# Cameras HD-SDI

## Product description and HD-SDI technology

These cameras are based on the HD-SDI (High Definition Serial Digital Interface) that allows you to carry CCTV systems in Full HD resolution. The cameras are very similar

to cameras traditional analog in how much also I'm installed with a harness of RG59 coaxial cable (BNC connectors, standard nominal impedance 75 ohms).

However, these cameras can not be connected to a DVR for analog cameras, or the AV input of a TV / monitor because the signal transmitted is not a PAL video. The HD-SDI signal is able to reproduce the video resolution Full HD 1080i at 1920x1080 pixels and allows to realize a high-resolution system while retaining the structural characteristics of a traditional analog system.

The HD-SDI standard is capable of transmitting video signals up to a distance of 100 meters with RG59 coaxial cable. To increase the signal distance you can install repeaters.

The image quality is more than 5 times higher than analog cameras and the image is transmitted without compression, without loss of data, full-frame-rate 25 f / sec and no latency during viewing.

The absence of latency, that is, between video and real action delay is a significant advantage of SDI technology over IP systems.

The HD-SDI technology offers the advantages of a simple system traditional analog combining to High Definition features of the IP systems.

## Viewing HD-SDI images

The Full HD image of these cameras you get with HD-SDI video recorders DSE that provide VGA video outputs for PC and HDMI monitor for Full HD TV. The correct monitor to match these DVR is not the traditional 4: 3 analog CCTV but the 16: 9 wide screen now widely used in both the PC monitor industry and in commercial TV.

## mounting

Most of the cameras is equipped with an integrated bracket for wall mounting, specially designed to allow the passage of cables inside it and protect them from tampering. The cameras are mounted

in gender in matching output cables in so do not leave exposed wires. The basis of fixing has However, also of cable exit slot side where the cables come laterally outer raceway. The box model RS-room TCC5 is provided without bracket, if necessary wall mounting is possible to purchase the bracket RE-ST1L separately. The spherical models (dome type) are fastened directly to the ceiling or wall. In the RS-DCC5 model it is also possible to remove the bracket and secure the camera directly to a ceiling.

## impermeability

The DSE HD-SDI cameras with the exception of RS- TCC5 / DCC5 models are watertight and can be installed outdoors in the rain without protection. The RS-DCC5 cameras and RS-TCC5 are to be installed indoors and protect them from exposure to rain. If required, the external mounting, the TS-TCC5 camera can equip RE-C3 protective custody.

## Connections

○ **BNC video output** - The cameras of the RS series

They have 2 female BNC connectors that provide SDI video and analog PAL. If not indicated otherwise the outputs are distinguished by the color green (HD-SDI), and yellow (PAL).

The green BNC connector is the SDI output in FullHD and connects to HD-SDI management devices via coaxial cable type RG59 or higher, and BNC connectors. The yellow BNC connector instead provides a standard PAL composite analog signal resolution. It is only present for

can connect a portable monitor and render easy there regulation lens.

When wiring an HD-SDI camera must consider that the SDI video signal is much more delicate than a PAL signal. You must use good quality RG59 cables as our CV-RG59 and do not exceed the 100 m cabling distance. To overcome this distance you should use the SDI signal repeaters. You can not use minicoassiali cables (like our CV-RG179), or twisted cables.

○ **Jack DC12V** - We must connect a 12VDC power supply stabilized by at least 1000 mA, such as RE-AL4S model (not included). The requested plug is the standard 5.5 mm. Attention to use STABILIZED feeders that provide 12V in any load condition. The use of a different supply voltage from 12VDC can generate video disorders and in the worst cases damage the camera. Attention to extension cables power too long or small section, which could introduce an excessive fall of species voltage at power IR illuminator. If you prefer to conduct power along with the video cable, you can use a centralized power supply, like RE-AL10 and the combined cable CV-RG59 + 4. The video cable must not pass along with AC power cables.

○ **Adjust zoom / focus** - The cameras

RS series equipped with varifocal lens have adjustable lens from 2.8 to 12 mm and it is therefore possible to adjust the angle of view according to their own needs. There are external screws that allow to adjust the lens focal length and the focus without having to open

Wrap camera. The octagonal key is included in the package. initially act on the screw and adjust ZOOM

the width of the frame (Wide angle / zoom) based on the area to be framed.

Remember that in most wide angle corresponds inevitably less image detail. Once you defined the field of view act on the FOCUS screw to focus perfectly framed area. Remember that each lens has its own depth of field so it can focus so

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perfect only a portion of the space in front of the camera. Concentrate on the most important area to adjust the focus optimally. The fixed lens models do not require any adjustment of the lens.

**CAUTION:** The commissioning fire screws have a limit block which avoids

to the escape of ferrules

drive them from their seat.

It 'absolutely necessary not to force with the key provided beyond the end so as not to damage it.

The only RS-TCC5 model comes without lens and can be combined with any of the megapixel lenses

DSE to CS mount.

## IR Illuminator

Cameras with integrated IR to                                    their inside a infrared illuminator that emanates illumination invisible to the human eye, but visible to the camera. The illuminator turns itself on when it gets dark and the camera switches alone in night vision mode.

The illuminator ignition allows the vision in B / N in absolute darkness until its scope lighting The IR illuminators are not present in the RS-TCC5 model which, however, is compatible with external IR illuminators as our RE-IR80C or RE-IR130C .

## Programming Menu OSD

The cameras of the HD-SDI standard RS series have the possibility to configure various display options through an on-screen menu (OSD). To control the on-screen menu is acting on the mini joystick placed along the camera cable. The OSD programming options are explained in the documentation separately.

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Cameras HD-SDI Full HD

| TECHNICAL DATA | RS-BCC2 | RS-BCC5 | RS-BCC6 | RS-DCC5H | RS-DCC5 | RS-TCC5 |
|---|---|---|---|---|---|---|
| Camera Type | HD SDI | HD SDI | HD SDI | HD SDI | HD SDI | HD SDI |
| Colors / White black | color function day night | color function day night | color function day night | color day function night | color day function night | color function day night |
| video standards | SDI | SDI | SDI | SDI | SDI | SDI |
| Type of sensor | C-MOS Sony Exmor | C-MOS Sony Exmor | C-MOS Sony Exmor | C-MOS Sony Exmor | C-MOS Sony Exmor | C-MOS Sony Exmor |
| Sensor Size | 1/3 " | 1/3 " | 1/3 " | 1/3 " | 1/3 " | 1/3 " |
| video Output main HD-SDI | HD-SDI BNC connector female | HD-SDI BNC connector female | HD-SDI BNC connector female | HD-SDI BNC connector female | HD-SDI BNC connector female | HD-SDI BNC connector female |
| auxiliary video output PAL | Composite video 1V pp 75 Ohm BNC connector female | Composite video 1V pp 75 Ohm BNC connector female | Composite video 1V pp 75 Ohm BNC connector female | 1V pp composite video 75 Ohm BNC connector female | 1V pp composite video 75 Ohm BNC connector female | Composite video 1V pp 75 Ohm BNC connector female |
| HD-SDI Video Resolution | Full HD 1080p 1920x1080 pixels | Full HD 1080p 1920x1080 pixels | Full HD 1080p 1920x1080 pixels | 1080p Full HD 1920x1080 pixels | 1080p Full HD 1920x1080 pixels | Full HD 1080p 1920x1080 pixels |
| Frame rate HD-SDI | 25 f / sec | 25 f / sec | 25 f / sec | 25 f / sec | 25 f / sec | 25 f / sec |
| Minima lighting required for recovery | 0 Lux (illuminator active IR) 0.01 Lux (IR illuminator turned off) | 0 Lux (illuminator active IR) 0.01 Lux (IR illuminator turned off) | 0 Lux (illuminator active IR) 0.01 Lux (IR illuminator turned off) | 0 Lux (IR illuminator active) 0.01 Lux (IR illuminator turned off) | 0 Lux (IR illuminator active) 0.01 Lux (IR illuminator turned off) | 0.01 Lux |
| Relationship Signal / Noise (S / N ratio) | Over 50 dB | Over 50 dB | Over 50 dB | Over 50 dB | Over 50 dB | Over 50 dB |
| Screen Programming (OSD) | Yes (mini joystick along the cable) | Yes (mini joystick along the cable) | Yes (mini joystick along the cable) | Yes (mini joystick along the cable) | Yes (mini joystick along the cable) | Yes (mini joystick along the cable) |
| Gain Control automatic (AGC) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) |
| Auto white balance (AWB) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) |
| Automatic electronic shutter | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) |
| Compensation against the light (BLC) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) | Yes (programmable) |
| Glare | Yes | Yes | Yes | Yes | Yes | Yes |
| Function Day / Night (color day / night bn) | Yes (adjustable thresholds) | Yes (adjustable thresholds) | Yes (adjustable thresholds) | Yes (adjustable thresholds) | Yes (adjustable thresholds) | Yes (adjustable thresholds) |
| infrared lighting compatible | 850 nm | 850 nm | 850 nm | 850 nm | 850 nm | 850 nm |
| integrated LED | It - 36 LED capacity 30 m. | It - 42 LED capacity 40 m. | It - 72 LED capacity 60 m. | - 36 LEDs reach 30 m. | It - 30 LED range 25 m. | No |
| 3D-DNR (Digital noise reduction) | Yes | Yes | Yes | Yes | Yes | Yes |
| built-in microphone | - | - | - | - | - | - |

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|---|---|---|---|---|---|---|
| the camera power supply | DC 12V | DC 12V | DC 12V | DC 12V | DC 12V | DC 12V |
| Power consumption | 400 mA | 400 mA | 600 mA | 400 mA | 300 mA | 200 mA |
| Power supply 230VAC / 12VDC included | No | No | No | No | No | No |
| Support bracket included | Yes | Yes | Yes | Yes | Yes | No |
| Target | focal incorporated fixed 3.6 mm | Built-in varifocal 2.8 ... 12 mm | Built-in varifocal 2.8 ... 12 mm | Built-in variable focal 2.8 ... 12 mm | Built-in variable focal 2.8 ... 12 mm | - |
| compatible lenses | - | - | - | - | - | Mount CS |
| Digital Slow Shutter (DSS) for low brightness | Yes | Yes | Yes | Yes | Yes | Yes |
| ICR function (removable IR cut filter) | Yes | Yes | Yes | Yes | Yes | Yes |
| MIRROR function for image reversal | Yes | Yes | Yes | Yes | Yes | Yes |
| Overlay camera name | Yes | Yes | Yes | Yes | Yes | Yes |
| MASK function for privacy protection | Yes | Yes | Yes | Yes | Yes | Yes |
| Motion detection Yes (signaling | video) | Yes (signaling video) | Yes (signaling video) | Yes (signaling video) | Yes (signaling video) | Yes (signaling video) |
| tin container | IP67 | IP67 | IP67 | IP67 | IP40 | IP40 |
| Operating temperature | - 10 ° ... + 50 ° C | - 10 ° ... + 50 ° C | - 10 ° ... + 50 ° C | - 10 ° ... + 50 ° C | - 10 ° ... + 50 ° C | - 10 ° ... + 50 ° C |
| External dimensions (mm.) | 177 (L) x76 (H) x74 (P) | 220 (L) x80 (H) x80 (P) | 260 (L) x98 (H) x95 (P) | 131 (Dia.) X93 (H | 135 (D) x110 ( H) | 110 (L) x45 (H) x55 (P) |
| Weight | 700 gr. | 1400 gr. | 1700 g. | 800 gr. | 2000 g. | 400 gr |