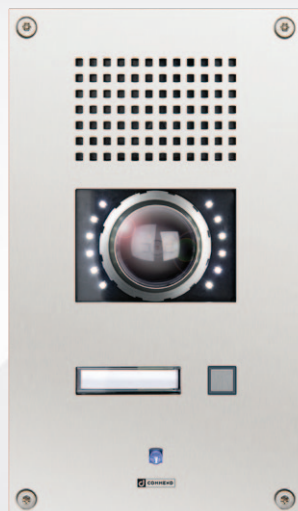


## SIP-WS 201VCA



## Wallmount Stations SIP-WS 201VCA

Full Duplex capable, vandal resistant SIP station with built-in high-performance AXIS colour video camera designed for areas with high requirements on safety and system integration. The stations are connected directly to the Ethernet (LAN/WAN) and in this manner are connected to a compatible SIP Server via the IP-network.

Besides high volume, the SIP station provides a numerous amount of further features: Pre-recorded audio can be applied in a multi-purpose manner, e.g. as acoustic indication at line fault or as waiting information at call initiation, a con-

figurable background noise canceller provides a crystal clear communication in challenging situations. Furthermore, the stations are perfectly suited for use as door stations at entry- and gateways, due to integrated relay outputs.

The 3 mm stainless steel front panel with tamper protection and special screws protects against vandalism. The robust construction provides full protection against water, dirt and dust – protection class IP 65. The button can be allocated to a call number and the label area can be filled in individually.

### SIP-WS 201VCA

SIP station with one programmable, back-lit direct dialling button, back-lit label area, AXIS built-in colour video camera, electret microphone with multifunction LED, loudspeakers 2x8 Ω, 3 inputs for floating contacts and 2 relay outputs (connection as "make" or "break" contact)

## Technical Data – Benefits

### TECHNICAL DATA

IP rating:	IP 65
Mechanical impact resistance acc. EN 62262:	IK 07
Front panel:	stainless steel, 3 mm (0.12 in)
Operating temperature range:	-25°C to 50°C (-13°F to 122°F)
Storage temperature range:	-25°C to 50°C (-13°F to 122°F)
Relative humidity:	up to 95% not condensing
Call button:	back-lit direct dialling button with label area
Microphone:	Omnidirectional electret microphone for max. 7 m (23 ft) speaking distance
Loudspeaker:	Special membrane type for optimal sound quality, sound pressure: 85 dB/1 W/1 m (3.28 ft), 2 x 8 Ω
Amplifier:	Built-in amplifier class "D" with 2.5 W
Handset, Headset:	EM sensitivity: 14 mV <sub>eff</sub> EM impedance: 3.3 kΩ / EM supply: 2.5V EP level: 850 mV <sub>eff</sub> at 0 dBm0 / EP impedance: 200 Ω
Call indication:	multifunction LED (colours: red, green, blue)
Line output:	for connection of loudspeaker module
Outputs:	2 SPDT (changeover) relay outputs 30 V / 1 A: 100,000 make-and-break cycles
Inputs:	3 inputs for floating contacts
DTMF Decoding:	RFC 2833
SIP User Agent (UDP):	RFC 3261
IP Protocol:	IPv6 ready, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, SNMPv2, STUN
Frequency range:	300 - 7,000 Hz
Connection:	pluggable screw terminals expansion plug
- IP Uplink/Downlink:	shielded RJ 45 modular jacks
Cabling:	min. Cat. 5
Power supply:	PoE
PoE (Power over Ethernet):	IEEE 802.3af standard Power consumption of the terminal device: Class 0 (0.44 W to 12.95 W)
Codecs:	G.711 a-Law, G.711 μ-Law G.722
Ethernet:	2 x 10/100 MBit/s (full/half Duplex)
Additional mounting material:	flush mount kit WSFB 50V flush mount kit WSFB 50V FL surface mount kit WSSH 50V, rain protection roof WSRR 50V
Measurements:	with flush mount kit: W 164 mm (6.46 in), H 279 mm (10.98 in), D 14 mm (0.55 in) with surface mount kit: W 164 mm (6.46 in), H 279 mm (10.98 in), D 50 mm (1.97 in) (measurements without camera dome)
Weight incl. package:	approx. 1500 g (3.3 lbs)

### BENEFITS

- Built-in Axis camera
- Illuminator
- Multiple H.264 and Motion JPEG streams
- Compatible to 3rd-Party-Video components e.g. NVRs
- Excellent video quality including HDTV 720p and H.264
- Wide angle of view 105° +/- 30° mechanical = 165°
- Video functions e.g. motion detection, recording etc.
- Vandal resistant and detection of tampering attempts such as blocking or spray-painting
- Back-lit direct dialling button
- IP rating IP 65 and mechanical impact resistance up to IK 07
- Supports DSP-Features such as OpenDuplex®, Audio Monitoring and Microphone-/Loudspeaker Surveillance
- HD Voice – 7 kHz Audio
- Display, Full keypad support, Full handset support, i.e. handling same like at a telephone
- Optional text in display (e.g. house number, Info,...)
- Very high volume
- Provisioning
- Phonebook and Webcalls directly via web interface
- Full Duplex for natural, hands-free communication
- Local directory support
- Chain call support (e.g. automatic processing of call sequences)
- STUN support
- SNMP for surveillance of the station
- Using Pre-recorded audio as: Waiting information at call initiation; Individual call tone for call initiation; Location message; Acoustic indication at line fault
- Control of the 2 relays e.g. as door opener via
  - DTMF post-dial or Web
- Attendant contacts for various functions
- Three inputs for connecting add-on call button modules
- Server redundancy (up to 3 servers)
- Operation without Server possible
- Configurable Acoustic Echo Canceller (AEC)
- Configurable Background Noise Canceller
- Adaptive jitter buffer
- Complies with SIP standard for easy integration in every SIP capable PBXes
- Integrated webserver for configuration & firmware update
  - Adjustment of microphone sensitivity and volume
- Remote controllable via HTTP
- Increased system availability by redundant LAN infrastructure
- The integrated data switch function enables the connection of further IP devices, e.g. IP camera
- Configurable Auto Answer Function
- Instant boot (system boot within seconds)

#### Note:

The camera works independently from the SIP operation!



# Technical Data AXIS Camera

## TECHNICAL DATA

Camera	
Image sensor:	1/4" progressive scan RGB CMOS
Total horizontal camera angle of view:	165°
Lens:	1.97 mm, F3.0, 105°
Camera angle adjustment (mechanical):	+/- 30°
Light sensitivity:	1 - 100000 lux, F3.0
Shutter time:	1/24 500 s to 1/6 s
Video	
Video compression:	H.264 (MPEG-4 Part 10/AVC) Motion JPEG
Resolutions:	800x600 to 160x90 1280x800* to 160x90 * 1440x900 (1.3 MP) scaled resolution available via VAPIX®
Frame rate:	30 fps in all resolutions
Video streaming:	Multiple, individually configurable streams in H.264 and Motion JPG, Controllable frame rate and bandwidth VBR/CBR H.264
Image settings:	Compression, color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, wide dynamic range - dynamic con- trast, fine tuning of behavior at low light, mirroring of images Rotation: 0°, 90°, 180°, 270°, including Corridor Format Text and image overlay, privacy mask

## TECHNICAL DATA

Network	
Security:	Password protection, IP address filtering, HTTPS** encryption, IEEE 802.1X network access control**, digest authentication, user access log
Supported protocols:	IPv4/v6, HTTP, HTTPS**, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS
System integration	
Application Programming Interface:	Open API for software integration, including VAPIX® and AXIS Camera Application Platform from Axis Communications; specifications available at <a href="http://www.axis.com">www.axis.com</a> ONVIF, specifications at <a href="http://www.onvif.org">www.onvif.org</a> AXIS Video Hosting System (AVHS) with One-Click Camera connection
Intelligent video:	Video motion detection, active tampering alarm, AXIS Camera Application Platform
Event triggers:	Intelligent video
Event actions:	File upload: FTP, HTTP, network share and email; notification: email, HTTP and TCP; external output activation; video recording to edge storage; pre- and post-alarm video buffering
Data Streaming:	Event data
Built-in installation aids:	Pixel counter
Edge storage:	Support for recording to network share (Network Attached Storage or file server)
**This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ( <a href="http://www.openssl.org">www.openssl.org</a> )	



# Compatibility

## COMPATIBILITY SIP PBX

Basically the SIP stations can be used with any SIP server.

The following server types have been tested explicitly by Commend and therefore a proper functionality can be confirmed:

MANUFACTURER <sup>1</sup>	TYPE	VERSION
Cisco	Cisco Call Manager Cisco Unified Communication Manager	Versions 5, 6, 7, 8
Digium	Asterisk	Version 1.2, 1.4, 1.6
Avaya (former: Nortel)	CS1000	Version 6
Avaya	Avaya Aura™ (Avaya Communication Manager, Avaya Session Manager) <sup>2</sup>	Release 6.1
Innovaphone	Virtual Appliance IPVA	Version 9 final
Alcatel	OmniPCX Enterprise (OXE)	Release 9
Siemens	Hipath 4000 Hipath 3000 + HG 1500	Version 5
3CX	3CX for Windows	3CX PhoneSystem Versions 9, 10, 11
Starface	Starface free	Version 4.x, 5.x
Aastra (former: Ericsson)	MX-ONE	Version 4.1 SP 1
Kamailio	Kamailio (OpenSER)	Version 3.3.0
FreeSWITCH	FreeSWITCH <sup>3</sup>	Version 1.1 Beta1
ELMEG	elmeg ICT880	Version 7.67D
2N®	2N® Netstar IP <sup>2</sup>	Version 3.1.0.96
AVM	Fritz!Box Fon 7170 <sup>2</sup> Fritz!Box Fon 7270 <sup>2</sup>	Version 29.04.87 Version 54.05.05
Sipgate	sipgate.at, sipgate.de	tested in Dec 2010
Vodafone Arcor	vodafone.de	tested in Jan 2011
blueSIP	blueSIP.net	tested in May 2011
Mitel	3300ICP	①②③④⑤

<sup>1</sup> The listed products and company names are brand names or registered trademarks of their respective owners.

<sup>2</sup> Requires SIP Station firmware 1.2 or higher.

<sup>3</sup> Requires SIP Station firmware 2.0 or higher.

# Installation

## PRECAUTIONS

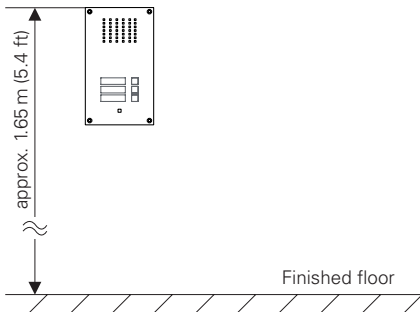
- When opening the stations ESD precautions must be observed.
- The stations may only be opened by authorised service engineers.

## MOUNTING INSTRUCTIONS

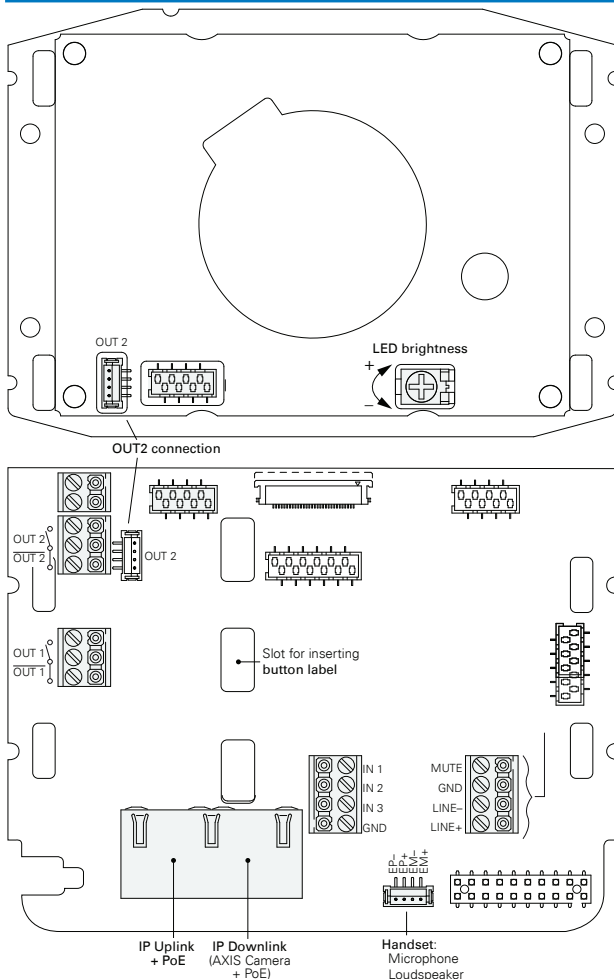
- Do not expose the station to extreme temperature (see “Technical Data” on page 2).
- For flush mounting a flush mount kit WSFB 50V (available separately) is required.
- For surface mounting a surface mount kit WSSH 50V (available separately) is required.

### Recommended Mounting height

The upper edge of the station approx. 1.65 m (5.4 feet) from the finished floor, based on an average man being 176 cm (69.2”) tall and a facial viewing distance of 25 cm (9.8”) to 50 cm (19.6”). Please adapt the mounting height to the individual needs.



## CONNECTION



### Camera illuminator control

- The camera illuminator is connected via Relay 2 (OUT2) of the subscriber. It is also possible to use Relay 2 (OUT2) as attendant contact. For example to switch the camera illuminator on at initiation of a call.  
NOTE: It is only possible to use just one Relay 2 (OUT2) connection, i.e. either the screw terminals or the connector (see connection diagram).

### Dimming the camera illuminator

- For dimming the camera illuminator use the potentiometer on the camera board.

### Attention:

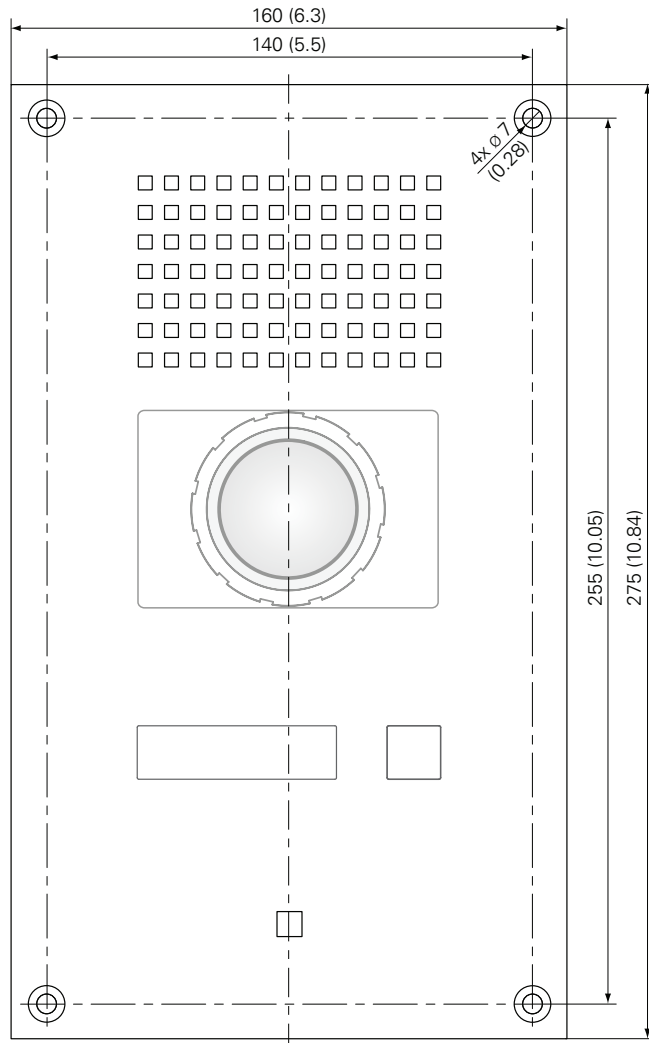
- **PoE** has to be connected to the RJ 45 jack “IP Uplink” (see connection diagram).
- The AXIS camera is connected to the “IP Downlink” jack of the station PCB



# Installation

## MEASUREMENTS FRONT PANEL

Front panel thickness: 3 mm (0.12")  
 Measurements in mm (inch), not to scale!



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