



# Catalog. 2013

All models and data at a glance

**CCTV Cameras, communication systems, equipment and accessories** for explosion risk zones. Products, services, planning, assembly supervision and commissioning.

|          |                     |
|----------|---------------------|
| Doc.-Id. | SAMCON Catalog 2013 |
| Author:  | Steffen Seibert     |
| Date:    | January 7, 2013     |

## Overview

### Static & motor zoom cameras (EX)

#### Analog Varifocal Systems (EX)

|                        |   |
|------------------------|---|
| ExCam® vario .....     | 3 |
| ExCam® lightTube ..... | 4 |

#### Analog motor zoom Systems (Ex)

|                       |   |
|-----------------------|---|
| ExCam® miniZoom ..... | 5 |
| ExCam® niteZoom ..... | 6 |

#### Digitale IP Systems (EX)

|                 |   |
|-----------------|---|
| ExCam® IP ..... | 7 |
| ExCam® HD ..... | 8 |

#### Process cameras (non EX)

|                        |   |
|------------------------|---|
| ToughCam® Series ..... | 9 |
|------------------------|---|

### Dome cameras & PTZ systems (EX)

|                    |    |
|--------------------|----|
| Dome cameras ..... | 11 |
| PTZ-Systems .....  | 12 |
| PTZ-drives .....   | 13 |

### Lighting systems (EX)

|                            |    |
|----------------------------|----|
| Lights & accessories ..... | 14 |
|----------------------------|----|

### Audio components (EX)

|                              |    |
|------------------------------|----|
| Speakers & microphones ..... | 16 |
| DECT components .....        | 17 |

### Assembling- & mounting parts

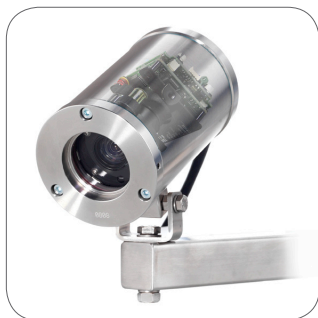
|                          |    |
|--------------------------|----|
| Mounting parts .....     | 18 |
| Power supply .....       | 20 |
| Cables & wiring .....    | 23 |
| Network components ..... | 24 |

### Video server & Connection Rail Series

|                                |    |
|--------------------------------|----|
| Video server .....             | 28 |
| Connection Rail - S/SA .....   | 31 |
| Connection Rail - Q/QA .....   | 32 |
| Connection Rack - Q/QA .....   | 33 |
| ExConnection Rail - Q/QA ..... | 34 |
| ExConnection Rail - PoE .....  | 35 |

### Displays & controls (HMI systems)

|                            |    |
|----------------------------|----|
| VISCA ControlBoards .....  | 36 |
| Analog (Ex) Displays ..... | 36 |
| (Ex) PC-Systems .....      | 36 |
| Software SAMCONtrol® ..... | 37 |





**ExCam vario**  
in a stainless steel housing

# ExCam vario

The **ExCam vario** is a camera approved for hazardous areas (gas and dust) in accordance with directive 94/9/EC (ATEX).

The **ExCam vario** is the world's smallest explosion-proof varifocal camera of its class. Despite its very compact dimensions, it features DSP, automatic shutter control, minimal illumination of 0.15Lux, AGC-Turbo, S/W, fast lens with F1.2/3.8-9.5mm, automatic white balance and IR cut filter.

| product / model  | description   |
|--|---|
| ExCam vario<br>T03-AL-B-005-X-L<br>   | Varifocal camera in an aluminum housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 0.15 lx<br>Angle: 74.2° (wide) to 30° (tele)<br>Self adjusting DC iris<br>Day/night function within IR cut filter<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019       |
| ExCam vario<br>T03-VA-B-005-X-L<br> | Varifocal camera in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 0.15 lx<br>Angle: 74.2° (wide) to 30° (tele)<br>Self adjusting DC iris<br>Day/night function within IR cut filter<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| ExCam vario<br>T03-XX- <u>C</u> -XXX-X-L   | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop. In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d <u>IIC</u> T6 Gb<br>Product group: A, tariff number: 8525 8019  |
| ExCam vario „long range“<br>T03-XX-X-XXX-X-L   | Option „long range“ (surcharge):<br>Version with passive two-wire transmitter.<br>Transmission range of up to 500m.<br>Attention: Can only be used in combination with a VZT-21B/TB two-wire receiver<br>Product group: A, tariff number: 8525 8019   |
| <b>new!</b><br>ExCam vario „K2“<br>T03-VA-X-XXX-X-L  | Option „K2“ (surcharge):<br>Version with 90° angle flange for VA housing.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019   |
| <b>new!</b><br>ExCam vario „Pin free“<br>T03-VA-X-XXX-X-L  | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips.<br>Product group: A, tariff number: 8525 8019  |



# ExCam liteTube

The **ExCam liteTube** is an explosion proof zoom borescope camera for dust and gas explosion risk zones in accordance with EU directive 94/9/EC (ATEX).

Used with **Olympus borescopes**, its 1/3" interline transfer CCD image sensor delivers sharp and crisp images - even through very small holes.

In connection with special borescopes, the camera can even look „around corners“.

**ExCam liteTube**  
with Olympus borescope

| product / model                                     | description  |
|---|--|
| ExCam liteTube<br>T03-VA-B-005-X-N                  | Borescope camera in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>(Olympus borescope not included)<br>Product group: A, tariff number: 8525 8019   |
| ExCam liteTube<br>T03-VA- <u>C</u> -XXX-X-N         | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop.<br>In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>(see data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a> )<br>Product group: A, tariff number: 8525 8019 |
| <b>new!</b> ExCam liteTube „K2“<br>T03-VA-X-XXX-X-N | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019  |



**ExCam miniZoom**  
 in a stainless steel housing

# ExCam miniZoom

The **ExCam miniZoom** is a zoom camera approved for dust and gas explosion risk zones in accordance with EU directive 94/9/EC (ATEX).

The ExCam miniZoom is the **world's smallest explosion-proof zoom camera** of its class. Despite the camera's compact dimensions, it has a 10x motorised zoom lens, allowing it to be optimally adapted to the specific angle and lighting situation.

| product / model   | description   |
|---|---|
| ExCam miniZoom<br>T03-VA-B-005-X-N                        | Camera with motor zoom in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 1.5 lx<br>Interface: VISCA@RS232 or VISCA@RS422<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019                                       |
| ExCam miniZoom<br>T03-VA-C-XXX-X-X                        | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop.<br>In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| ExCam miniZoom<br>T03-VA-X-XXX-X-L                        | Option housing heating (surcharge):<br>Equipped with a self regulating heater for housing<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019   |
| <b>new!</b> ExCam miniZoom „K2“<br>T03-VA-X-XXX-X-X       | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019   |
| <b>new!</b> ExCam miniZoom „pin free“<br>T03-VA-X-XXX-X-X | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips.<br>Product group: A, tariff number: 8525 8019  |



**ExCam niteZoom**  
 in a stainless steel housing

# ExCam niteZoom

The **ExCam niteZoom** is the world's smallest explosion proof zoom camera of its class. Despite its compact dimensions, it has a 10x motorized zoom lens, allowing it to be optimally adapted to a specific angle and lighting situation.

The **ExCam niteZoom** features a Day/Night capability which provides optimum sensitivity in both day and night shooting applications. As the scene illumination darkens, the infrared filter is automatically removed. The camera then switches to B&W mode, enabling it to operate under a minimum illumination of 0.0004 lx (Auto ICR On).

| product / model   | description  |
|---|--|
| ExCam niteZoom<br>T03-VA-B-005-X-N                        | Camera with motor zoom in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 1/4 s, 1/3 s mode & ICR on: 0.0004 lx<br>Interface: VISCA@RS422<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: 0°C < T <sub>amb</sub> < 50°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019                    |
| ExCam niteZoom<br>T03-VA-C-XXX-X-X                        | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop. In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: 0°C < T <sub>amb</sub> < 50°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| ExCam niteZoom<br>T03-VA-X-XXX-X-L                        | Option housing heating (surcharge):<br>Equipped with a self regulating heater for housing<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: -20°C < T <sub>amb</sub> < 50°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b> ExCam niteZoom „K2“<br>T03-VA-X-XXX-X-X       | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b> ExCam niteZoom „pin free“<br>T03-VA-X-XXX-X-X | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips.<br>Product group: A, tariff number: 8525 8019   |



# ExCam IP

With our **ExCam IP**, a full-fledged network camera is available for hazardous areas and explosion risk zones.

The video streams can be directly controlled via Ethernet which means that there is no further need for a video server! Electrical power is passed, along with data, via the network cable (IEEE 802.3af). This eliminates the costly installation of power cables.

**MJPEG and H.264 in HD**, resolution of 1280x800 pixels.

## ExCam IP

in a stainless steel housing

new!

| product / model  | description   |
|--|---|
| ExCam IP<br>T03- <u>AL</u> -B-005-X-N<br>   | Network camera in an aluminum housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 1.0 lx<br>Horizontal angle: 80°<br>Video compression: H.264, MJPEG<br>Resolution: 1280 x 800 to 160 x 90<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-5^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019       |
| ExCam IP<br>T03- <u>VA</u> -B-005-X-N<br> | Network camera in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 1.0 lx<br>Horizontal angle: 80°<br>Video compression: H.264, MJPEG<br>Resolution: 1280 x 800 to 160 x 90<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-5^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| ExCam IP<br>T03-XX- <u>C</u> -XXX-X-N  | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop.<br>In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019   |
| new!<br>ExCam IP „K2“<br>T03-VA-X-XXX-X-X  | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019   |
| new!<br>ExCam IP „pin free“<br>T03-VA-X-XXX-X-X  | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips<br>Product group: A, tariff number: 8525 8019   |





**ExCam HD**  
in a stainless steel housing

## ExCam HD

The **ExCam HD** is an explosion proof network camera for dust and gas explosion risk zones in accordance with the EU directive 94/9/EC (ATEX).

The video streams as well as the control signals are therefore directly available within the network.

Due to **Power over Ethernet (PoE)**, the same cable is used for transferring the data and for supplying the camera with power. As a result, a PoE-Switch or a PoE-Midspan is the sole equipment required in the safe area in order to connect the camera.

The ExCam HD delivers various different video streams simultaneously and supports **MJPEG as well as H.264 in HD resolution** of 1920x1080 pixels.

| product / model                                      | description  |
|--|--|
| ExCam HD<br>T03-VA2-B-005-X-N                        | Network camera in a stainless steel housing in accordance with Directive 94/9/EC (ATEX).<br>Minimal illumination: 1.0 lx<br>Horizontal angle: Depending on lens<br>Video compression: H.264, MJPEG<br>Resolution: Up to 3MP<br>Lens mount type: CS Mount<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-10^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| ExCam HD<br>T03-VA2-C-XXX-X-N                        | Option IIC (surcharge):<br>Certified after IIC for atmospheres containing hydrogen, carbon disulphide and acetylene. Includes cable gland with integrated pressure stop.<br>In accordance with DIN EN 60079-14.<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b> ExCam HD „K2“<br>T03-VA2-X-XXX-X-X       | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b> ExCam HD „pin free“<br>T03-VA2-X-XXX-X-X | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips<br>Product group: A, tariff number: 8525 8019  |





**ToughCam IP and ToughCam HD**  
in stainless steel (VA & VA2)

# ToughCam Series


Our **ToughCam Series** comprises mechanically process as well as security cameras which are extremely robust. Apart from a few details, the **ToughCam Series** corresponds with our ExCam Series - just without the certification for explosion proof areas.

All **ToughCams** meet the same high quality standards as our ExCams and are therefore perfect for even the roughest industrial conditions. The stainless steel housing in combination with borosilicate glass and high-end sealings make our **ToughCams** resistant to nearly all media; withstanding even the highest mechanical demands.

| product / model   | description  |
|---|--|
| <b>new!</b><br>ToughCam vario<br>T03-AL-0-005-X-L<br>      | Varifocal camera in an aluminum housing (IP67).<br>Minimal illumination: 0.15 lx<br>Angle: 74.2° (wide) to 30° (tele)<br>Self adjusting DC iris<br>Day/night function within IR cut filter<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019       |
| <b>new!</b><br>ToughCam vario<br>T03-VA-0-005-X-L<br>     | Varifocal camera in a stainless steel housing (IP67).<br>Minimal illumination: 0.15 lx<br>Angle: 74.2° (wide) to 30° (tele)<br>Self adjusting DC iris<br>Day/night function within IR cut filter<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |
| <b>new!</b><br>ToughCam miniZoom<br>T03-VA-0-005-X-N<br> | Camera with motor zoom in a stainless steel housing (IP67)<br>Minimal illumination: 1.5 lx<br>Interface: VISCA@RS232 or VISCA@RS422<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b><br>ToughCam niteZoom<br>T03-VA-0-005-X-N<br> | Camera with motor zoom in a stainless steel housing (IP67)<br>Minimal illumination: 1/4 s, 1/3 s Mode & ICR on: 0.0004 lx<br>Interface: VISCA@RS422<br>Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019  |
| <b>new!</b><br>ToughCam IP<br>T03-AL-0-005-X-N<br>       | Network camera in an aluminum housing (IP67)<br>Minimal illumination: 1.0 lx<br>Horizontal angle: 80°<br>Video compression: H.264, MJPEG<br>Resolution: 1280 x 800 to 160 x 90<br>Ambient temperature limit: $-5^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019                    |
| <b>new!</b><br>ToughCam IP<br>T03-VA-0-005-X-N<br>       | Network camera in a stainless steel housing (IP67)<br>Minimal illumination: 1.0 lx<br>Horizontal angle: 80°<br>Video compression: H.264, MJPEG<br>Resolution: 1280 x 800 to 160 x 90<br>Ambient temperature limit: $-5^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019              |

## ToughCam Series

new!

| product / model   | description  |
|---|--|
| ToughCam HD<br>T03-VA2-0-005-X-N<br> | Network camera in a stainless steel housing (IP67)<br>Minimal illumination: 1.0 lx<br>Horizontal angle: Depending on lens<br>Video compression: H.264, MJPEG<br>Resolution: Up to 3MP<br>Lens mount type: CS Mount<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-10^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8525 8019 |

## ToughCam Options

| product / model                                 | description  |
|---|--|
| ToughCam „K2“<br>T03- <u>VA</u> -X-XXX-X-X      | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019  |
| ToughCam „K2“<br>T03- <u>VA2</u> -X-XXX-X-X     | Option „K2“ (surcharge):<br>Option with 90° angle flange.<br>The cable gland is laterally introduced into the flange.<br>Product group: A, tariff number: 8525 8019  |
| ToughCam „pin free“<br>T03-VAX-X-XXX-X-X        | Option „pin free“ (surcharge):<br>Version with an even VA housing without pin attachment.<br>Suitable for flange fixation as well as hose clips<br>Product group: A, tariff number: 8525 8019  |
| ToughCam vario „long range“<br>T03-XX-X-XXX-X-L | Option „long range“ (surcharge):<br>Version with passive two-wire transmitter.<br>Transmission range up to 500m.<br>Attention: Can only be used with VZT-21B/TB two-wire receiver.<br>Product group: A, tariff number: 8525 8019   |
| ToughCam Serie<br>T03-XX-X-XXX-X- <u>L</u>      | Option housing heating (surcharge):<br>Only available for minZoom and niteZoom products.<br>Equipped with a self regulating heater for housing<br>Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Ambient temperature limit: $-20^{\circ}\text{C} < T_{\text{amb}} < 50^{\circ}\text{C}$<br>Product group: A, tariff number: 8525 8019 |




# Ex Dome cameras

The Hytec DTR120ZEXPEVIWP is a dome camera approved for gas explosion risk zones in accordance with EU directive 94/9/EC (ATEX).

The dome camera is mechanically very well manufactured and in comparison with classical PTZ systems an extreme lightweight. It comes with 5 m cable and is 100% compatible with our ExCam Series.

## Hytec DTR120ZEXPEVIWP

wih stainless steel housing

| product / model   | description  |
|---|--|
| Hytec<br>DTR120ZEXPEVIWP<br>   | Ex-Dome camera with stainless steel housing (analoge)<br>Housing: L = 260 mm, Dmax = 155 mm,<br>Weight = 8 kg, protection level: IP 68 (5 bar)<br>Explosion protection: Ex d IIC T6<br>Temperature range: -20 to +55 °C<br>18 x analoge zoom, 1/4" CCD image sensor<br>Sensitivity: 0.7 lx, 0.01 lx without IR filter<br>Control interface: PELCO-D@RS485<br>Cable outlet with certified cable gland<br>Delivery includes 5 m cable<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C  |
| Hytec<br>DTR120ZEXPEIPWP<br> | Ex-IP-Dome camera with stainless steel housing (digital)<br>Housing: L = 260 mm, Dmax = 155 mm<br>Weight = 8 kg, protection level: IP 68 (5 bar)<br>Explosion protection: Ex d IIC T6<br>Temperature range: -20 to +55 °C<br>Video compression: Motion JPEG und MPEG4<br>Resolution:<br>Max.: 768 x 576 (PAL) or 704 x 480 (NTSC)<br>Min.: 176 x 144 (PAL) or 160 x 120 (NTSC)<br>Picture frequency:<br>Motion JPEG of up to 30/25 fps at 4CIF<br>MPEG-4 of up to 30/25 fps at 2CIF, of up to 20/17 fps at 4CIF<br>Security:<br>Password protection, IP-Address filtering, HTTPS encoding.<br>Webbrowser: Live view access via webbrowser, pan/tilt commands and pre-settings.<br>Picture rotation and overlapp feasibility (time, date, text)<br>Cable outlet with certified cable gland<br>Delivery includes 5 m cable<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C |





**AmEx PTZ system**  
with stainless steel

# AmEx PTZ System

The AMEX PTZ system is an explosion protected stainless steel PTZ positioning system

It is certified and particularly designed and developed to meet the strict requirements of equipment, used in explosion risk areas at which flammable gases and powders can be present.

The system offers an extraordinary performance for the observation of critical processes in explosion risk zones and is therefore the perfect choice for a video surveillance in the chemical as well as in the oil and gas industry.

| product / model   | description   |
|---|---|
| <b>new!</b><br>AMEX PTZ<br>MPX-X-PVW000A-XXX-X<br>     | PTZ camera according to RL 94/9/EG (ATEX) and IECEx<br>Explosion protection (gas): Ex d IIC T6 Ta -40°C to 60°C Gb<br>Explosion protection (dust): Ex tb IIIC T85°C Ta -40°C to 60°C Db<br>Protection level: IP 66 (IEC / EN 60529)<br>Material: Electro polished stainless steel AISI 316L<br>Pan/Tilt speed: 0.1 ° - 100 ° / s<br>Tilt: -90 ° / +90 °<br>Day / night function<br>Analog zoom factor: 36x<br>Control protocol: Pelco-D@485 and others (q.v. data sheet)<br>All required cable glands are included.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B                             |
| <b>new!</b><br>AMEX PTZ<br>MPX-T2-PAW0000A-XXX-X<br> | PTZ camera with analogue and IR camera according to RL 94/9/EG (ATEX) and IECEx<br>Explosion protection (gas): Ex d IIC T6 Ta -40°C to 60°C Gb<br>Explosion protection (dust): Ex tb IIIC T85°C Ta -40°C to 60°C Db<br>Protection level: IP 66 (IEC / EN 60529)<br>Material: Electro polished stainless steel AISI 316L<br>Pan/Tilt speed: 0.1 ° - 100 ° / s<br>Tilt: -90 ° / +90 °<br>Day / night function<br>Analog zoom factor: 36x<br>Control protocol: Pelco-D@485 and others (q.v. data sheet)<br>All required cable glands are included.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B |



# Ex PTZ Drives

The **rangeExtender** systems extend the viewing range of the ExCam series. Depending on the application, pan and tilt units can be used as stand alone applications (only pan or only tilt), or can be combined as a pan-and-tilt-system.

In conjunction with the **ExCam HD** or **ExCam IP** which generally supports digital PTZ (ePTZ), all requirements of a pan-tilt-system in explosion risk zones are met.

## rangeExtender (air) at pneumatic drive

| product / model  | description   |  |
|--|---|--|
| rX-air<br>PAN<br>   | Pneumatic Ex-pan drive according to RL 94/9/EG (ATEX)<br>Torque at 6 bar: 5Nm<br>Max. swing angle: 270°<br>Operating medium: Compressed air according to ISO 8573-1:2010 [7:--:-]<br>Ambient temperature limit: -10°C to +60°C<br>Product group: C  |  |
| rX-air<br>TILT<br> | Pneumatic Ex-tilt drive according to RL 94/9/EG (ATEX)<br>Torque at 6 bar: 5Nm<br>Max. swing angle: 135°<br>Operating medium: Compressed air according to ISO 8573-1:2010 [7:--:-]<br>Ambient temperature limit: -10°C to +60°C<br>Product group: C   |  |
| rX-e<br>PAN<br>   | Electrical Ex-pan drive according to RL 94/9/EG (ATEX)<br>Operating time: 25(21)s/90°<br>Torque: 6Nm<br>Ambient temperature limit: -20° to +60°C<br>Power supply: 230V, 50(60)Hz<br>In accordance with EN 50014: Ex II 2G EEx de IIC T6<br>Waiting time: 40 minutes<br>Certification: TÜV 03 ATEX 2167<br>Protection level: IP 65<br>Potentiometer at 270°<br>Product group: C                    |  |
| rX-e<br>TILT<br>  | Electrical explosion proof tilt drive in accordance with RL 94/9/EG (ATEX)<br>Operating time: 25(21)s/90°<br>Torque: 6Nm<br>Ambient temperature limit: -20° to +60°C<br>Power supply: 230V, 50(60)Hz<br>In accordance with EN 50014: Ex II 2G EEx de IIC T6<br>Waiting time: 40 minutes<br>Certification: TÜV 03 ATEX 2167<br>Protection level: IP 65<br>Potentiometer at 90°<br>Product group: C |  |

# (Ex) Lighting systems

Process and object lighting are obligatory in explosion risk zones and hazardous areas. The right combination of lighting equipment and the usage of fast camera lenses is essential to get crisp and sharp images. The following lighting systems are the perfect match for the ExCam series; using the same pressure-proof housings. Almost all lighting systems are available for non-explosion risk zones also.

## Ex-flood lights

| product / model  | description   |
|--|---|
| ChemLux FHED d<br>LED-S K1 sp<br> | Lighting for explosion risk zones<br>230-240VAC, 7W, Ta -20°C to +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T80°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m cable H05GG-F 3x1.5 mm²<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000                                |
| ChemLux FKEL<br>20 dH<br>         | Lighting for explosion risk zones<br>24V AC/DC, 20W, Ta -20°C to +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T4 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T130°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m cable H05GG-F 3x1.5 mm²<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000                               |
| ChemLux FKEL<br>50 dH<br>       | Lighting for explosion risk zones<br>24V AC/DC, 50W, Ta -20°C to +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T3 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T195°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m silicon cable OilflexHeat180 EWKF 3G1Heat180 EWKF 3G1<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000 |
| ChemLux R100<br>deH<br>         | Lighting for explosion risk zones<br>24V AC/DC, 100W, Ta -20°C bis +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T3 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T195°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m cable H05GG-F 3x1.5 mm²<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000                             |
| EdelEx 20<br>dH K1<br>          | Lighting for explosion risk zones<br>24V AC/DC, 20W, Ta -20°C to +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T4 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T130°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m silicon cable OilflexHeat EWKF 2X0.75<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000                 |
| EdelEx 50<br>dH K1 (T3)<br>     | Lighting for explosion risk zones<br>24V AC/DC, 50W, Ta -20°C to +60°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T3 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T195°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m silicon cable OilflexHeat 180 EWKF 3G1.5<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000              |

## Ex- flood lights

| product / model  | description   |
|--|---|
| EdelEx 50<br>dH K1 (T4)<br>         | Lighting for explosion risk zones<br>24V AC/DC, 50W, Ta -20°C to +40°C<br>Explosion protection (gas): Ex II 2G Ex d IIC T4 Gb<br>Explosion protection (dust): Ex II 2D Ex t IIIC T130°C Db IP67<br>Protection level: IP 67 (IEC / EN 60529)<br>Includes 5 m silicon cableÖlflexHeat180 EWKF 3G1,5<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 9405 4000 |
| Wall bracket<br>WMB-S-...<br>       | Wall bracket (stainless steel)<br>Manual pan angle: 360°<br>Manual tilt angle: 90°<br>Includes hinge and mounting in accordance with housing identity code:<br>WMB-S-AL: for Chemlux FHEL/FKEL<br>WMB-S-VA: for EdelEx20<br>WMB-S-VA2: for EdelEx50<br>WMB-S-R100: for Chemlux R100<br>WMB-S-0: without hinge<br>Product group: A, tariff number: 8529 9092   |
| Twin-Adapter<br>WMB-TA-...-...<br> | Twin Adapter (stainless steel)<br>Manual pan angle: 360°<br>Manual tilt angle: 90°<br>Includes hinge and mounting for left and right side in accordance with housing identity code.<br>Example:<br>WMB-TA-VA-VA: left and right for housing „VA“<br>Product group: A, tariff number: 8529 9092  |
| Hood<br>WPR-...<br>               | Hood (stainless steel)<br>Inclusive mounting for housing:<br>WPR-AL: for Chemlux FHEL/FKEL<br>WPR-VA: for EdelEx20<br>WPR-VA2: for EdelEx50<br>WPR-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092   |
| Hinge attachment<br>SCH-...<br>   | Hinge attachment „SCH“<br>Easy mounting on round sight glasses.<br>In accordance with DIN 28120/28121 (or similar).<br>Includes mounting for housing:<br>SCH-AL: for Chemlux FHEL/FKEL<br>SCH-VA: for EdelEx20<br>SCH-VA2: for EdelEx50<br>SCH-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092   |
| Flange mounting<br>R-...<br>      | Flange mounting «R»<br>Easy mounting for screw and sight glass fittings similar DIN 11851 (milk pipe screws) as well as flow indicator sight glass fittings. Mounting material of housing:<br>R-AL: for Chemlux FHEL/FKEL<br>R-VA: for EdelEx20<br>R-VA2: for EdelEx50<br>R-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092  |







# (Ex) Audio components

The ConnectionRail series converts video, audio, and binary signals into Ethernet-network streams and makes them available over long distances.

As part of the ConnectionRail series, ATEX certified equipment for use in hazardous areas as well as non-ATEX equipment for industrial control environments are available. Interface diversity makes our ConnectionRails solve every digitalization task. Cameras of renowned manufacturers can be controlled via RS232/RS422 or RS485 interface network-based. Explosion proof speakers, intrinsically safe microphones, and DECT base stations can be connected. Networking can be realized via fiber optic cable, copper Ethernet or wireless.

## Analog devices

| product / model   | description  |
|---|--|
| ExMic<br>WM-48<br>             | Intrinsically safe, dynamic wall microphone<br>Housing: shock-resistant plastic<br>Colour: black<br>Dimensions: 85 mm x 85 mm x 77.5 mm<br>Weight: ca. 320 g<br>Electrical connections: terminals 2 x 0.08...2.5 mm <sup>2</sup><br>KLE for cable 4...7 mm<br>Protection level: IP 54 in accordance with DIN EN 60529<br>Temperature range Betrieb: -40°C to +60°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C |
| Exi separation stage<br>      | Exi separation stage Ex-i for ExMic<br>Safety data: U <sub>0</sub> = 1,6 V, I <sub>0</sub> = 15 mA<br>P <sub>0</sub> = 6 mW<br>Certificates: PTB 01 ATEX 2088; PTB 01 ATEX 2135<br>Product group: C  |
| ExSpeak<br>H60 EExeNTIIB<br> | H 60 EExeNT, IIB EX-horn speakers 20 Watt/10<br>Material/type: Aluminum alloy/ RAL 7031<br>Mounting: Bracket<br>Connection: Terminal<br>Net weight: 5.0 kg<br>Protection level: IP 67<br>Temperature range: -50°C to +50°C<br>EEx de IIC T5<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C  |
| Amplifier<br>FP-PA20A<br>    | 70V/100V Audio-Amplifier 20 Watts<br>20 Watts RMS constant power supply amplifier<br>70 V and 100 V exits<br>(see data sheet for more technical data - <a href="http://www.samcon.eu">www.samcon.eu</a> )<br>Product group: C  |

## DECT components

| product / model  | description   |
|--|---|
| DECT ExNF Interface<br>T02<br>              | DECT base station for explosion risk zones<br>- CT-DECT Interface 4-fold in alloy housing<br>- External antenna via SMA-socket<br>- Video server controls process via terminal strip<br>- LED visualising of process via terminal strip<br>- Audio Line IN and Audio Line OUT connection via terminal strip<br>- Mounting via auf profile rails<br>- Explosion protection (Gas): Ex IIB<br>- Explosion protection (dust): Ex IIIC<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C |
| CT-DECT ATEX Headset<br>Art no. 1407100<br> | Use up to 4 CT-DECT ATEX headsets with a range of up to 200 meters. Hands-free. Communicate with control room or colleagues in the field at the same time without having to press any buttons.<br>- VK cover orange<br>- Gooseneck microphone<br>- Microphone On/Off<br>- Speaker On/Off<br>- Li-Po Accumulator 3.7V/1250mAh<br>- 4-contacts charging jack for Charger 0910135<br>- Ex II 2 G Ex ib IIB T4<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C                        |
| CT-DECT ATEX Headset<br>Art no. 1407200  | Same as art no. 1407100 but with dynamic throat microphone<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C  |
| CT-DECT ATEX Headset<br>Art no. 0910135  | Charger for CT-DECT Headset Ex<br>Includes network adaptors for Europe<br>Product group: C  |

# Mounting & accessories

All accessories have been thoroughly tested with regard to their use in industrial zones, reflecting the highest quality standards. Accessories for explosion risk zones are in accordance with the current norms; DIN EN 60079-0,-14, regulation 94/9/EG as well as the norms for the applicable explosion protection.

## Mounting & accessories

| product / model  | description   |
|--|---|
| Wall bracket<br>WMB-S-...<br>       | Wall bracket (stainless steel)<br>Manual pan angle: 360°<br>Manual tilt angle: 90°<br>Includes hinge and mounting in accordance with housing identity code:<br>WMB-S-AL: for T03-AL<br>WMB-S-VA: for T03-VA<br>WMB-S-VA2: for T03-VA2<br>WMB-S-R100: for Chemlux R100<br>WMB-S-0: without hinge<br>Product group: A, tariff number: 8529 9092 |
| Twin-Adapter<br>WMB-TA-...-...<br> | Twin Adapter (stainless steel)<br>Manual pan angle: 360°<br>Manual tilt angle: 90°<br>Includes hinge and mounting for left and right side in accordance with housing identity code.<br>Example:<br>WMB-TA-VA-VA: left and right for housing „VA“<br>Product group: A, tariff number: 8529 9092  |
| Hood<br>WPR-...<br>               | Hood (stainless steel)<br>Inclusive mounting for housing:<br>WPR-AL: for T03-AL<br>WPR-VA: for T03-VA<br>WPR-VA2: for T03-VA2<br>WPR-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092   |
| Hinge attachment<br>SCH-...<br>   | Hinge attachment „SCH“<br>Easy mounting on round sight glasses.<br>In accordance with DIN 28120/28121 (or similar).<br>Includes mounting for housing:<br>SCH-AL: for T03-AL<br>SCH-VA: for T03-VA<br>SCH-VA2: for T03-VA2<br>SCH-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092   |
| Flange mounting<br>R-...<br>      | Flange mounting «R»<br>Easy mounting for screw and sight glass fittings similar DIN 11851 (milk pipe screws) as well as flow indicator sight glass fittings. Mounting material of housing:<br>R-AL: for T03-AL<br>R-VA: for T03-VA<br>R-VA2: for T03-VA2<br>R-R100: for Chemlux R100<br>Product group: A, tariff number: 8529 9092            |
| Wide angle lens<br>HR0.6-VA<br>   | Wide angle lens for T03-VA<br>Two lenses, glued into stainless steel flange<br>HR = 0.6<br>Inner lens: D=36 mm, N-BK7<br>Outer lens: D=56 mm, N-LASF45<br>Product group: A, tariff number: 8529 9092  |



## Mounting & accessories

| product / model  | description  |
|--|--|
| Thermoisolator<br>THERM-VA<br>                    | Thermo isolator for flange T03-VA..<br>For installation at hot sight glasses or for reducing light incidences<br>Colour: black<br>Temperature range: -45°C to +100°C<br>Durability: weatherproof, ozone proof, non-ageing, acid resistant, alkali resistant<br>Characteristics: extremely flame resistant, abrasion and impact resistant. Electrically puncture-proof<br>Product group: A, tariff number: 8529 9092  |
| Ex-e Terminal box<br>ExTB-2<br>                   | Terminal box for analog and digital ExCam systems<br>Gas – Explosion proof: Ex II 2 G Ex e II T6<br>Dust – Explosion proof: Ex II 2 D Ex tD A21 IP66<br>Material: Polyester resin, dimensions: 115 x 115 x 64 mm<br>Protection level: IP 66<br>Ambient temperature limit: - 40°C to + 55°C<br>Max. power supply: 690 V, max. diameter: 2.5 mm <sup>2</sup><br>10 pcs. terminal clamp UT 2,5, description: 1-10,<br>2 pcs. conductor terminal USLKG 5<br>1 pc. TS35 carrier rail TS35 100 mm<br>2 pcs. 8161/5-M20-9 screw connection M20x1.5 sw<br>Product group: C             |
| Ex-e Terminal box<br>ExTB-4<br>                  | Terminal box for analog as well as digital ExCam systems<br>Gas - Explosion proof: Ex II 2 G Ex e II T6<br>Dust – Explosion proof: Ex II 2 D Ex tD A21 IP66<br>Material: polyester resin<br>Dimensions: 115 x 115 x 64 mm<br>Protection level: IP 66<br>Ambient temperature limit: - 40°C to + 55°C<br>Maximum power supply: 690 V<br>Maximum diameter: 2.5 mm <sup>2</sup><br>10 pcs. terminal clamp UT 2.5, description: 1-10,<br>2 pcs. conductor terminal USLKG 5, 1 pc. TS35 carrier rail TS35 100 mm 4 pcs. 8161/5-M20-9 screw connection M20x1.5 sw<br>Product group: C |
| Passive two-cable transmitter<br>VZT-21B/TB<br> | Passive two-cable sender or receiver for ExCam systems<br>The device can be either directly connected to a video server or to an analog monitor.<br>It converts the symmetrical CVBS signal of the camera into an asymmetrical one. CVBS input / output,<br>BNC terminal block<br>Product group: C   |

## Power supply (12VDC out)

| product / model  | description  |
|--|--|
| Tracopower<br>TCL 024-112DC<br> | Top hat rail power supply<br>Power supply (in): 18 V DC - 75 V DC<br>Power supply (out): 12 V DC, power: 24 W<br>Adjustable power supply (out)<br>Suitable for battery charging<br>DC-OK Signal<br>Radio shielding in accordance with EN 55022, Class B and FCC, level B<br>Product group: C   |
| Tracopower<br>TCL 024-112<br>   | Top hat rail power supply.<br>Power supply in: 85 V AC - 264 V AC<br>Power supply out: 12 V DC, power: 24 W<br>Adjustable power supply (out)<br>Suitable for battery charging.<br>DC-OK Signal<br>Radio shielding in accordance with EN 55022, Class B and FCC, level B<br>Product group: C    |
| PULS<br>ML30.102<br>            | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 12 V DC<br>power: 30 W<br>Adjustable power supply (out)<br>Product group: C   |
| Tracopower<br>TCL 060-112<br> | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 12 V DC, power: 60 W<br>Adjustable power supply (out)<br>Suitable for battery charging<br>DC-OK signal<br>Radio shielding in accordance with EN 55022, Class B and FCC, level B<br>Product group: C |

## Power supply (24VDC out)

| product / model  | description   |
|--|---|
| Dehner DUE<br>DUE 15WCP-24V<br> | Universal power supply with interchangeable plug adapter (thus can be used internationally).<br>Device in accordance with EN60601, can be used in medical applications as well.<br>Short circuit protection as well as overload protection, automatic restart Cable length: 1.8m.<br>CE-, TÜV, cUL. EN60601-certified for medical applications.<br>With INLINE fuse class for direct supply of signals and heating (luster terminal).<br>Product group: C |
| PULS<br>ML15.241<br>            | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 24 V DC<br>Power: 15 W<br>Adjustable power supply (out).<br>Product group: C   |

## Power supply (24VDC out)

| product / model  | description   |
|--|---|
| Tracopower<br>TCL 024-124<br>   | Top hat rail power supply.<br>Power supply in: 85 V AC - 264 V AC<br>Power supply out: 24 V DC<br>Power: 24 W, Adjustable power supply (out)<br>Suitable for battery charging<br>DC-OK Signal<br>Radio shielding in accordance with EN 55022, class B and FCC, level B<br>Product group: C        |
| PULS<br>ML30.100<br>            | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 24 V DC<br>Power: 30 W<br>Adjustable power supply (out)<br>Product group: C  |
| PULS<br>ML50.100<br>            | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 24 V DC<br>Power: 50 W<br>Adjustable power supply (out)<br>Product group: C  |
| Tracopower<br>TCL 060-124<br>  | Top hat rail power supply.<br>Power supply in: 85 V AC - 264 V AC<br>Power supply out: 24 V DC<br>Power: 60 W, Adjustable power supply (out)<br>Suitable for battery charging<br>DC-OK Signal<br>Radio shielding in accordance with EN 55022, class B and FCC, level B<br>Product group: C        |
| PULS<br>ML70.100<br>          | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 24 V DC<br>Power: 72 W<br>Adjustable power supply (out)<br>Product group: C  |
| PULS<br>ML100.100<br>         | Top hat rail power supply.<br>Power supply (in): 115/230 V AC<br>Power supply (out): 24 V DC<br>Power: 100 W<br>Adjustable power supply (out)<br>Product group: C   |
| Tracopower<br>TCL 120-124<br> | Top hat rail power supply.<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 24 V DC<br>Power: 120 W<br>Adjustable power supply (out)<br>Suitable for battery charging<br>DC-OK Signal<br>Radio shielding in accordance with EN 55022, class B and FCC, level B<br>Product group: C |

## Power supply (48V DC out - PoE)

| product / model  | description  |
|--|--|
| PULS<br>ML50.105<br>          | Top hat rail power supply<br>Power supply (in): 85 V AC - 264 V AC<br>Power supply (out): 48 V DC<br>Power: 50 W<br>Suitable for power supply of PoE cameras<br>Product group: C   |
| Tracopower<br>TSP 090-148<br> | Top hat rail power supply<br>Power supply (in): 85-132 V AC / 187-264 V AC<br>Power supply (out): 48 V DC<br>Power: 96 W<br>Suitable for POE cameras. Worldwide usage due to auto range in and international certifications. Adjustable power supply (out), short circuit protection, overheating protection, over power protection. DC-OK signal, radio shielding in accordance with EN 55011, class B, EN 55022, class B, EN 61000-3-2<br>Product group: C |
| PULS<br>ML100.105<br>         | Top hat rail power supply<br>Power supply (in): 115/230 V AC<br>Power supply (out): 48 V DC<br>Power: 100 W<br>Suitable for power supply of PoE cameras<br>Product group: C  |
|  | Concerning the Traco switching power supply, please note:<br>In case that the model code does not show an extension, screw terminals are used.<br>If the model code shows an extension comprising a „C“, spring type terminals are used.<br>Pictures may vary.   |



## Cable & Wiring

| product / model   | description   |
|---|---|
| SKA01<br>            | <u>System cable analog</u><br>Special wiring in accordance with DIN EN 60079-14<br>Outer diameter: 8.5 mm, bending radius: min. 150 mm<br>Video: 1x75Ω Coax AWG 24, Cu shielded<br>RS 232: 2x0.25 mm <sup>2</sup> closed Cu shielded<br>Power supply camera: 2x0.75 mm <sup>2</sup><br>Power supply heating: 2x0.75 mm <sup>2</sup><br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A, tariff number: 8544 4993   |
| new!<br>SKA02<br>    | <u>System cable analog</u><br>Special wiring in accordance with DIN EN 60079-14<br>Outer diameter: 9.4 mm, bending radius: min. 150 mm<br>Video: 1x75 Ω Coax AWG 24, Cu shielded<br>Data (physic.): 2x2x0.25 mm <sup>2</sup> closed Cu shielded<br>Data (protocol): RS232, RS422, RS485 full duplex<br>Power supply heating: 2x0.75 mm <sup>2</sup><br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A   |
| SKAD01<br>          | <u>System cable digital</u><br>Special explosion proof wiring in accordance with DIN EN 60079-14<br>Outer diameter: 14.50±0.30 mm<br>Maximum bending radius: 150 mm<br>Material outer cable sheath: PUR – flame retardant in accordance with IEC 60322-1-2 1KW flame<br>Color outer cable sheath: RAL 9005 matt<br>Coax 75OHM, 4x0.75 mm <sup>2</sup> , 5x1.5 mm <sup>2</sup> , 6x2x0.25 mm <sup>2</sup><br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A                      |
| new!<br>ASKA02<br> | <u>Reinforced system cable analog</u><br>Special explosion proof wiring in accordance with DIN EN 60079-14<br>Outer diameter: 9.4 mm, bending radius: min. 150 mm<br>Video: 1x75 Ω Coax AWG 24, Cu shielded<br>Data (physic.): 2x2x0.25 mm <sup>2</sup> closed Cu shielded<br>Data (protocol): RS232, RS422, RS485 full duplex<br>Power supply camera: 2x0.75 mm <sup>2</sup><br>Power supply heating: 2x0.75 mm <sup>2</sup><br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A |
| SKD01<br>          | <u>System cable digital</u><br>Special explosion proof wiring in accordance with DIN EN 60079-14.<br>Outer diameter: ø 8.7 ±0.3 mm<br>Max bending radius: 10 mm<br>Material outer cable sheath: PUR – flame retardant in accordance with IEC 60322-1-2 1KW flame<br>Composition: 4 x 2 x AWG22/1 shielded<br>Perfect for PoE cameras and cameras with normal power supply.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: A  |
|   | ...more cables upon request   |

# Network components

High-performance CCTV networks require high performance components.

Except for some special applications, IP-based camera networks will, in the long run, prevail over analog networks. The main reasons are as follows:


1. When installing an IP-based network system, parts, components and cameras from all manufactures can be used
2. All ethernet means (copper, fiber, wireless) can be used as information is transmissioned as TCP/IP
3. In IP-based networks, all video images cannot only be viewed on work stations in the control roombut also on standard PCs, notebooks, tablet PCs and smartphones as well! This means that no special hardware, such as controllers or analog monitors, have to be purchased
4. Software solutions allow a very high degree of customization. Just one example: Camera views can be embedded either in maps or in flow diagrams
5. Unlike with analog networks, IP-based networks can be fully integrated into the PCS
6. IP-based camera systems can be accessed worldwide (for example via a secure VPN tunnel). This means that cameras can be controlled and viewed from anywhere in the world – and not only from one control room. In addition, the camera history can be sent directly to your desktop

All components, such as the ExCam Series, (Ex)Connection Rails or video servers, are perfectly suitable for our CCTV-networks. Whether you plan a small test or a large industrial network.



## Desktop switches

| product / model   | description   |
|---|---|
| Netgear<br>GS108<br>     | GE 8-Port Gigabit-Copper-Switch<br>8 Autosensing-Gigabit-Copper-Ports with 10/100/1000 MBit/s<br>Auto Uplink, Unmanaged, compact, sturdy metal housing<br>LED displays, external power supply<br>Plug-and-Play-Installation<br>Silent operation (no fan)<br>Product group: C, tariff number: 8517 6200  |
| Netgear<br>GS108P<br>    | GE 8-Port Gigabit-Copper-Switch<br>8 Autosensing-Gigabit-Copper-Ports with 10/100/1000 MBit/s<br>4 PoE Ports<br>Auto Uplink, Unmanaged, compact, sturdy metal housing<br>LED displays, external power supply<br>Plug-and-Play-Installation<br>Silent operation (no fan)<br>Product group: C, tariff number: 8517 6200   |
| D-LINK<br>DES-1024R+<br> | 24-Port Fast Ethernet Switch 2x opt. Fiber<br>Compatible with IEEE 802.3, 802.3u and 802.3x<br>24 10/100Mbit NWay TP-connections (RJ-45)<br>NWay Autosensing<br>NWay Auto negotiation<br>Expansion slot for one optional 2-Port 100 Mbit Fiber-connection module (SC)<br>Automatic connection to hardware addresses (MAC)<br>Data control (flow-control) with full duplex<br>Back-pressure for half duplex<br>Automatic settings on MDI/MDI-X for every connection<br>Automatic correction of polarity (twisted pair cables)<br>RAM for automatic connection for every plug<br>Product group: C |

## Industrial fast ethernet switches

| product / model   | description   |
|---|---|
| MOXA Ethernet Switch<br>EDS-305<br>                  | 5 Port Ethernet Switch in metal housing<br>TX Ports: 5x10/100BaseT(X) thereof:<br>PoE Ports: 0<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage), redundant power supply<br>Product group: C                                 |
| MOXA Ethernet Switch<br>EDS-308<br>                  | 8 Port Ethernet Switch with metal housing<br>TX Ports: 8x10/100BaseT(X) thereof:<br>PoE Ports: 0<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage), redundant power supply<br>Product group: C                              |
| <b>new!</b><br>MOXA Ethernet Switch<br>EDS-P308<br> | 8 Port Ethernet Switch with metal housing<br>TX Ports: 8x10/100BaseT(X) thereof:<br>PoE Ports: 4<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage)<br>Connection for 2 redundant power supplies 24 V DC<br>Product group: C |





## Industrial gigabit ethernet switches, media converter und firewalls

| product / model  | description   |
|--|---|
| <b>new!</b><br>MOXA Ethernet Switch<br>EDS-G205<br> | 5 Port Ethernet Switch with metal housing<br>TX Ports: 8x10/100BaseT(X) thereof:<br>PoE Ports: 0<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage), Connection for 2 redundant power supplies 24 V DC<br>Product group: C   |
| <b>new!</b><br>MOXA Ethernet Switch<br>EDS-G308<br> | 8 Port Ethernet Switch with metal housing<br>TX Ports: 8x10/100BaseT(X) thereof:<br>PoE Ports: 0<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage)<br>Connection for 2 redundant power supplies 24 V DC<br>Product group: C |

## Industrial gigabit ethernet switches, media converter und firewalls

| product / model   | description   |
|---|---|
| <b>new!</b> MOXA Ethernet Switch<br>EDS-G308-SFP<br>           | 8 Port Ethernet Switch with metal housing<br>TX Ports: 8x10/100BaseT(X) thereof:<br>PoE Ports: 0<br>FX Ports: up to 2<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage)<br>Connection for 2 redundant power supplies 24 V DC<br>Product group: C |
| <b>new!</b> MOXA Ethernet Switch<br>EDS-G205A-4PoE<br>         | 5 Port Ethernet Switch with metal housing<br>TX Ports: 5x10/100BaseT(X) thereof:<br>PoE Ports: 4<br>FX Ports: 0<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage),<br>Connection for 2 redundant power supplies 24 V DC<br>Product group: C      |
| <b>new!</b> MOXA Ethernet Switch<br>EDS-G205A-4PoE -1GSFP<br> | 5 Port Ethernet Switch with metal housing<br>TX Ports: 5x10/100BaseT(X)<br>thereof PoE Ports: 4<br>FX Ports: 1<br>Temperature: 0 - 60°C<br>Compact and sturdy housing, ideal for industrial usage.<br>Mounting on DIN-rails (35 mm), 5 year warranty, alarm-function (triggered on power or network shortage)<br>Connection for 2 redundant power supplies 24 V DC<br>Product group: C        |
| <b>new!</b> MOXA Gigabit SFP Modul<br>SFP-1GSXLC<br>         | SFP module for Gigabit Ethernet Multimode FOC transmission<br>In accordance with IEEE 802.3z<br>Differential LVPECL-inlets and out lets<br>TTL signal display<br>Hot pluggable<br>Product of laser class 1, corresponds with EN60825-1<br>Product group: C  |
|   | Further SFP modules upon request  |
| MOXA Access Point<br>AWK-3121-EU<br>                         | WLAN Access Point<br>Wireless 802.11 a/b/g, AP/Bridge/Client<br>- 64-bit and 128-bit WEP (Wired Equivalent Privacy)<br>- Enable/disable SSID broadcasts<br>- WPA/WPA2 (Wi-Fi Protected Access) support<br>- IEEE802.1X/RADIUS support<br>- Powerful IP packet filters<br>Product group: C   |
| <b>new!</b> MOXA Secure Router<br>EDR-G903 3-port<br>        | Moxa Gigabit Ethernet Firewall<br>Router/Firewall/VPN* All-in-One-solution<br>High-performance Gigabit-combi-port (for copper /fiber optic cable)<br>WAN redundancy function with 2 WAN interfaces<br>and 1 LAN interface<br>NAT functions (N-to-1 NAT, 1-to-1 NAT and port forwarding)<br>Intelligente PolicyCheck and SettingCheck Tools<br>Product group: C                                |

## Solutions for 19" Racks

| product / model   | description   |
|---|---|
| <b>new!</b> MOXA<br>RK-4U<br>                                      | 19-inch-35mm-mounting rack adapter<br>This rack offers the best solution for industrial BTO switches.<br>In combination with redundantly executed power supplies, if applicable, it is possible to install all Moxa switches.<br>Product group: C       |
| <b>new!</b> MOXA 19" managed Switch<br>IKS-G6524-4GTXSFP-HV-HV<br> | Layer 2 Full Gigabit managed Ethernet Switch<br>20x 10/100/1000BaseTX ports<br>4x Gigabit SFP Combo ports<br>Power supply: Redundant<br>Product group: C  |
| <b>new!</b> Hirschmann<br>MACH104-20TX-F<br>                       | 24 Port Gigabit Ethernet Industrial Workgroup Switch<br>(20 x GE TX Ports, 4 x GE SFP combo Ports),<br>Managed, Software Layer 2 Professional<br>Store-and-Forward-Switching<br>IPv6 Ready, fanless design<br>Product group: C                          |
| <b>new!</b> Hirschmann<br>MACH104-20TX-FR<br>                      | 24 Port Gigabit Ethernet Industrial Workgroup Switch<br>with redundant power supply (20 x GE TX Ports, 4 x GE SFP combo Ports), Managed, Software Layer 2 Professional<br>Store-and-Forward-Switching<br>IPv6 Ready, fanless design<br>Product group: C |



**Quad video server (4-fold)**

Axis Q7404

# Video Server

Video servers convert video, audio, and binary signals into Ethernet-network streams, making them available over long distances. Without the applicable protective housing, video servers which are not ATEX certified must not be installed in explosion risk areas (q.v. ExConnection Rail Series).


All SAMCON video servers are 100% compatible with all analog cameras of the ExCam Series, as well as with our video management system SAMCONtroll.

All video servers are delivered with 35 mm carrier rail or mounting plate adapters.

## Single port video server for one video camera

| product / model  | description  |
|--|--|
| Axis<br>M7001<br>         | 1-Channel Ethernet video server<br>Video compression: MJPEG and H.264<br>Maximum transmission rate: 25fps@4CIF<br>DI: 0, DO: 0<br>Interfaces: 1xRS422/485<br>Internal recording archive: No, audio: No<br>Required IP addresses: 1<br>Power supply: PoE (IEEE 802.3af), class 2<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8517 62000   |
| Axis<br>M7001-BTO<br>   | 1-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver, execution and logging of a function as well as quality check.<br>Video compression: MJPEG und H.264<br>Maximum transmission rate: 25fps@4CIF<br>DI: 0, DO: 0<br>Interfaces: 1xRS422/485<br>Internal recording archive: No, audio: No<br>Required IP addresses: 1<br>Power supply: PoE (IEEE 802.3af), class 2<br>Product group: B, tariff number: 8517 62000   |
| Axis<br>Q7401<br>       | 1-Channel Ethernet video server<br>Video compression: MJPEG and H.264<br>Maximum transmission rate: 25fps@4CIF<br>Digital In/Outputs: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485<br>Internal recording archive: via SD Slot<br>Audio: Full duplex<br>Required IP addresses: 1<br>Power supply: 9-20 V DC or PoE class 2<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8525 5000   |
| Axis<br>Q7401 - BTO<br> | 1-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver, execution and logging of a function as well as quality check.<br>Video compression: MJPEG and H.264<br>Maximum transmission rate: 25fps@4CIF<br>Digital In/Outputs: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485<br>Internal recording archive: via SD Slot<br>Audio: Full duplex<br>Required IP addresses: 1<br>Power supply: 9-20 V DC or PoE class 2<br>Product group: B, tariff number: 8525 5000 |

## Single Port video server for one video camera

| product / model   | description   |
|---|---|
| Axis<br>241S - BTO<br> | 1-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver, execution and logging of a function as well as quality check.<br>Video compression: MJPEG und MPEG-4<br>Maximum transmission rate: 25fps@4CIF<br>Digital inputs: 4<br>Digital outputs: 4<br>Interfaces: 1xRS232, 1xRS422/485<br>Internal recording archive: no<br>Audio: Full duplex<br>Required IP addresses: 1<br>Power supply: 9-20 V DC via power supply unit (included)<br>Includes BNC angle plug, D-SUB plug with solder tags and mounting adapter for 35 mm DIN carrier rail.<br>Product group: B, tariff number: 8525 5000 |

## Quad Port video server for up to four video cameras

| product / model  | description   |
|--|---|
| Axis<br>P7214<br>       | 4-Channel Ethernet video server<br>Video compression: MJPEG and H.264<br>Maximum transmission rate per channel: 25fps@4CIF<br>Digital In/Outputs: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485 (BUS or DAISY CHAIN!)<br>Internal recording archive: 1 x microSDHC<br>Audio: External microphone, in or line in line level output, audio streams, recording (AU) and uploaded (WAV, AU), play clips<br>Required IP addresses: 1<br>Power supply: 8-20 V DC or PoE class 3<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8517 6990   |
| Axis<br>P7214 - BTO<br> | 4-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver, pre-wiring of the interfaces via DAISY CHAIN, execution and logging of a function as well as quality check.<br>Video compression: MJPEG and H.264<br>Maximum transmission rate per channel: 25fps@4CIF<br>Digital In/Outputs: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485 (BUS or DAISY CHAIN!)<br>Internal recording archive: 1 x microSDHC<br>Audio: External microphone, in or line in line level output, audio streams, recording (AU) and uploaded (WAV, AU), play clips<br>Required IP addresses: 1<br>Power supply: 8-20 V DC or PoE class 3<br>Product group: B, tariff number: 8517 6990 |
| Axis<br>241Q - BTO<br>  | 4-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver, execution and logging of a function as well as quality check.<br>Video compression: MJPEG and MPEG4<br>Max overall transmission rate: 25fps@4CIF<br>Digital inputs: 4<br>Digital outputs: 4<br>Interfaces: 1xRS422/485, 1xRS232<br>Audio: one channel full duplex<br>Required IP addresses: 1<br>Power supply: 8-20 V DC<br>Product group: B, tariff number: 8525 5000  |



## Quad port video server for up to four video cameras & accessories

| product / model  | description  |
|--|--|
| Axis<br>Q7404<br>                         | 4-Channel Ethernet video server<br>Video compression: MJPEG and MPEG4<br>Maximum transmission rate per channel: 25fps@4CIF<br>digital in/out per channel: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485 per channel<br>Internal recording archive: no<br>Audio: Half duplex on channel 1<br>Required IP addresses: 4<br>Power supply: 8-20 V DC<br>It is possible to install different PTZ drivers on each channel<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8525 5000   |
| Axis<br>Q7404 - BTO<br>                   | 4-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver,<br>pre-wiring of the interfaces via DAISY CHAIN, execution and logging of a function as well as quality check.<br>Video compression: MJPEG and MPEG4<br>Maximum transmission rate per channel: 25fps@4CIF<br>Digital in/out per channel: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485 per channel<br>Internal recording archive: no<br>Audio: Half duplex on channel 1<br>Required IP addresses: 4<br>Power supply: 8-20 V DC<br>It is possible to install different PTZ drivers on each channel<br>Product group: B, tariff number: 8525 5000  |
| <b>new!</b><br>Axis<br>Q7424-R<br>      | 4-Channel Ethernet video server<br>Video compression: MJPEG and MPEG4<br>Maximum transmission rate per channel: 15-25fps@4CIF<br>Digital in/out per channel: 4 (as DI or DO configurable)<br>Interfaces: 1xRS422/485<br>Ethernet: Copper PoE and SFP Slot<br>Internal recording archive: Yes (SD Card)<br>Audio: Full duplex, Required IP addresses: 1<br>Power supply: 8-28 V DC, max. 10 W, 20-24 V AC, max. 15.6 VA<br>Power over Ethernet IEEE 802.3af Class 3<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8525 5000   |
| <b>new!</b><br>Axis<br>Q7424-R -BTO<br> | 4-Channel Ethernet video server - BTO<br>This BTO version comprises the following scope:<br>Connection of the equipment, installation of the applicable PTZ driver,<br>pre-wiring of the interfaces via DAISY CHAIN, execution and logging of a function as well as quality check.<br>Video compression: MJPEG and MPEG4<br>Maximum transmission rate per channel: 15-25fps@4CIF<br>Digital in/out per channel: 4 (configurable as DI or DO)<br>Interfaces: 1xRS422/485<br>Ethernet: Copper PoE and SFP Slot<br>Internal recording archive: Yes (SD Card)<br>Audio: Full duplex, Required IP addresses: 1<br>Power supply: 8-28 V DC, max. 10 W, 20-24 V AC, max. 15.6 VA;<br>Power over Ethernet IEEE 802.3af Class 3<br>Product group: B, tariff number: 8525 5000 |
| AXIS<br>POE MIDSPAN 1-PORT<br>          | 1-Channel Power over Ethernet power supply voltage<br>Input voltage: 90 - 264 V AC<br>Data rate: 10/100 Mbps<br>Power over Ethernet (PoE) IEEE 802.3af Compliant<br>Dimensions: 31 x 60 x 145 mm<br>Weight: 450 g<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: C, tariff number: 8504 4030  |



**Connection Rail - S**  
 with stainless steel housing

# Connection Rail - S/SA

The ConnectionRail series converts video, audio, and binary signals into Ethernet-network streams, making them available over long distances.

As part of the ConnectionRail series, ATEX certified equipment for use in hazardous areas as well as non-ATEX equipment for industrial control environments are available. Interface diversity makes our ConnectionRails solve every digitalization task. Cameras from renowned manufacturers can be controlled via RS422 or RS485 interface network-based.

| product / model                           | description   |
|---|---|
| Connection Rail - S<br>T05-S-00-001       | Plug & Play connection and digitalization unit for an analog system<br>Compact cabinet AE stainless steel 1.4301, for wall mounting (mounting plate (WxHxD 200x300x120 mm) included) including an Axis Q741 video server, lever lockers, a switch mode power supply, an ethernet terminal point and coupling relays for external control. System with cable glands completely pre-wired. 1 set of documentation, consisting of circuit diagrams, equipment documentation and Axis parameterizing protocol.<br>ExCam® driver pre-installed and tested.<br>No options for audio connection.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000 |
| Connection Rail - S<br>T05-S-XX-011       | Optional accessory FOC (surcharge):<br>Same as model T05-S-XX-001 but with FOC media converter to connect to Ethernet FX.<br>Product group: B, tariff number: 8525 6000   |
| Connection Rail - S<br>T05-S-XX-101       | Optional accessory WLAN (surcharge):<br>Same as model T05-S-XX-001 but 380x300x155 mm (WxHxD). Furthermore, device contains one WLAN access point<br>Product group: B, tariff number: 8525 6000   |
| Connection Rail - S „I/O“<br>T05-S-XX-XXX | Optional „I/O“ surcharge per relay package (max. 1):<br>Four binary contacts as couple relay pre-wired.<br>The binary contacts can either be interconnected as digitale inputs or digitale outputs.<br>The „I/O“ package allows establishing a simple but effective communication with external devices or systems. For example, in case of a motion detection, the binary outputs allow connecting lights or security gates.<br>By the means of the binary inputs, it is possible to transmit external commands such as recordings to the video system.<br>DO: Maximum specific values: 250V / 6A<br>DI: Potential free contact<br>Product group: B, tariff number: 8525 6000  |
| Connection Rail - SA<br>T05-SA-DE-XX1     | Plug & Play connection and digitalisation unit for one ExCam®.<br>Same as model T05-S-XX-001 but 380x300x155 mm (WxHxD).<br>Furthermore, the device contains one DECT base station which antenna can be set up in explosion risk zones (q.v. DECT ExNF Interface)<br>Product group: B, tariff number: 8525 6000   |
| Connection Rail - SA<br>T05-SA-AM-XX1     | Plug & Play connection and digitalization unit for one ExCam®.<br>Same as model T05-S-XX-001 but (WxHxD) 380x300x155 mm.<br>Furthermore device contains one amplifier to connect on speaker in explosion risk zones, and one intrinsically safe separation stage to connect a room microphone in explosion risk zones.<br>Product group: B, tariff number: 8525 6000  |
| Connection Rail - SA (BTO)                | Build-to-Order version upon request   |



# Connection Rail - Q/QA

The ConnectionRail series converts video, audio and binary signals in Ethernet-network streams, making them available over long distances.

As part of the ConnectionRail series, ATEX certified equipment for use in hazardous areas, and non-ATEX equipment for industrial control environments are available. Interface diversity makes our ConnectionRails solve every digitalisation task. Cameras of renowned manufacturers can be controlled via RS232/RS422 or RS485 interface network-based.

**Connection Rail - Q**  
with stainless steel housing

| product / model                           | description   |
|---|---|
| Connection Rail - Q<br>T05-Q-00-001       | Plug & Play connection and digitalization unit for four ExCam®<br>Compact cabinet AE stainless steel 1.4301, for wall mounting (mounting plate (WxHxD 200x300x120 mm) included) including an Axis Q7404 video server, lever lockers, switch mode power supply and Ethernet terminal point. System with cable glands completely pre-wired.<br>1 set of documentation, consisting of circuit diagrams, equipment documentation and Axis parameterizing protocol. ExCam® driver pre-installed and tested. No options for audio connection.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000 |
| Connection Rail - Q<br>T05-Q-XX-X11       | Option accessory FOC (surcharge):<br>Same as model T05-Q-XX-001 but with FOC media converter to connect to Ethernet FX<br>Product group: B, tariff number: 8525 6000  |
| Connection Rail - Q<br>T05-Q-XX-101       | Option accessory WLAN (surcharge):<br>Same as model T05-Q-XX-001 but 380x300x155 mm (WxHxD).<br>Furthermore, device contains one WLAN access point.<br>Product group: B, tariff number: 8525 6000   |
| Connection Rail - Q „I/O“<br>T05-Q-XX-XXX | Option „I/O“ surcharge per relay package (max. 4):<br>Four binary contacts as couple relay pre-wired.<br>The binary contacts can either be interconnected as digitale inputs or digitale outputs. The „I/O“ package allows establishing a simple but effective communication with external devices or systems. For example, in case of a motion detection, the binary outputs allow connecting lights or security gates. By the means of the binary inputs, it is possible to transmit external commands, such as recordings, to the video system<br>DO: Maximum specific values: 250V / 6A<br>DI: Potential free contact<br>Product group: B, tariff number: 8525 6000       |
| Connection Rail - QA<br>T05-QA-DE-001     | Plug & Play connection and digitalization unit for four ExCam®.<br>Same as model T05-Q-XX-001 the device contains one DECT base station which antenna can be set up in explosion risk zones (q.v. DECT ExNF Interface).<br>Product group: B, tariff number: 8525 6000   |
| Connection Rail - QA<br>T05-QA-AM-001     | Plug & Play connection and digitalization unit for four ExCam®.<br>Same as model T05-Q-XX-001 but (WxHxD) 380x300x155 mm.<br>Furthermore, the device contains one amplifier to connect one speaker in explosion risk zones as well as one intrinsically safe separation stage to connect a room microphone in explosion risk zones.<br>Product group: B, tariff number: 8525 6000   |



# Connection Rack - Q/Q²

The **Connection Rack** series converts video, audio and I/O signals into ethernet network streams , making them available over long distances.

Interface diversity makes our ConnectionRails solve every digitalisation task. Cameras from renowned manufacturers can be controlled via RS232/RS422 or RS485 interface network-based.

## Connection Rack - Q²

im 4HE 19 inch rack

new!

| product / model                           | description   |
|---|---|
| Connection Rack - Q<br>T05-Q-00-001       | Plug & Play connection and digitalization unit for four analog systems<br>4HE 19 inch slot with one Axis Q7404 video server, lever lockers, switch mode power supply and Ethernet terminal point. System with cable glands completely pre-wired. 1 set of documentation, consisting of circuit diagrams, equipment documentation and Axis parameterizing protocol. ExCam® driver pre-installed and tested.<br>On the rear side, the slot is wired with terminal clamps.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000 |
| Connection Rack - Q²<br>T05-Q-00-001      | Plug & Play connection and digitalization unit for four ExCam®<br>4HE 19 inch slot with 2 Axis Q7404 video server, lever lockers, switch mode power supply and 2 Ethernet terminal points. System with cable glands completely pre-wired. 1 set of documentation, consisting of circuit diagrams, equipment documentation and Axis parameterizing protocol. ExCam® driver pre-installed and tested.<br>On the rear side, the slot is wired with terminal clamps.<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000        |
| Connection Rack - Q<br>T05-Q-XX-X11       | Option accessory FOC (surcharge):<br>Same as model T05-Q-XX-001 but with FOC media converter to connect to Ethernet FX.<br>Product group: B, tariff number: 8525 6000   |
| Connection Rack - Q „I/O“<br>T05-Q-XX-XXX | Option „I/O“ surcharge per relay package<br>(Connection Rack Q: Maximum 4; Connection Rack Q²: Maximum 8)<br>Four binary contacts as couple relay pre-wired.<br>The binary contacts can either be interconnected as digitale inputs or digitale outputs.<br>DO: Maximum specific values: 250V / 6A<br>DI: Potential free contact<br>Product group: B, tariff number: 8525 6000  |
| Connection Rack - Q<br>T05-Q-XX-101       | Optional accessory WLAN (surcharge):<br>Same as model T05-Q-XX-001 but with a WLAN access point<br>Product group: B, tariff number: 8525 6000   |
| Connection Rack - QA (BTO)                | Build-to-Order (BTO) versions upon request  |



# ExConnection Rail - Q/QA

The ConnectionRail series converts video, audio and binary signals in Ethernet-network streams and makes them available over long distances.

As part of the ConnectionRail series, ATEX certified equipment for use in hazardous areas and non-ATEX equipment for industrial control environments are available. Interface diversity makes our ConnectionRails solve every digitalization task. Cameras from renowned manufacturers can be controlled via RS232/RS422 or RS485 interface network-based.

**ExConnection Rail - Q**  
in Ex-d housing

| product / model                        | description  |
|--|--|
| ExConnection Rail - Q<br>T04-Q-00-001  | Explosion proof connection and digitalisation unit for four ExCam®<br>Explosion proof housing Ex-e for wall mounting includes double-sided mounting plate with Axis video server, lever lockers, switch mode power supply and Ethernet terminal point. System includes KLE completely prewired. 1 set of documentation, consisting of circuit diagrams, equipment documentation and Axis parameterizing protocol. ExCam® driver pre-installed and tested. No options for audio connection.<br>Ex II 2 G Ex de IIC T6<br>Ex II 2 D Ex td A21 IP66 T80°C<br>UN = 85-240 V AC<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000 |
| ExConnection Rail - Q<br>T04-XX-XX-011 | Optional accessory (surcharge):<br>Ethernet ST patch field, intrinsically safe fibre optics transmission range up to 2500 m.<br>Ex II 2 G Ex de [op is] IIC T6<br>Ex II 2 D Ex td A21 [op is] IP66 T80°C<br>UN = 85-240 V AC<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000   |
| ExConnection Rail - Q<br>T04-XX-XX-101 | Optional accessory (surcharge):<br>W-LAN Access Point allowing wireless transmission of video signals.<br>Ex II 2 G Ex de [op is] [ia] IIC T6<br>Ex II 2 D Ex td A21 [op is] [ia] IP66 T80°C<br>UN = 85-240 V AC<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000   |
| ExConnection Rail - QA<br>T04-Q-DE-001 | Option DECT (surcharge):<br>Video server with duplex audio channel. DECT ExNF Interface (DECT base station) and ATEX antenna.<br>Ex II 2 G Ex de [op is] [ia] IIC T6<br>Ex II 2 D Ex td A21 [op is] [ia] IP66 T80°C<br>UN = 85-240 V AC<br>See data sheet for more technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000   |
| ExConnection Rail - QA<br>T04-Q-AM-001 | Optional accessory amplifier (surcharge):<br>Video server with duplex audio channel. Amplifier to connect explosion proof speaker. Intrinsically safe separator to connect room microphones.<br>Ex II 2 G Ex de [op is] [ia] IIC T6<br>Ex II 2 D Ex td A21 [op is] [ia] IP66 T80°C<br>UN = 85-240 V AC<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000   |
| ExConnection Rail - Q (BTO)            | Build-to-Order (BTO) versions upon request   |



**ExConnection Rail - PoE**  
 in Ex-d housing

# ExConnection Rail - PoE

High performance PoE switches for explosion risk zones. The ExConnection Rail - PoE is particularly designed to connect our digital PoE cameras or other network participants.

The ExConnection Rail - PoE's centerpiece is a high performance GigE network switch with up to 8 GBit/s TX ports and up to 2 GBit/s FX ports. As an option, the FX ports can also be executed to reflect the ignition protection category [op is]. The ExConnection Rail - PoE allows the connection of up to 8 PoE (Class 2) cameras to. The connection of the GBit/s FX ports is possible over very large distances.


| product / model  | description  |
|--|--|
| ExConnection Rail - PoE<br>T04-PoE-8TX-0FX()           | High performance PoE Switch for explosion risk zones<br>Explosion proof housing with wall mounting.<br>Interfaces in explosion risk zone:<br>1 x supply on 3xUT6 glands: 48 V DC or 230 V DC<br>8 x TX Ports (+,+,+,-,Tx-,Tx+,Rx-,Rx+) 100Mbit/s on 32xUTTB2.5<br>0 x FX Ports ()<br>Ex II 2 G Ex de IIC T6<br>Ex II 2 D Ex td A21 IP66 T80°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000                                      |
| ExConnection Rail - PoE<br>T04-PoE-7TX-1FX(SFP-1GSXLC) | High performance PoE Switch for explosion risk zones<br>Explosion proof housing with wall mounting.<br>Interfaces in Ex-e housing:<br>1 x supply on 3xUT6 glands: 48 V DC or 230 V DC<br>7 x TX Ports (+,+,+,-,Tx-,Tx+,Rx-,Rx+) 100Mbit/s on 28xUTTB2.5<br>Interfaces in Ex-d housing:<br>1 x FX Ports (SFP-1 GSXLC)<br>Ex II 2 G Ex de IIC T6<br>Ex II 2 D Ex td A21 IP66 T80°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000   |
| ExConnection Rail - PoE<br>T04-PoE-6TX-2FX(SFP-1GSXLC) | High performance PoE Switch for explosion risk zones<br>Explosion proof housing with wall mounting.<br>Interfaces in Ex-e housing:<br>1 x supply on 3xUT6 glands: 48 V DC oder 230 V DC<br>6 x TX Ports (+,+,+,-,Tx-,Tx+,Rx-,Rx+) 100Mbit/s on 24xUTTB2.5<br>Interfaces in Ex-d housing:<br>2 x FX Ports (SFP-1 GSXLC)<br>Ex II 2 G Ex de IIC T6<br>Ex II 2 D Ex td A21 IP66 T80°C<br>See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a><br>Product group: B, tariff number: 8525 6000 |
| ExConnection Rail - PoE (BTO)                          | It is possible to execute our FOC interfaces in ignition protection category [op is], or alternatively for very long distances, as „Single Mode“ FOC.<br>As an option, also a WLAN Access Point can be integrated in the ExConenction Rail - PoE. The Ethernet TX interfaces can be adapted concerning the PoE class as well as concerning the bandwidth.<br>Do not hesitate to ask for additional ExConnectionRail - PoE versions!  |

# Display & Control (HMI)


Many times, displays, control panels and computers reflect customer specific requirements and wishes. This in turn leads to the necessity to design so called Build-to-Order (BTO) versions.

Hence, the components below only show a small variety of commonly used equipment and merely serve to give an idea on the different implementation possibilities in this area. Please do not hesitate to contact us if you have specific requirements - we are more than happy to advise you on additional possibilities or to detail a concept that suits your needs and requirements best.


## VISCA controlboards

| product / model  | description  |
|--|--|
| T03 Control Board<br>VCB-XX<br> | Control your ExCam® without a PC by using the T03 Control Board. Board functions: Zoom, focus, Iris day/night to control one camera.<br><br>VCB-01 = For one camera<br>VCB-02 = For two cameras (surcharge 50€)<br>VCB-03 = For three cameras (surcharge 100€)<br>VCB-04 = For four cameras (surcharge 150€)<br>Product group: C |

## Analog displays

| product / model  | description  |
|--|--|
| 19" color monitor<br>VMC-19LCD-OPC1<br> | Professional 19" LCD/TFT Display<br>Automatic PAL/NTSC-switch, multilingual, 2D comb filter<br>Resolution: 1280x1024 pixels (SXGA) 2xFBAS, S-Video, RGB and audio-input, high contrast and high luminosity range, fast signal-switching, fast response time, sturdy, compact plastic housing, integrated stand<br>(More displays upon request)<br>Product group: C |

## (Ex) PC Systeme

| product / model  | description  |
|--|--|
| Terra PC<br>Industry 5000<br> | Optimized for continuous duty (24/7/365). Equipped with special hardware, specifically designed for permanent usage. Units minimize costly downtime<br>Intel® Core™ i3-2120 Dual-Core<br>3.30 GHz, 3 MB L3, HTT, EIST, EM64T, VT<br>Original Windows® 7 Professional 64-Bit<br>Includes pre-installed Windows XP-Mode<br>2x 2048 MB DDR3-RAM PC1333<br>500 GB SATA II 7.200 rpm<br>DVD±RW burner<br>Product group: C |
|  | Further HMI components upon request  |





# SAMCON<sup>®</sup>trol

**SAMCON<sup>®</sup>trol** is a browser based video management system which provides a common surface in order to configure, administer, and operate cameras.

**SAMCON<sup>®</sup>trol** does not require a video client which means that each browser allowing Adobe® Flash can be used as a video client. The reproduction module is designed in an operator friendly way and offers various modes in order to play, search, and display video recordings. Within the play list or history, it is possible to switch between different videos. It is not only possible to display all pictures of the connected cameras in real time but also to control them (PTZ).

Standard monitoring functions such as video sequencing and the display of different split screen modes are feasible. It supports the plant's operating personnel since the cameras can be integrated into and displayed on a map, a flow chart or a floor plan. The map view (road map or topographic map) allows a top view in aerial perspective which is particularly suitable for facilities which are widely spread. Floor plans, on the other hand, allow an easy and quick access of cameras that are positioned on various levels or places of a facility. As a result, operators in a control center do not have to memorize camera names anymore in order to find the correct ones. Instead, they can comfortably navigate via the floor plan. Due to the high level of personalization, it is even possible for every operator to set his or her own priorities and to adapt the system to reflect their highest degree of control effectiveness.

| product / model                            | description   |
|--|---|
| SAMCON <sup>®</sup> trol 2.3<br>4Sources   | Browser-based video-management-system<br>MJPEG and H.264 Support up to FullHD.<br>SAMCON <sup>®</sup> trol Server& Source Configurator for up to 4 sources.<br>SAMCON <sup>®</sup> trol FullHD Viewscriptbox including: <ul style="list-style-type: none"> <li>- Fieldview editor</li> <li>- Controlview editor with MAP, ARCHIV, OVERVIEW, LIST and THUMB View Templates</li> <li>- Wall editor mit NxN and RING Templates</li> <li>- Operator Web archive</li> </ul> Product group: A             |
| SAMCON <sup>®</sup> trol 2.3<br>10Sources  | Browser-based video-management-system<br>MJPEG and H.264 Support up to FullHD.<br>SAMCON <sup>®</sup> trol Server& Source Configurator for up to 10 sources.<br>SAMCON <sup>®</sup> trol FullHD Viewscriptbox including: <ul style="list-style-type: none"> <li>- Fieldview editor</li> <li>- Controlview editor with MAP, ARCHIV, OVERVIEW, LIST and THUMB View Templates</li> <li>- Wall editor mit NxN and RING Templates</li> <li>- Operator Web archive</li> </ul> Product group: A            |
| SAMCON <sup>®</sup> trol 2.3<br>Enterprise | Browser-based video-management-system<br>MJPEG and H.264 Support up to FullHD.<br>SAMCON <sup>®</sup> trol Server& Source Configurator for unlimited number of sources.<br>SAMCON <sup>®</sup> trol FullHD Viewscriptbox including: <ul style="list-style-type: none"> <li>- Fieldview editor</li> <li>- Controlview editor with MAP, ARCHIV, OVERVIEW, LIST and THUMB View Templates</li> <li>- Wall editor mit NxN and RING Templates</li> <li>- Operator Web archive</li> </ul> Product group: A |







Schillerstrasse 5a, D-35102 Lohra-Altenvers  
[www.samcon.eu](http://www.samcon.eu), [info@samcon.eu](mailto:info@samcon.eu)  
fon: +49 6426 9231-0, fax: -31