recording space on the connected HDD is divided equally between the selected number of cameras.

Note: This setting is only editable before cameras are added to the system. You must also enable recording for each camera before the feed will be recorded to the HDD. You can enable recording as you add each camera. See *Adding Cameras using Discovery* on page 18 and *Adding Cameras Manually* on page 20.

4. Click **Save**.

5.9 Factory Reset

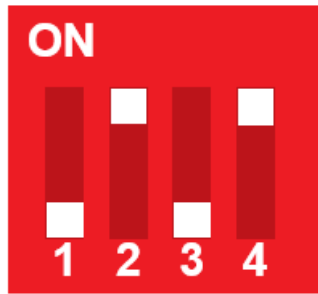
In the event of a unit failure or forgotten ACT365-VCU password, follow the procedure below to factory reset the ACT365-VCU.



IMPORTANT: Factory reset removes all custom settings and camera databases. Previous camera footage is erased. Factory reset is **NOT REVERSIBLE** and should only be used as a last resort.

You can also perform a factory reset from the ACT365-VCU web interface **Diagnostics** tab. See *Diagnostics on ACT365-VCU* on page 32 for more information.

1. Power off the ACT365-VCU.
2. Configure the unit DIP switches as pictured below. (ON = 2,4; OFF = 1,3)



3. Power up the ACT365-VCU. Wait for the red LED to flash.
4. Reset all DIP switches to the OFF position, as pictured below. (OFF = 1, 2, 3, 4)



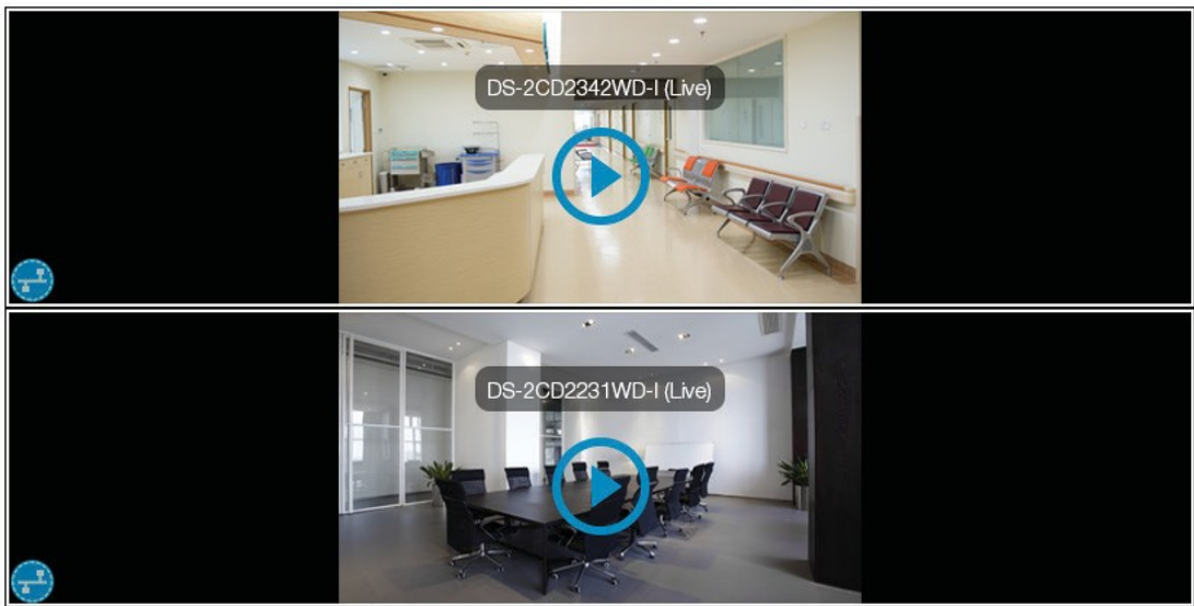
5. The LEDs will turn off and the unit will reboot.
The ACT365-VCU is now defaulted to factory settings.

6 Video

This section describes:

6.1 Viewing Live Video on the ACT365-VCU	28
6.2 Viewing Live Video on the ACT365 Installer Portal	29
6.3 Viewing recorded footage on the ACT365 Installer Portal	29
6.4 Exporting Video from the ACT365-VCU	30

6.1 Viewing Live Video on the ACT365-VCU



☐ Diagnostics

To view a live video stream from the ACT365-VCU, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

1. Click the **Live** tab.
2. Click the play button in the centre of any camera feed. The stream may take a few seconds to buffer.




To display additional diagnostic information overlaid on the camera stream, select the **Diagnostics** check box at the bottom of the screen before viewing the required live video stream.

6.2 Viewing Live Video on the ACT365 Installer Portal

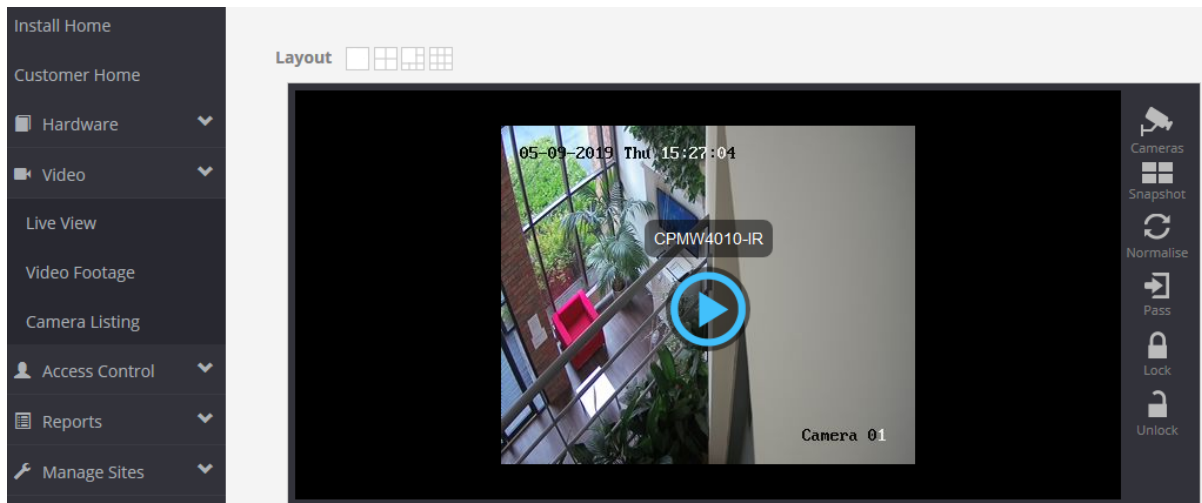
To view a live video stream from the ACT365 Installer Portal:

1. Log in to the ACT365 Installer Portal at ACT365.eu.
2. Enter the customer portal from the ACT365 Installer Portal.

To do this:

- a. Click **Customers** to open a list of customers.
 - b. Click the **Enter Customer Portal** icon  beside a customer name to enter the customer portal.
3. Click **Video > Live View**.
 4. **(Optional)** Select a camera.
 5. Click the play button in the centre of the camera feed.

The stream may take a few seconds to buffer.




6.3 Viewing recorded footage on the ACT365 Installer Portal


To view recorded footage on the Installer Portal:

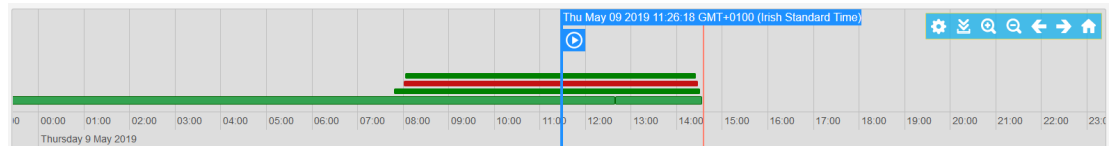
1. Log in to the ACT365 Installer Portal at ACT365.eu.
2. Enter the customer portal from the ACT365 Installer Portal.

To do this:

- a. Click **Customers** to open a list of customers.
 - b. Click the **Enter Customer Portal** icon  beside a customer name to enter the customer portal.
3. Click **Video > Video Footage**.
 4. Select the camera(s) for which you want to view footage.

The timeline at the bottom of the screen is populated with available recordings for the selected camera(s).

Click and drag the timeline until the required timestamp/event is below the vertical **Play** indicator, then click the **Play** icon .



- Click the **Settings** icon , select the **Show Events** check box in the **Options** popup, then close the **Options** popup.

Options

☒ **Show Events**

☒ **Motion**

☐ **Diagnostics**

☐ **Layout**

- Click an access control event icon on the time bar to view footage from the selected camera(s) at that time.

6.4 Exporting Video from the ACT365-VCU

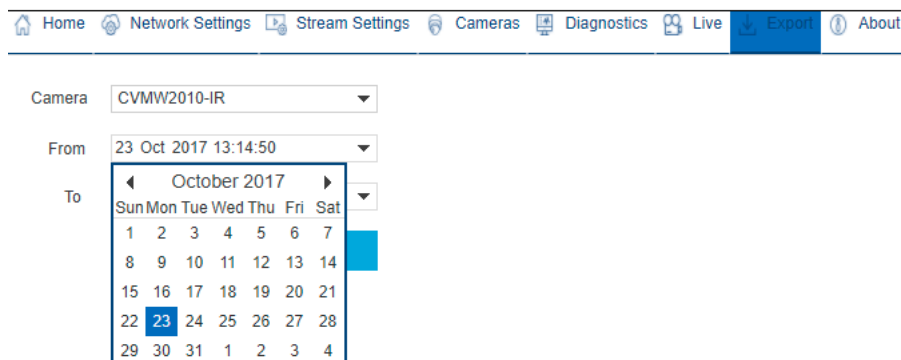
Footage can be exported locally on the ACT365-VCU via the export tap in the local web access.



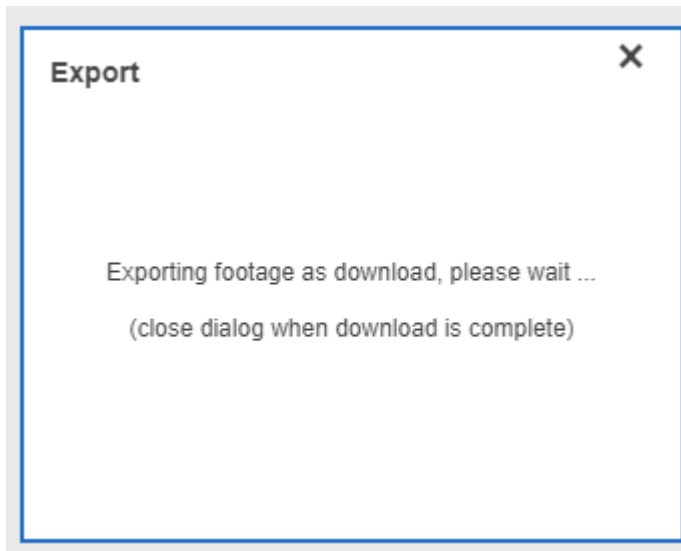
Exporting locally saves bandwidth and resources, as footage does not need to be uploaded to the cloud to be prepared before export.

To export video from the ACT365-VCU, log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17), then:

- Click the **Export** tab.
- Select a camera from the **Camera** drop-down menu.
- Select a date and time range for the export.



- Click **Export**.



The ACT365-VCU converts and exports the selected footage. When this process is complete, the new video file is downloaded in accordance with your browser download settings.

7 Diagnostics on ACT365-VCU

Log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17) and click the **Diagnostics** tab.

Maintenance

Reboot

Factory Reset

ID Mode

Shutdown

☒ AutoUpdate

☐ Enable Remote Access

☐ Log Power Errors

Change Password

Clear Power Err

VCU Status

TemperatureStatus: OK

Temperature: 62.3

CPUStatus: OK

CPU: 42

Power: OK

GrubConnection: OK

ACT365Portal: OK

LocalInternetConnection: OK

GrubNode: OK

Refresh

Camera Status

CPMW4010-IR: OK

CAM-SMV-SVC-D-3.2-WHITE: Analytics (InvalidStreamResolution)

Refresh

Event Log

Timestamp	Category	Type	Device ID	Info
Thu, 09 May 2019 08:53:22	Info	VCUServiceUp	c5a5097c-8aae-4493-8a16-e7	Service up: GrubConnection
Thu, 09 May 2019 08:52:49	Error	VCUServiceDown	c5a5097c-8aae-4493-8a16-e7	Service down: GrubConnection
Wed, 08 May 2019 08:22:10	Info	VCUServiceUp	c5a5097c-8aae-4493-8a16-e7	Service up: SoftwareManagerNode
Wed, 08 May 2019 08:21:41	Info	VCUGeneral	c5a5097c-8aae-4493-8a16-e7	VCU Registered
Wed, 08 May 2019 08:21:41	Info	VCUServiceUp	c5a5097c-8aae-4493-8a16-e7	Service up: ACT365Portal
Wed, 08 May 2019 08:21:15	Info	VCUServiceUp	c5a5097c-8aae-4493-8a16-e7	Service up: GrubConnection

From this tab, you can view the **VCU Status**, the **Camera Status** for each camera that is connected to the ACT365-VCU, and the ACT365-VCU **Event Log**.

You can also perform the following ACT365-VCU maintenance tasks:

- **Reboot the ACT365-VCU.** Click **Reboot** to shut down services and reboot the ACT365-VCU.
- **Reset the ACT365-VCU to factory defaults.** Click **Factory Reset** to remove all local configuration and reset the unit. You can also reset the ACT365-VCU as described in *Factory Reset* on page 26.
- **Identify an individual ACT365-VCU.** Click **ID Mode** and all LEDs on the ACT365-VCU will flash repeatedly. Click again to resume normal operation.
- **Enable automatic firmware updates.** By default, automatic updates are turned off. If new firmware is available, the update must be initiated from the ACT365 Installer Portal. To enable automatic firmware updates, select the **AutoUpdate** check box.
- **Set a unique password for the ACT365-VCU.** Enter a new password in the field provided and click **Set Password**.
- **Enable Remote Access.** To allow Vanderbilt to remotely connect to the unit to perform debug operations, select the **Enable Remote Access** check box.
- **Log Power Errors.** Voltage fluctuations can cause low power events. To enable voltage monitoring for power, select the **Log Power Errors** check box.

8 FAQs

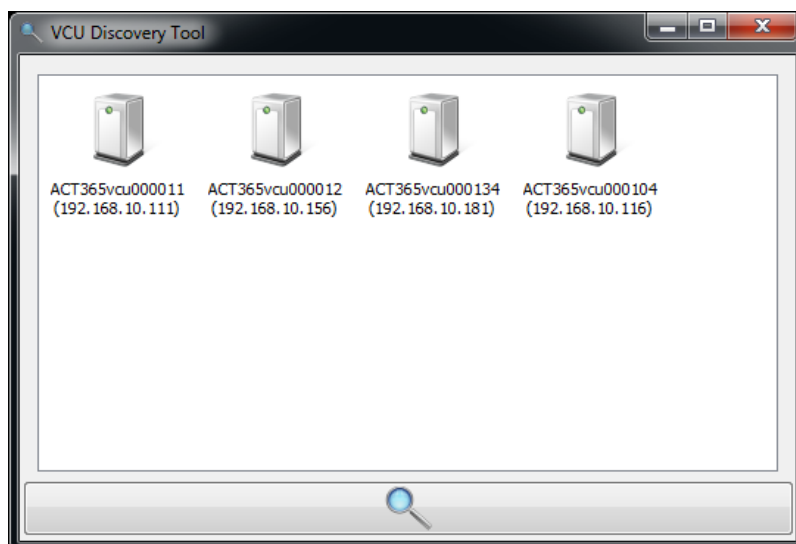
This section covers the following:

8.1 How do I find the address of the ACT365-VCU?	33
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8.1 How do I find the address of the ACT365-VCU?

To find the NetBIOS name or IP address of the ACT365-VCU, do one of the following:

- Use Windows Explorer on your PC to find the IP address of the ACT365-VCU under the **Network** folder. Navigate to the **Network** folder in Windows Explorer and double-click the ACT365-VCU. This will take you directly to the ACT365-VCU home page.
- Download the VCU Discovery Tool from the **Installer Utilities** page of the ACT365 Installer Portal. Run the tool to scan the network for the ACT365-VCU. Double-click the required ACT365-VCU in the list of discovered ACT365-VCUs.



8.2 What is the password for the ACT365-VCU web front end?

The default password is 999999. After first login, you are prompted to change the password. The password can also be changed on the **Diagnostics** page on the ACT365-VCU (see *Diagnostics on ACT365-VCU* on page 32). Ensure that the password is keep safe once set.

If you forget your password, a factory reset may be required to gain access to the unit. See *Factory Reset* on page 26 for more information.

8.3 Why is the ACT365-VCU not connecting to ACT365?

While operating, the ACT365-VCU must connect to <https://api.act365.eu> on port 443.

If the ACT365-VCU is not connecting:

1. Check that the LEDs on the ACT365-VCU Ethernet jack are active.

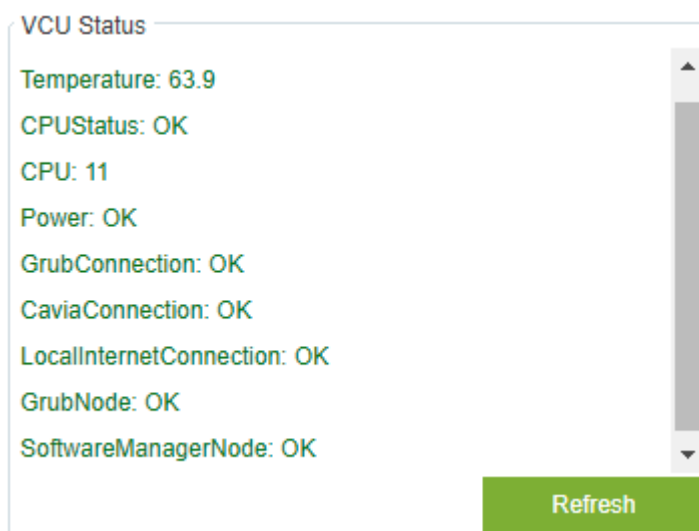
If no LEDs are illuminated, then check the Ethernet cable is inserted fully and is connected to a live Ethernet port.

2. Ping the ACT365-VCU using either the NetBIOS name or IP address and ensure the controller responds.

NetBIOS name example: `ping ACT365VCU010049`

IP address example: `ping 192.168.1.60`

3. If the ping fails, ensure that the ACT365-VCU IP address is set:
 - If the ACT365-VCU is set to use DHCP, ensure that the DHCP server on your network is running.
 - If the ACT365-VCU is set to use a static IP address, ensure that the address is set correctly.
4. If the ping is successful:
 - a. Log in to the ACT365-VCU web interface (see *Accessing the ACT365-VCU web interface* on page 17).
 - b. Click the **Diagnostic** tab.
 - c. Check that all entries under **VCU Status** show a status of **OK**.



5. Log in to the ACT365 Installer Portal at ACT365.eu and check that the ACT365-VCU CUID matches what is printed on the label inside the controller.

If the problem is not resolved, contact the customer IT department as there may be a problem with the customer network.

8.4 How many cameras can I add to my ACT365-VCU?

The ACT365-VCU can support up to 4 cameras per unit. Multiple ACT365-VCUs can be added to the same site.

8.5 Why can I not see my cameras on the camera setup page?

The ACT365-VCU automatically discovers cameras on the network. If the ACT365-VCU fails to discover any cameras, check the following:

- Does the camera have connectivity?
- Does the ACT365-VCU have connectivity?
- Are cameras fully up to date with latest manufacturer firmware?
- Are the ACT365-VCU and cameras connected on the same network/network IP range?
- Are cameras compliant with ONVIF 2.0 Profile S or later?

8.6 What are the bandwidth requirements for the ACT365-VCU?

The ACT365-VCU can support up to 4 cameras.

Maximum and minimum upload bandwidth requirements for concurrent viewing at **Standard** stream settings (1Mbps per camera) are:

- Maximum: 8 Mbps upload, 8 Mbps download (4 live, 4 replay)
- Minimum: 1 Mbps upload or download (1 live or replay)

If unsure of upload/download speed capabilities, contact the network administrator or perform a speed test using a service such as speedtest.net. Note that a speed test provides a snapshot of the network performance at the time of the test; network performance will vary over time and may degrade with increasing demands.

8.7 Why can't I access the ACT365-VCU web server?

In ACT365, ensure that **Enable Local Web Server** is set under **Hardware > ACT365 VCU's**.

8.8 What browsers are supported for video playback on ACT365?

Tested and supported internet browsers are listed in the following table.

Operating system	Browser(s)
Windows 7	<ul style="list-style-type: none"> • Google Chrome • Mozilla Firefox • Opera <p>For the best user experience, Vanderbilt recommend using Google Chrome or Mozilla Firefox.</p>
Windows 10 OS	<ul style="list-style-type: none"> • Google Chrome • Mozilla Firefox • Opera • Microsoft Edge <p>For the best user experience, Vanderbilt recommend using Google Chrome, Microsoft Edge or Mozilla Firefox.</p>

Operating system	Browser(s)
Mac OS X	<ul style="list-style-type: none">• Google Chrome• Mozilla Firefox• Opera• Safari
Linux	<ul style="list-style-type: none">• Google Chrome• Mozilla Firefox• Opera
iOS	Safari
Android	Chrome

You should ensure that all browsers are up to date for best performance.

8.9 What IP cameras does the ACT365-VCU support?

The ACT365-VCU is compatible with most ONVIF 2.0 profile S or later IP cameras. Ensure that your camera meets this specification. For more information regarding ONVIF or supported cameras visit: www.onvif.org

8.10 Does the ACT365-VCU support camera recording?

Yes. The ACT365-VCU ships with a 1TB SATA disk for recording storage. This enables the ACT365-VCU to record each camera. HDD space is split equally across the configured channels.



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