

Video Cloud Gateway AVC1



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Product description

Intended use

The AVC1 device is a cloud gateway with an integrated video server. It converts TC:Bus signals to network protocol (IP) level and connects the **KochCloud** to the TC:Bus.

The device is designed to be mounted on a DIN rail in the control cabinet. To carry out any programming, the user must have an external device (e.g. laptop) and an account on <https://kochcloud.ch>.



The manufacturer assumes no liability for use that deviates from or goes beyond the stipulated intended use.

Scope of functions

- Image resolution VGA (640 x 480)
- Supports JPEG, Motion-JPEG, H.264 for video streaming, 25 fps
- TC:Bus connection via 6-wire technology using screw connectors, P-supply with 15-28 VDC
- RJ45 port for Ethernet connection
- Built-in differential 2-wire video receiver
- Visual status and error display via LED
- Web interface in four languages (German, French, Italian and English)
- Half-duplex audio connection
- IP address configuration can be done with STC-C configuration software
- Cloud gateway control during voice transmission via commands
- Jumper can be set as terminating resistor for video signal path
- Secure external connection via TLS
- Corresponds to DIN 50486

Safety instructions



- The safety regulations for high-voltage installations must be observed when working on systems with a 230 V AC mains connection.
- Only qualified electricians may carry out the assembly, installation and start-up work.

The general safety regulations for telecommunications systems apply to the installation of TC:Bus systems.

- Separate routing of high-voltage and low-voltage lines
- A minimum distance of 10 cm between joint cable routing
- Add Spacers between high-voltage and low-voltage lines in shared cable ducts
- Recommended cable: G51 4x2x0.8 (twisted pair)
- Lines with different diameters already in place (renovations) can be used if the loop resistance ($< 20 \Omega$) is taken into account.



Suitable steps must be taken to protect against lightning to ensure that the voltage on the TC:Bus wires a and b does not exceed 32 VDC.

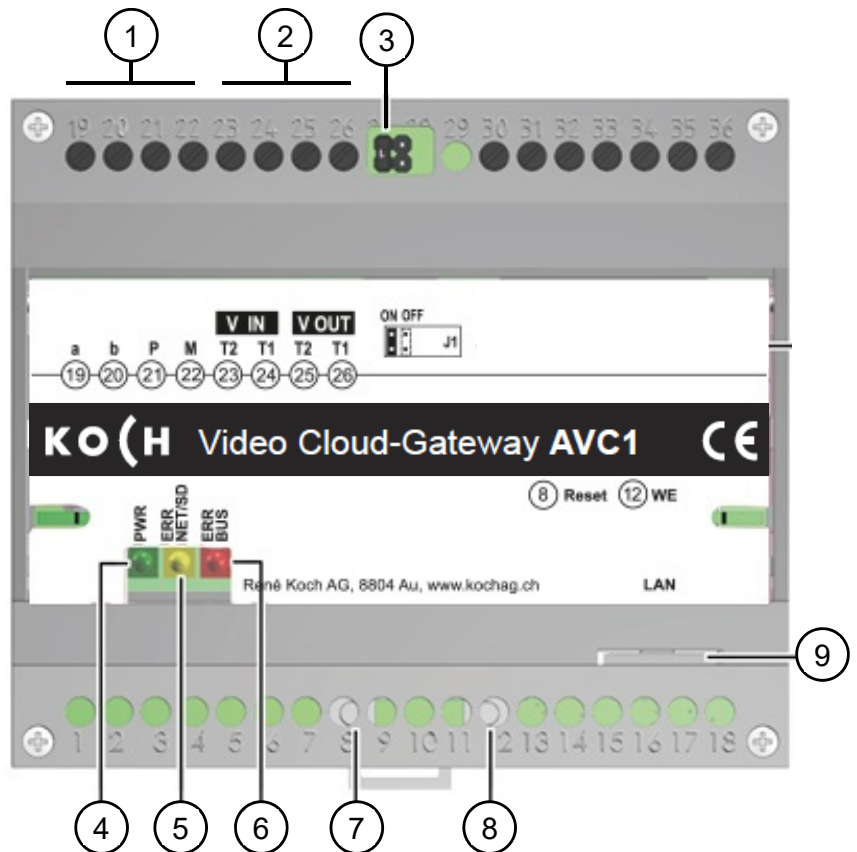
Technical data




Operating voltage:	15-28 VDC
Input voltage when idle:	$I(a) = 0,1 \text{ mA}$, $I(P) = 200 \text{ mA}$
Maximum input current:	$I(P_{\max}) = 250 \text{ mA}$
Video stream	Image format JPEG, Motion-JPEG, H.264 Resolution VGA (320 x 240), VGA (640 x 480)
Housing:	Plastic, serial installation housing 6 TE (DIN 43880) for DIN rail (DIN EN 60715)
Dimensions (WxHxD)	105 x 90 x 75 mm
Protection class	IP20
Permitted ambient temperature	0°C ... + 40°C

Note: Only tc:bus 6-wire technology can be used!

Device overview

- 1 Terminals a, b, P, M,
- 2 Video-IN and -OUT Terminals
- 3 Terminating resistor (jumper)
- 4 LED, green
(ready for use indicator light)
- 5 LED, yellow (network and SD
card error indicator light)
- 6 LED, red
(TC:Bus error indicator light)
- 7 Reset button (device restart)
- 8 WE button
(restore factory settings)
- 9 RJ45 port with LED status
(network connection)



 (4)	Green LED: Ready for use indicators	<ul style="list-style-type: none"> • ON: ready for use • Flashing: loading factory settings
 (5)	Yellow LED: Network/SD error indicator light	<ul style="list-style-type: none"> • Flashing slowly: Network error • ON: Device powering up
 (6)	Red LED: TC:Bus error indicator light	<ul style="list-style-type: none"> • ON: Firmware update is being installed • Flashing: TC:Bus error

Assembly and installation

Caution!

The AVC1 may only be assembled and dismantled when the device is disconnected from the power supply!



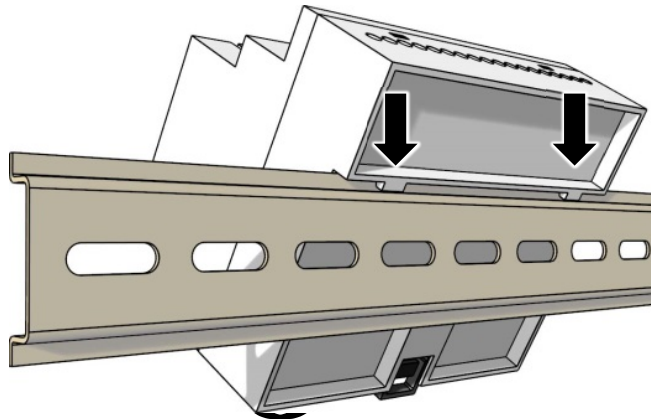
T1 and T2 must not be connected with another wire.

The polarity should be noted when connecting video wires T1 (-) and T2 (+).

If the image is unclear after the device has been started up, switch it off and swap the wires for the video signal.

Mounting on the DIN rail

- Place the AVC1 on the DIN rail

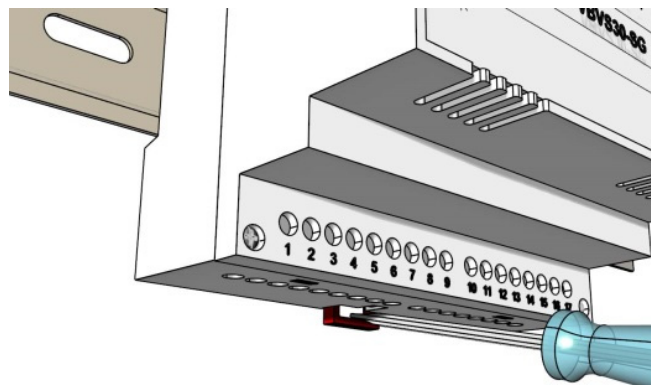


- Click it into place by applying light pressure



Removing the AVC1 from the DIN rail

- Press the locking mechanism down using a screwdriver
- Pull the AVC1 away from the DIN rail from underneath and lift it off



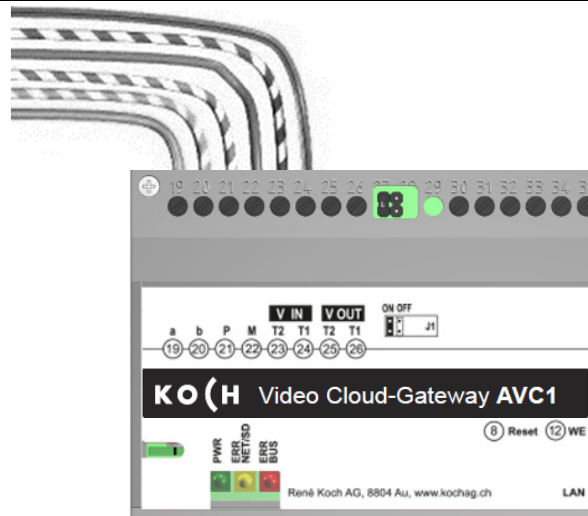
Connection

Screw connectors:

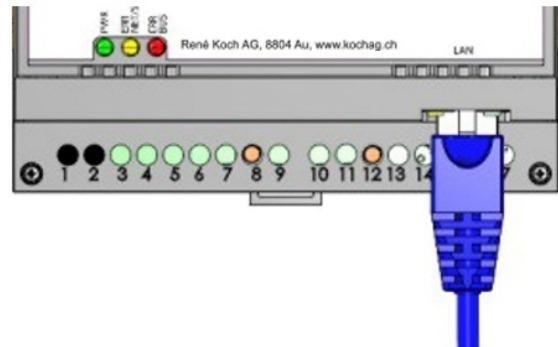
- A size 0 screwdriver is suitable for operating the screw terminals and buttons on the AVC1.
- Connect additional wires with auxiliary terminals
- Only use cables of the same material and diameter for each terminal contact
- Observe the installation diagram provided with the system

Network connection: RJ45 patch cable (CAT.5 FTP 8-pin)

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- Connect the TC:Bus wires (a, b, P, M, T2, T1) as per the installation diagram provided



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- Connect the RJ45 interface of the AVC1 and network with a patch cable



Operation



Only connect the power supply after completing all the installation steps!

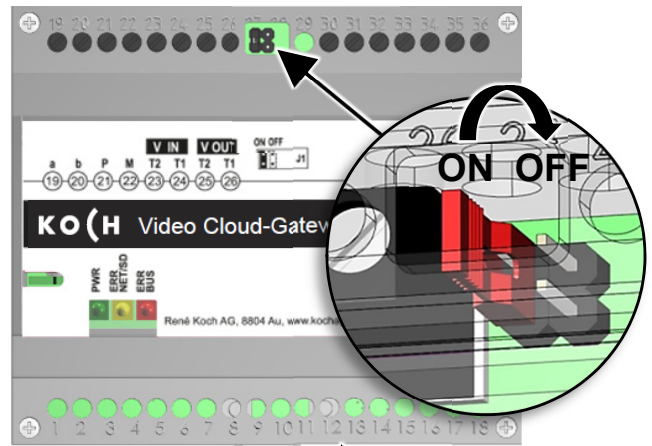
- Check wires a, b and P for short-circuiting
- T1 and T2 must not be connected with another wire.
- The polarity should be noted when connecting video wires T1 and T2.
If the image is unclear after the device has been started up, switch it off and swap the wires for the video signal

HW Setting

(De)activate the terminating resistor

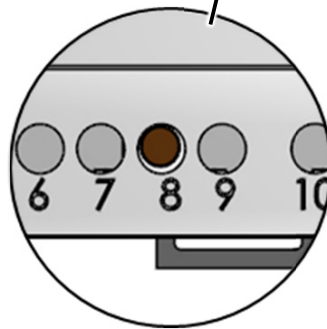
If the AVC1 device is installed at the end of a TC:Bus video line, the jumper for the terminating resistor must be set to the **ON** position (**factory setting**)

- To deactivate the terminating resistor unplug the jumper and set it to **OFF** position



Restarting the device

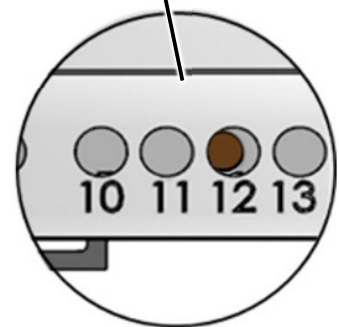
- Briefly click the reset button (8) with a screwdriver
- This restarts the device and it will be ready for use after approx. 60 sec.



Load factory settings (WE)

(This only resets IP addresses and passwords)

- Press the WE button (12) down for 10 sec. with a screwdriver, until the green LED flashes, first slowly then quickly
- This restarts the device and it will be ready for use after approx. 60 sec.



Network settings

Installing an IP network is a very intricate procedure due to the numerous interdependent parameters and settings. The procedure requires a lot of background knowledge. Please contact your network administrator for this.

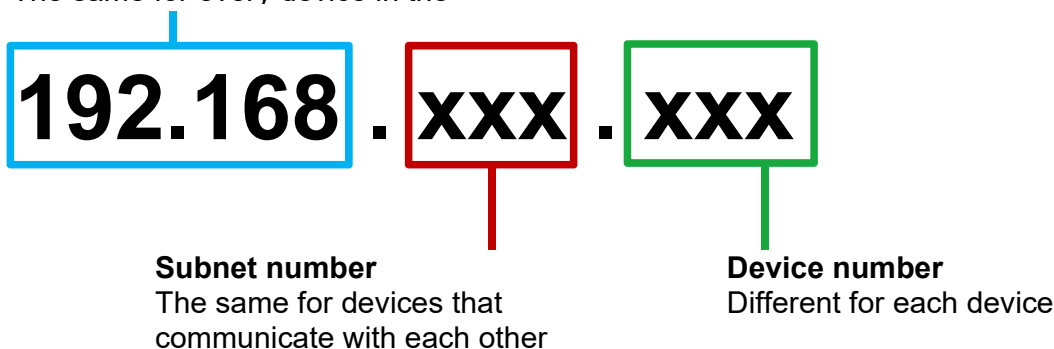
IP addresses and DHCP server

Every device used in a network requires an **IP address**. Devices that communicate with each other must also be on the same **subnet**.

Home networks are usually set up as follows:

Network number

The same for every device in the



Why have a fixed or dynamic IP address?

Devices that provide a service should have a fixed IP address.

Devices that only request services can be assigned a dynamic IP address by the DHCP server.

Example: An external video intercom station provides various receivers with a service (video image) and should therefore have a fixed IP address.

The receivers, e.g. smartphones, request the service (video image), but do not actually provide the service. That is why the DHCP server can assign them a dynamic IP address.

Network settings with STC-C software

The following network parameters can be set in the STC-C software:

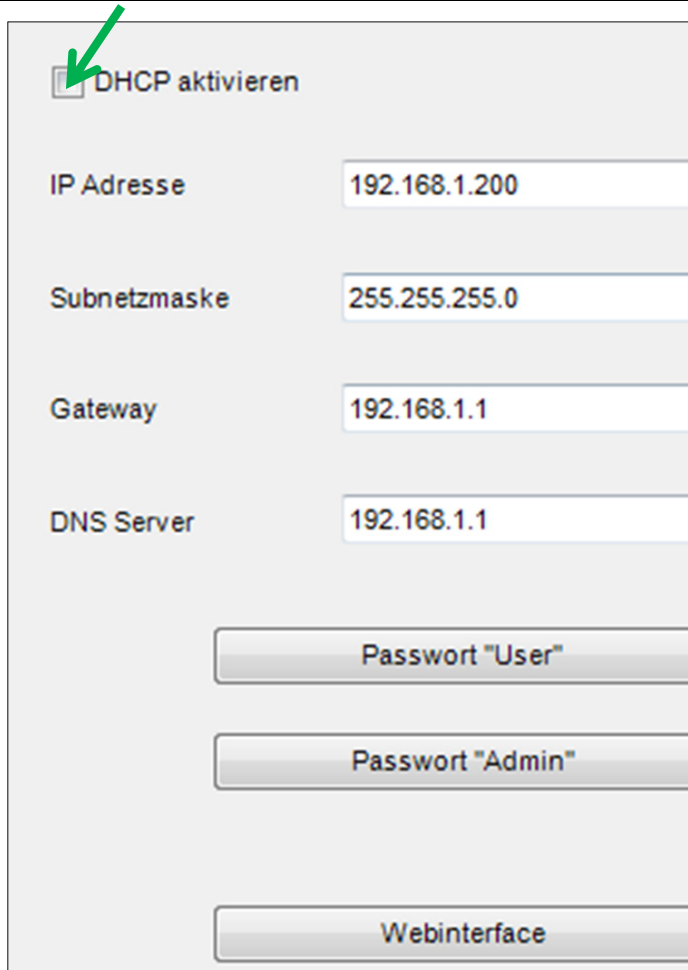
- (De)activate DHCP
- IP address
- Subnet mask
- DNS server
- Gateway
- Management of Admin and User passwords

(De)activate DHCP

- Start STC-C on PC
- Check or uncheck the DHCP checkbox
- Update the EEPROM from the AVC1.

For more information about STC-C refer to the program's help section.

Password = AVC1 serial number



☐ DHCP aktivieren

IP Adresse 192.168.1.200

Subnetzmaske 255.255.255.0

Gateway 192.168.1.1

DNS Server 192.168.1.1

Passwort "User"

Passwort "Admin"

Webinterface

Notes

[illegible]

Service

You can find answers in our list of frequently asked questions
www.kochag.ch **FAQ** (German and French only) >>>

For direct support, please contact
our technical customer service team:

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sehen hören sprechen
voir entendre parler