

PONTIS
EMC PRODUCTS



EMC Hardened Audio and Video System



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During EMC testing it is important to monitor the device under test (DUT) without interfering with the measurement during emission tests. On the other hand, the monitoring system has to withstand the high field strengths during immunity testing.

Field Proven Quality MADE IN GERMANY

Since 1995 PONTIS has been producing EMC hardened devices "Made In Germany". Our Audio and Video systems are installed in test sites all over the world. The extremely low defect rate is the result of a consequent quality management and intensive testing.

State of the Art Technology

EMC shielded housing, specially filtered power supply and signal transmission via fibre optics are common to all our products. For that reason the emission is below the standard limits and the immunity is above the usual requirements (up to 200V/m CISPR 22 Class B and higher).

Only the highest quality components find the way into our products. Thus we can ensure that the mechanical and even more the optical features of our camera systems are outstanding.

The Right Solution for Every Test Set-Up

Our wide variety of different products offers a suitable solution for every test set-up from small pre compliance EMC chambers to huge military or automotive test sites.

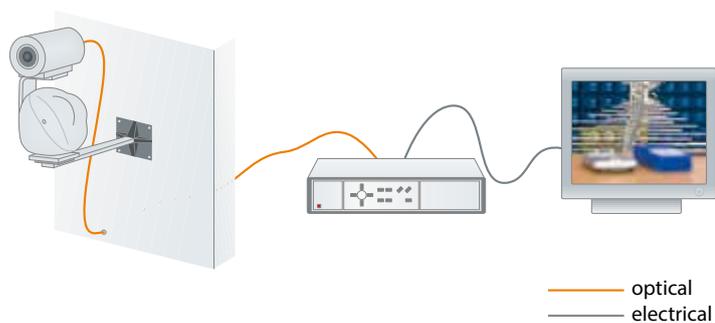
We offer cameras from a small manual version to special versions with zoom lenses up to 36times optical zoom and a focus which allows you to view objects the size of a matchbox from as far as 30m.

Our systems work in international environments and standards: PAL, NTSC, HD-SDI, 110 V, 230 V, 50/60 Hz, RF Immunity (ISO 11452) 200 V/m to 18Ghz (40GHz available), CISPR25 Class B, HIRF (RTCA DO 160 G – up to 3,000 V/m / RTCA DO 160 Q – 1,000 V/m up to 18GHz).



Standard Application EMC Chamber: Remotely Controlled Camera System

For the use in a larger chamber, where a lens cannot capture the whole room, it is required that the zoom and focus of the camera can be adjusted from the control room. If the antenna and the DUT have to be monitored, a pan and tilt unit is very useful. The camera as well as the pan/tilt unit are connected to a controller, from which the user can manipulate the devices very easily. The monitor is also connected to the controller.

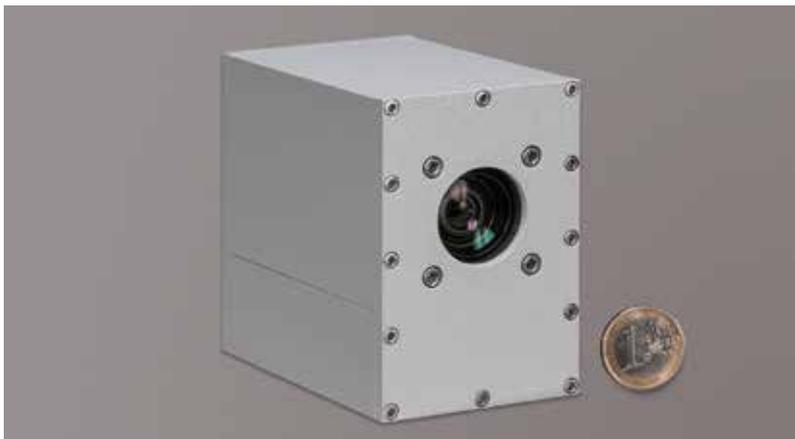
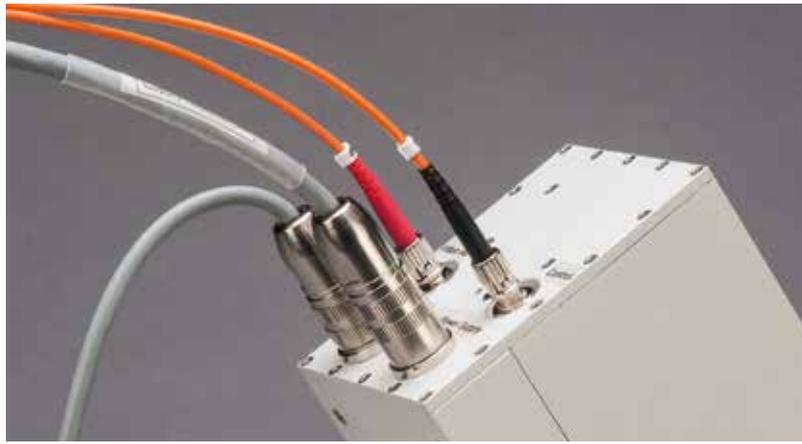


High Definition Video (HD 1080 p)

Modern mobile devices and also PCs and TVs use displays with very high resolution. In this case the analogue video may not offer enough resolution. The latest series camera offers a HD video uncompressed format (HD-

SDI) with resolutions up to $1920 * 1080$ pixels. In order to control and handle these massive data streams the HD Cameras need to be connected to HD-Controllers.

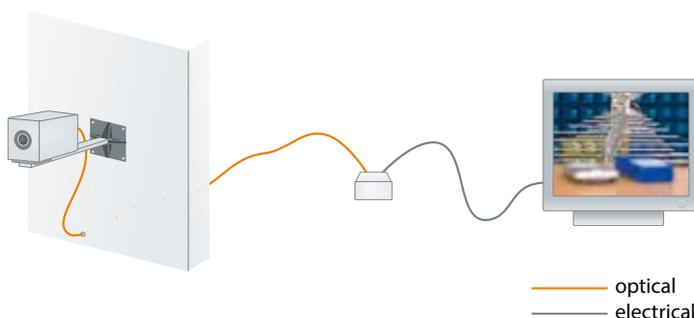
For application with difficult light conditions (e.g. displays in cars) the HDCam7 offers additional control functions for Iris control and long exposure.



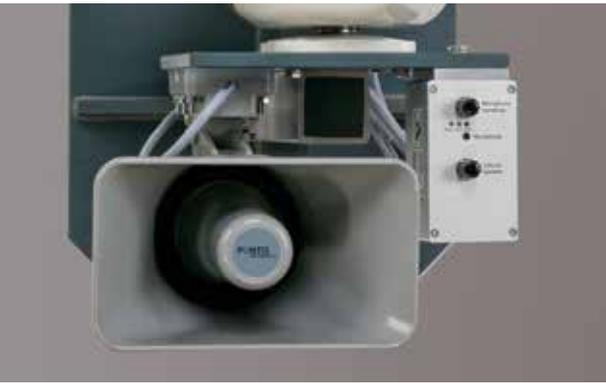
Small Chamber and Mobile Applications: CAM5

The CAM5 is our smallest EMC Camera. It has full remote control and manual control capability. The special keys on the back of the camera allow it to also function without a remote controller unit if an economic solution is needed.

It is an ideal solution for mobile applications, small compact chambers and when the equipment under test (EUT) needs to be watched very closely (e.g. aerospace, telecoms, automotive).



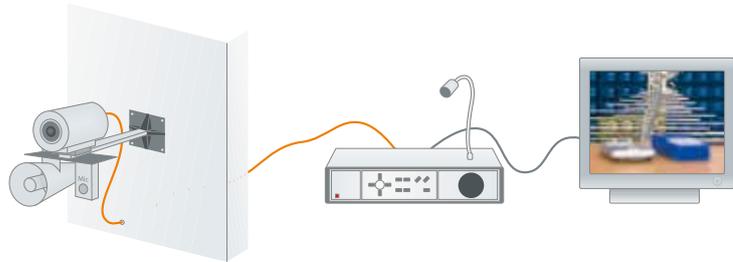
Acoustic Surveillance and Intercom System



In many cases it is necessary that noise or acoustic signals issued by the DUT need to be monitored. For that purpose we offer an EMC hardened audio system, which connects a microphone and a speaker in the chamber with a microphone and a speaker in the control room. An automatic gain adjust and automatic switching between listener and talker make the communication smooth and easy. This system can be integrated in the video system or used separately. All signals are transmitted via fibre optics.

For detailed acoustic surveillance we offer a digital version with a calibrated transmission line, which can be used to measure the actual sound level in the chamber.

A multi point intercom system with fixed and portable units is also available.



Multi Controllers

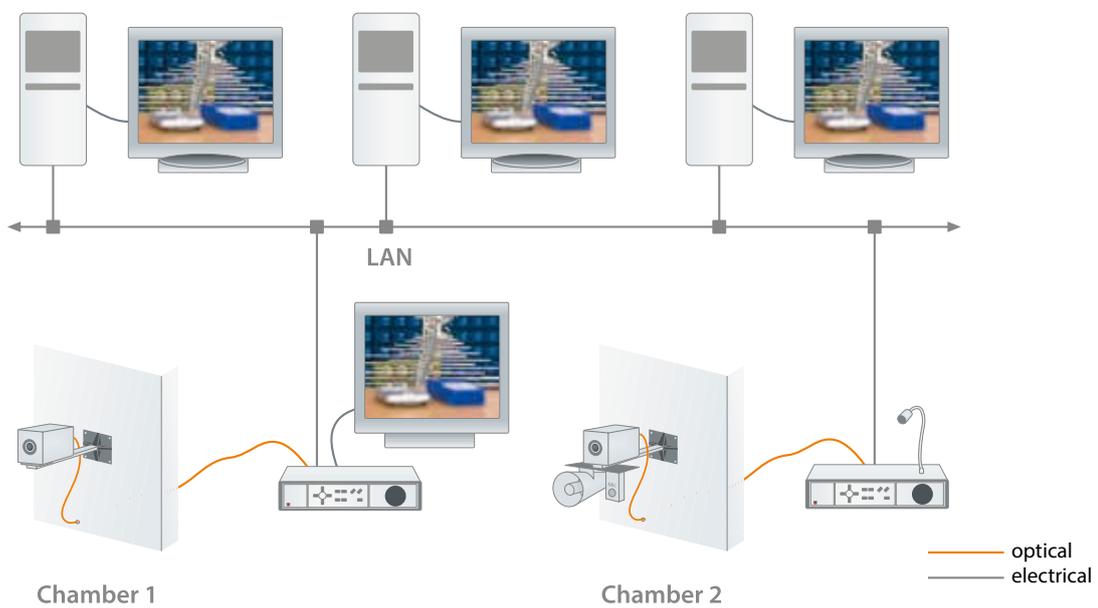
In larger test sites it is often required that more than one camera and/or intercom systems are controlled from one workplace. We offer controllers to drive up to 4 cameras and/or audio interfaces. Special versions are available on request.



Networking and Documentation: LAN Camera Controller

If the cameras have to be accessed from different workplaces, we offer a camera system that is integrated into the office network (LAN). The signals coming from the chamber are converted to an IP conform format by a network video controller. The picture of the camera system can be viewed on every PC in the network. This allows the user not only to see the picture, but he can easily store pictures for the documentation on the PC.

The HD controller series offers extended features for storing videos on internal hard disk (DVR) or for motion detection within specified areas (ROI) as well as the possibility to communicate with external SW (e.g. Emission or Immunity test SW) and store snapshots triggered by the external SW. These features are very convenient for immunity testing.



Fibre Optic Converters

In complex testing environments it is often needed that electrical signals have to be transmitted into the chamber or out of the chamber to the test equipment. For that purpose we offer a variety of different devices that convert electrical signals into optical signals and back. Such the signal can be transported via fibre optics and is immune against electrical fields. Among others we offer interfaces for digital and analogue signals, Ethernet, USB, CAN and video.



Overview of Products

Video Cameras

Cam5xx	Miniature SD FBAS video camera with manual and remote zoom (200V/m)
Cam8	Remotely controlled video camera (up to 36 resp. 40 x zoom, 200V/m up to 18GHz, automatic/remote aperture) Extended version 200V/m up to 40GHz
HDCamxx	HD (1080p) video camera with HD-SDI interface (optical zoom up to 18 times)

Note: All cameras are available for PAL and NTSC, where applicable

Controllers for Audio and Video

Con3xx_AUD only	for audio intercoms only, for up to 6 audio channels
Conxx	for SD FBAS video cameras, for up to 4 channels
HDConxx	for HD (1080p) video cameras for up to 4 channels

Special Options/Accessoires

FBASCNV	Cam5 FBAS video converter only, manual zoom, 1 channel
_AUD	Audio intercoms integration into video controller, 1 channel
_LAN-Pecos_DVR	LAN integration into video controller, for 3 resp. 4 channels. The PONTIS own HW/SW solution LAN-Pecos includes a PC, a HDD and Digital video recording function
_ICT	Iris control function integration into video controller
HRAadapt	Head Restraint Adaptor to mount video camera e.g inside cars
HeadSet	for fix or portable audio intercom units, for up to 7 channels

Fibre Optic Converters (foConverter)

Shielded Ethernet (100/1000 MBit/s) foEthernet	Shielded Video foHDMI
Shielded USB interface	Shielded CAN
Shielded LISN	Others converters on request

PONTIS EMC Products designed and manufactured by:

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