Baudisch.SIP Module System

Robust V4A terminals for IP door communication.

- Voice and image
- Modular system
- State-of-the-art VoIP technology
- Use of existing networks

01 Questions about IP and SIP ?

The transmission of voice and images over the Ethernet and by IP is increasingly replacing analog and ISDN-based transmission technologies.

The voice communication and image are converted into digital signals and are then transported over the IP network in a specific protocol such as **SIP**.

Apart from SIP, systems are also in use with the **H.323** protocol. In extremely simplified terms, this method can also be called ISDN over IP. However, it requires very powerful hardware and has several disadvantages relating to firewalls and network integration.

Baudisch IP intercoms solely support the sustainable SIP protocol. SIP is directly implemented in all devices with the necessary Ethernet interface, other adapters or converters are unnecessary.

This creates substantial advantages, especially in companies which already have IT networks and structured cabling. Existing IT resources can be used; there is no need for an additional cable network.

Where there is no cable connection, intercoms can be operated over **W-LAN** (IP radio link).

Other devices such as specific exchange or switchboard technology, storey distributors or interface modules are also unnecessary.

The following options are available for switching calls:

*   Direct connections:
    Door intercom - PoE switch - IP phone
    For the simplest applications, for example in a house. The intercoms call the IP address of an IP phone directly.

*   Public SIP provider
    Door intercom and IP phone are switched, free of charge, via a public SIP provider (internet access and at least on DSL connection required). Transfers from SIP to the fixed and mobile phone network are offered on favourable terms. This makes the door intercom a worldwide telephone. Even switching functions, e.g. the door opening, can be carried out while on the road.

*   Local SIP server (software solution, available as freeware)
    This software can be run on any PC. For example, the 3CX freeware runs directly on a Windows server. Alternatively, Asterisk is frequently installed on a Linux PC.

*   IP phone systems
    Many phone system manufacturers offer complete IP based systems. Our door intercoms can also be directly connected there. A current compatibility list is available on request.

Baudisch.CP-CAM Steel

IP65 with V4A front and impact-resistant glass.
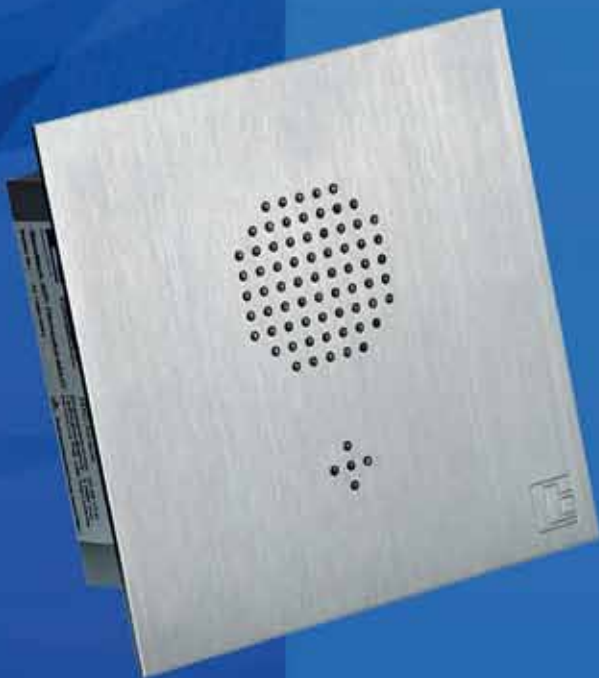
Baudisch.SIP DoorModule

IP65 with V4A front and poke-through protection.

Baudisch.ButtonModule

IP65 with V4A front, up to 4 buttons with illuminated nameplates.

Sabine Süss

Gerda Hübsch

Annette Nett

Max Mustermann

02 Baudisch.SIP DoorModule

The Baudisch.SIP DoorModule is a door intercom with loudspeaker, hands-free microphone and inputs for external call buttons.

The device is the ideal solution for vandal protection requirements or for outdoor applications. It includes a phone directory with 76 speed dialling numbers, which can be triggered via external buttons. Fast call setup and very good quality, clear, loud replay are the characteristic features of this robust intercom. Further advantages are:

- Protection class IP65 with integrated poke-through protection as complete mechanical unit, which is mounted directly from the rear onto a front panel.

- Priority of voice from the control station; which means dialog is possible even if there are loud noises in the intercom's environment.

- An integrated switch with 24V output for direct CP-CAM connection or daisy chaining of several intercoms (looping of the Ethernet, e.g. in tunnels), however, which in this case must be supplied with 24V.

- Simple configuration via the in-built web server which is pre-installed in a required language version (German, English, French, Italian).

- Emergency call logic: Features such as redialling, call acceptance confirmation of the control station over DTMF and call forwarding to alternative destinations.

- Cost-optimised ECO version, in which case the following are omitted: Internal switch/connection for CP-CAM, light relay, EasyLan, ribbon cable connector for matrix and KeypadModule extension.

Connections: (Maxi version)	2x Ethernet over RJ45, push-fit screw terminal for 24V supply, 2 switching relays (door opener +light), Easy-Lan, direct call buttons, central call button, lighting output. Ribbon cable connector for matrix and KeypadModules.
CE mark:	EMC to 2004/108/EC, EN50081-1 / EN55022
Temperature range:	-20 °C to +55 °C
Protection class:	IP65 in conjunction with suitable housings.
PoE supply:	Class 2, endspan or midspan for self-supply.
Operating voltage:	24 VDC as alternative to PoE supply
Power:	max. 3 VA
Material:	Aluminium housing and V4A front panel 2 mm
Dimensions:	109.5 x 109.5 x 43 mm (module with front panel).
Weight:	approx. 460 g
Article number:	33-1000 (MAXI DoorModule, without front panel)
	33-0999 (ECO DoorModule, without front panel)
	33-1119 (V4A front panel for DoorModule)

03 Baudisch.CP-CAM Steel

The Baudisch.CP-CAM Steel is an IP video camera with IR night vision function for use outdoors and in areas at risk of vandalism.

Due to its shallow design (2 mm V4A front panel), the product does not provide any areas open to attack (such as the hemispherical glass covers commonly used by other manufacturers), the lens is protected by a breakproof glass insert.

8 integrated IR spotlights ensure good illumination even at night.

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Display:	In the web browser by means of JAVA plug-in via Motion JPG, with which image rotation is possible in 90° steps. Individual frame mode over HTTP protocol in JPG format. Simultaneous access of several PCs is possible.
Configuration:	Using web browser following authentication.
Night vision:	Automatic switching-on of the IR function to night-time mode below adjustable brightness value.
UDP status:	Status messages over UDP for pop-up software.
Camera:	VGA colour CMOS image sensor
Lens:	2.5 mm f1:2.0 with fixed aperture 2.0, focussing range 20 cm to infinity, viewing angle: horizontal approx. 83°, vertical approx. 65°, diagonal approx. 111°.
Image resolution:	Colour image adjustable up to 640 x 480 (VGA). Hardware-based JPEG compression with max. 25 images per second with QVGA.
Network:	100BaseTX Ethernet interface.
Connection:	Patch cable, 0.25 m to RJ45 socket included in scope of supply. Therefore direct operation possible at SIP MAXI DoorModule.
CE mark:	EMC tested to EN55011 and EN500082-1
Temperature range:	-20 °C to +55 °C (-20 °C after 15 minutes running time).
Protection class	IP65 in conjunction with suitable housings.
PoE supply:	Class1, endspan (voltage is fed to the 4 data cables). Midspan (PoE on free cores) is not available.
Operating voltage:	24 VDC direct supply (20-36 V) on 2 free data cables as an alternative to PoE.
Power:	Maximum 3 VA.
Dimensions:	109.5 x 109.5 x 42 mm (module with front panel).
Weight:	approx. 370 g
Article number:	33-1001 (CP-CAM Steel without front panel) 33-1121 (V4A front panel for CP-CAM Steel)
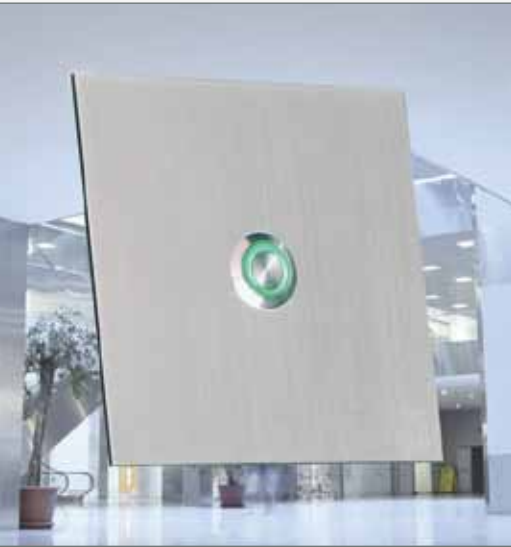
04 Central call ButtonModule

To be connected to SIP DoorModule ECO or MAXI -instead or together with the button module 2 or 4 buttons.

Vandalism protected stainless steel button with illuminated bi-colour (green/red) LED ring. Power for LED ring is obtained from SIP Door Module.

Following operating conditions are displayed:

• Logging on, ready, establishing call, intercommunication

Dimensions: 109,5 x 109,5 x 35 mm (module with V4A front panel)
Weight: 220 g
Article number: 33-1144 (Central ButtonModule incl. V4A front panel)

05 ButtonModule 2 buttons

The ButtonModule is connected directly to the SIP DoorModule (ECO or MAXI) where it triggers 2 adjustable speed dialling destinations.

The lettering is inserted from the rear with push-in strips. LED background lighting is active as soon as the SIP server has been logged into. Power for LEDs is obtained from SIP DoorModule.

Dimensions: 109.5 x 109.5 x 35 mm (module with front panel 2 mm)
Weight: approx. 250 g
Article number: 33-1222 (ButtonModule without front panel)
                   33-1219 (V4A front panel with 2 integrated buttons for ButtonModule)

06 ButtonModule 4 buttons

The ButtonModule is connected directly to the SIP DoorModule (ECO or MAXI) where it triggers 4 adjustable speed dialling destinations.

The lettering is inserted from the rear with push-in strips. LED background lighting is active as soon as the SIP server has been logged into. Power for LEDs is obtained from SIP DoorModule.

Dimensions: 109.5 x 109.5 x 35 mm (module with front panel 2 mm)
Weight: approx. 300 g
Article number: 33-1116 (ButtonModule without front panel)
                   33-1192 (V4A front panel with 4 integrated buttons for ButtonModule)

Baudisch Electronic

07 SIP KeypadModule 16B

To be connected to SIP DoorModule MAXI. In parallel the central call button and the 2 or 4 ButtonModule can be operated.

Allows entry of phone numbers, speed dialling numbers and Pin codes e.g. for door openers.

Keys in premium quality, anodised with blue back-light. Power for LEDs is obtained from SIP DoorModule MAXI.

Dimensions:	109,5 x 109,5 x 35 mm (module with front panel 2 mm)
Weight:	345 g
Article number:	33-1202 (SIP KeypadModule 16B without front panel)
	33-1198 (V4A front panel for SIP Keypad 16B)

08 SIP DisplayModule

Up to 4 SIP-DisplayModules can be connected per SIP DoorModule MAXI. In parallel the central call button and the 2 or 4 ButtonModule can be operated. Destinations stored in the SIP DoorModule MAXI are diplayed as follows:

> 1 x DisplayModule with 60 destinations or
> 2 x DisplayModule with 30 destinations each or
> 4 x DisplayModule with 15 destinations each

Additional lettering with individual push-in stripes from rear.

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Dimensions:	109,5 x 109,5 x 35 mm (module with front panel 2 mm)
Article number:	33-1200 (SIP Display modul incl. 4VA front panel kit)
	33-1259 (SIP Display32 installation kit)

09 Diode MatrixModule

The SIP DoorModule MAXI provides a digital interface via the ribbon cable connector, allowing to address up to 75 call buttons purely by arrangements of external diodes.

Each diode MatrixModule has screw type terminals to connect up to 15 call buttons, ribbon cable connectors for cascading as well as jumpers for address settings.

Type:	Open circuit board for installation in protected area.
Dimensions:	78 x 78 x 20 mm
Weight:	100 g
Article number:	33-1127 (Diode MatrixModule)
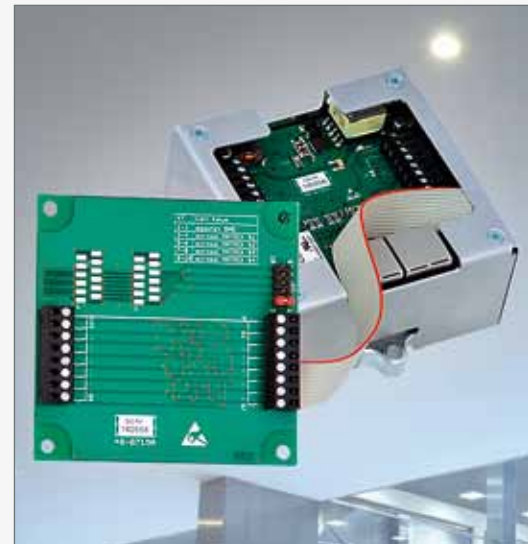
10   MotionDetector

Temperature-independent radar motion detector. Adjustable sensitivity for recognition of persons from 3-10 meters. Integrated light sensor, can be used as twilight switch or to activate radar function. MAXI-version features additionally EasyLAN interface and parameterization of all settings via data bus.

Due to radar technology, operation behind glass or wooden walls is possible.

Dimensions:	109,5 x 109,5 x 35 mm (module with front panel 2 mm)
Weight:	approx. 210 g
Article number:	36-0144 (MotionDetector ECO without front panel)
	36-0145 (MotionDetector MAXI without front panel)
	33-1176 (V4A front panel for MotionDetector)

11   TransponderReader ID6-Steel

Vandalism protected transponder reader with Baudisch.EasyLAN interface for connection to the central devices of the Baudisch access and time recording systems.

With 2 integrated switching relays and with optical (2 bi-colour LEDs) as well as acoustical status feedback.

Self contained access control for up to 5000 transponder chips.

Dimensions:	109,5 x 109,5 x 35 mm (module with front panel 2 mm)
Article number:	33-1197 (TransponderReader without front panel)
	33-1221 (V4A front panel for TransponderReader)

12   Dummy front panel

Dummy front panel with mounting bolts for empty module spaces.

Dimensions:	109,5 x 109,5 x 35 mm (V4A front panel 2 mm)
Weight:	approx. 185 g
Article number:	33-1218 (Dummy front panel)

13 Mounting frame FB

Mounting frame (front bolting) to install Baudisch Module System units together with flush-mounting boxes or for direct wall mount. Adequate screw sets (2 hole inward urge or Torx with safety pins) are available.

Material:	Aluminium, polished, anodised
Article number:	27-0281A (frame single)
Dimensions:	150 x 150 x 7,5 mm
Weight:	72 g
Article number:	27-0281B (frame double)
Dimensions:	260 x 150 x 7,5 mm
Weight:	130 g
Article number:	27-0281C (frame triple)
Dimensions:	370 x 150 x 7,5 mm
Weight:	190 g
Article number:	27-0281D (frame quadruple)
Dimensions:	480 x 150 x 7,5 mm
Weight:	245 g

14 Flush-mounting box FB

Flush-mounting box for Baudisch mounting frames with front bolting (FB).
The delivery contents also contains a screw set with M5x16mm Torx with safety pin.

Material:	V2A
Article number:	27-0282A (box single)
Dimensions:	138 x 138 x 41 mm
Weight:	approx. 230 g
Article number:	27-0282B (box double)
Dimensions:	248 x 138 x 41 mm
Weight:	approx. 330 g
Article number:	27-0282C (box triple)
Dimensions:	358 x 138 x 41 mm
Weight:	approx. 575 g
Article number:	27-0282D (box quadruple)
Dimensions:	468 x 138 x 41 mm
Weight:	approx. 714 g

15 Mounting frame RB

Mounting frame (<u>rear</u> <u>bolting</u>) to install units of the
Baudisch Module System into panels, letter boxes etc.

Material:	Aluminium, polished, anodised. Powder coating on request

Article number:	27-0235A (frame single)
Dimensions:	120 x 120 x 5.7 mm
Weight:	72 g

Article number:	27-0235B (frame double)
Dimensions:	230 x 120 x 5.7 mm
Weight:	130 g

Article number:	27-0235C (frame triple)
Dimensions:	340 x 120 x 5.7 mm
Weight:	190 g

Article number:	27-0235D (frame quadruple)
Dimensions:	450 x 120 x 5.7 mm
Weight:	245 g

16   System housings IP65

On wall system housings to accept 3 units of the Baudisch Module System.

Massive version to be used at factory buildings or construction sites.

Modules and front panels are not part of the delivery contents.

Colour:	Top section blue - RAL 5002, bottom section black powder coated
Material:	Aluminium pressure die-casting
Dimensions:	360 x 120 x 80 mm
Weight:	1,900 g
Article number:	33-1123 (System housings IP65)

17   SIP DoorStation IP65 standard

System housings IP65 equipped with following modules:

• SIP DoorModule ECO with V4A front panel

• Central call button

• ButtonModule 4 buttons

Dimensions:	360 x 120 x 80 mm
Weight:	approx. 2.650 g
Article number:	33-0211 (SIP DoorStation IP65 standard)
	33-1199 (Installation kit sabotage contact IP65)

18   SIP DoorStation IP65 video

System housings IP65 equipped with following modules:

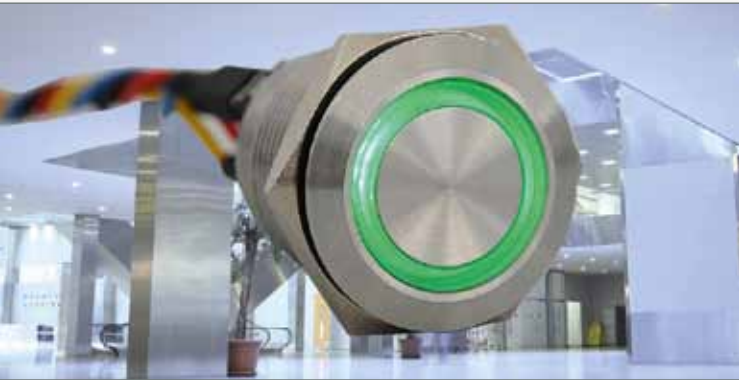• CP-CAM Steel with V4A front panel

• SIP DoorModule MAXI with V4A front panel

• ButtonModule 4 buttons

Dimensions:	360 x 120 x 80 mm
Weight:	approx. 2.800 g
Article number:	33-0213 (SIP DoorStation IP65 video)
	33-1199 (Installation kit sabotage contact IP65)

19 Central call button

Vandalism protected stainless steel button with illumina-ted bi-colour (green/red) LED ring. Power for LED ring is obtained from SIP Door Module. With cable, 8 cm.

Dimensions: Diameter 23 mm, Depth 40 mm
Weight: 26 g
Article number: 24-0225 (Central call button)

20 Call button IP67

Vandalism protected stainless steel button.

With cable, 8 cm.

Dimensions: Diameter 19 mm, Depth 40 mm
Weight: 22 g
Article number: 24-0222 (Call button IP67)

21 CP-CAM supply interface / IO interface
Discrete power supply, use of the digital inputs and outputs of the CP-CAM

If the CP-CAM is not to be supplied over PoE but conventionally with 24 VDC instead, the **supply interface** allows simple looping in of the power supply to the free cores of the Ethernet supply.

Two digital IO ports directly at the camera can also be used as inputs or out-puts for special projects (e.g. remote control via the web).

The **IO interface** (fully equipped version of the supply interface) implements these on 2 inputs with electrical isolation (opto-couplers) or 2 outputs (relays, 24V 1A) and enables the necessary power supply to be fed in from 24V DC.

Protection class: None, open sub-assembly for control cabinet installation

Operating voltage: 24 VDC

Dimensions: 110 x 85 x 50 mm
Weight: 120 g
Article number: 33-0901 (CP-CAM supply interface with I/O functions)
                    33-0901E (CP-CAM supply interface, no I/O functions)

22 LAN secure adapter
Safeguarding of outdoor IP supply cables of cameras and intercoms

When IP components are installed in public areas it is necessary to ensure that in the event of sabotage, it is not possible to access data in the company's Intranet via the external network cable.

This is achieved by installing the LAN secure adapter between the camera and the network (switch) in conjunction with a sabotage contact in the housing of the intercom or in the camera installation site.

The adapter monitors up to two sabotage contacts for interruption, short-circuit and current differences according to the closed current loop principle. In the event of irregularities, the devices triggers a sabotage alarm.

In case of sabotage the network cable is completely isolated. Another output enables a fault signal to be sent to the building services control system and the power supply to outdoor devices to be switched off.

The sabotage shutdown must be reset by pressing a button at the LAN secure adapter.

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Operation:	Triple LED status display and reset button.
Connections:	2 RJ45 sockets for network input and output. Push-fit screw terminals and LSA+ (parallel) for power supply, 2 sabotage loops and a switched voltage output 24V DC.
CE mark:	EN55011, EN50081-1
Temperature range:	0 °C to +55 °C
Protection class:	None, open sub-assembly for control cabinet installation
Operating voltage:	24 VDC are required, PoE supply is not possible, supply via a UPS is recommended.
Dimensions:	110 x 85 x 50 mm
Weight:	120 g
Article number:	33-0216
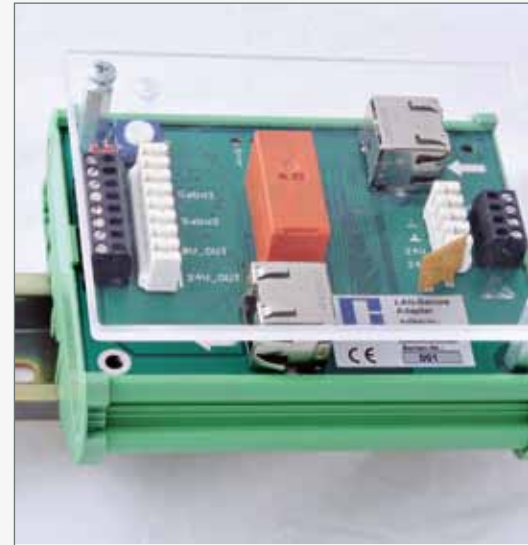
23 Configuration via web server

Both the Baudisch.SIP door modules and the Baudisch.CP-CAM provide numerous adjustment options and functional features for the user.

To achieve this, both systems have built-in web servers, which can be reached from any PC in the network via the web browser.

The web servers can be installed in different languages (German, English, French and Italian) - this makes starting up and maintenance considerably easier.

In addition, the web interface has also been developed in-house by Baudisch. The quality of the interface is therefore clear and "European", clearly distinguishing it from imported products. All dialogs are of course protected by a user password.

24 Functions of the SIP software

Phone directory: 1 central call number, 4 direct calls direct, alternatively up to 75 direct calls through diode matrix modules 33-1127.

Call logic: Parametrised call redial if destination unavailable and call forwarding to other destinations in the same group.

Announcements: 2 individual wave files can be installed for call identification (the person called therefore hears from where the call has come) and as ringing tone (playback at the loudspeaker and to the caller).

Door opening: DTMF suffix dialling, code for each call destination can be set separately.

SIP Codecs: iLBC, Speex, PCMU, PCMA, GSM 6.10, G.726-32

Bootloader: The whole software can be updated over IP.

UDP status: A UDP status message cyclically displays the operating status and the call number of the respective distant end. This acts as an interface for building management systems and to control the video pop-up software.
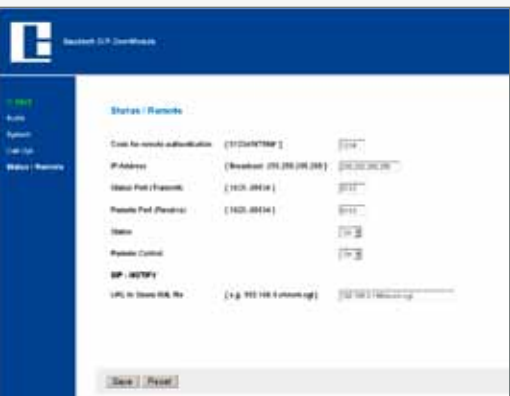
25 Compatibility

The Baudisch.SIP door module has been tested to date with the following system solutions and is compatible with their software:

- Sipgate.de
- 3CX Free Edition
- Asterisk
- accessVoIP
- Asterisk Cluster
- FOXFON

- easyPBX
- Swyx
- Siemens HiPath, Open Office
- Octopus NetPhone
- Starface

26   Video display in the web browser

The video data of the Baudisch.CP-CAM can be called up directly via the IP network, independent of a voice connection or the SIP server. This is a major advantage.

The coloured video images can be viewed in several places in the network (including simultaneously) via the web browser, without any additional components. It is only necessary to release a Java plug-in.

If necessary, a protected access with password protects the camera images against unauthorised viewing.

Worldwide access to the camera images is possible if the user's network has an appropriately configured router.

27   Baudisch.SIP VideoClient

As an alternative to video display in a web browser, this software enables automatic display (pop-up) of the door video image on the screen.

With the incoming call, the image of the matching Baudisch IP camera is immediately displayed at the called workstation PC - which saves the user having to manually start the display and to manually select the camera.

The door can be opened by clicking a button displayed on the screen.

It is also easily possible to directly save individual frame images as a JPG file on the hard disc with a click or even automatically when the door is opened.

Article number: 36-0213

28   SNOM IP phones with TFT display

With the desktop phones snom 820, 821 or 870 the video image of the CP-CAM can be directly displayed in the phone display.

The image of the required camera can be connected at any time using the phone's speed dialling keys. If the SIP server has a suitable function or in case of direct configuration without SIP server, this is also possible automatically in the call state.

A suffix dialling code at the snom phones can of course also be used to trigger the switch output for opening the door in the SIP door module during a call.

Detailed information and application notes are available on request.
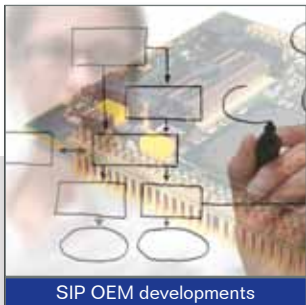
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