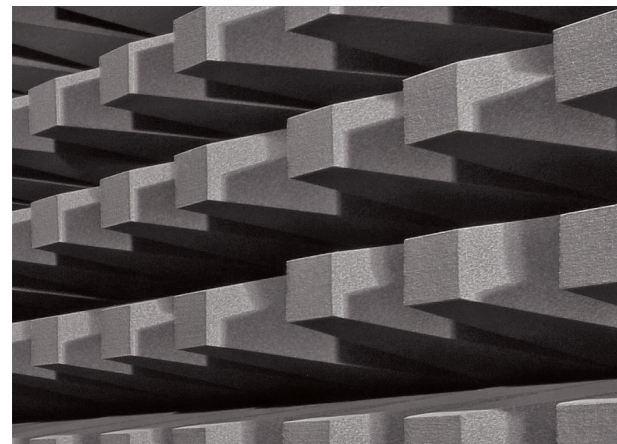


PONTIS
EMC PRODUCTS
A BRAND OF AUDIOVO



EMC Hardened Audio and Video System

www.pontis-emc.com



EMC Hardened Audio and Video System

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 we have been producing EMC hardened devices "Made in Germany". More than 2000 PONTIS EMC cameras have been installed in test sites all over the world. EMC chamber suppliers and existing customers trust in our solutions. The extremely low defect rate is the result of a consistent quality management system 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 emissions are below the standard limits and the immunity above the usual requirements (up to 200V/m CISPR 22 Class B and higher).

Only the highest quality components are used in 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 40 times optical zoom and a focus which allows you to view objects the size of a matchbox from as far as 30 m.

We also offer intercom system, shielded IR thermo cameras, (N)EMP systems, fibre optic converters and any customized solution you need.

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 18 GHz (40 GHz 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 18 GHz. up to -20 dB.

Local Support

We offer local sales and technical support via our distribution partners. They can be contacted directly:



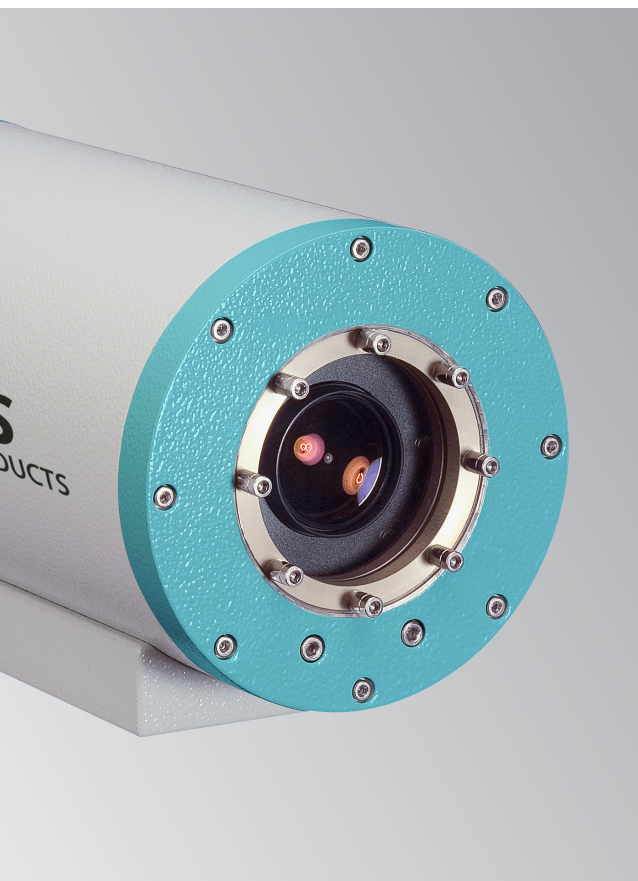
www.hvtechnologies.com



www.toyo.co.jp



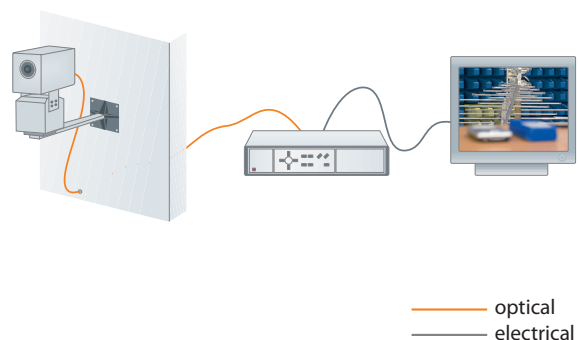
zongkui.shao@pontis-emc.com



Standard Application EMC Chamber: Remotely Controlled Camera System

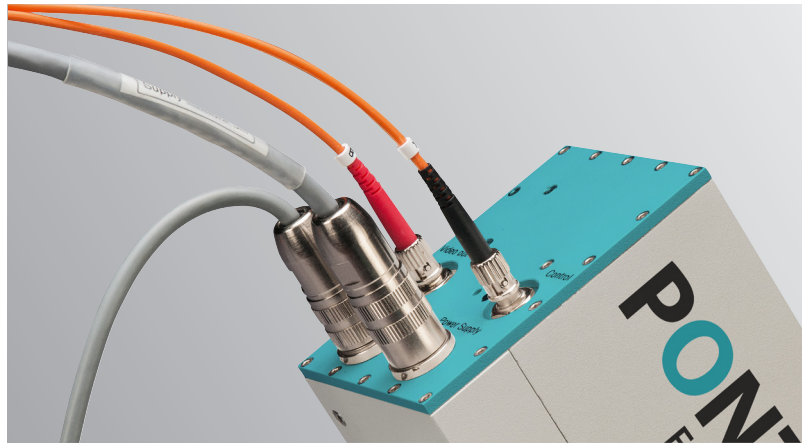
For the use in a larger chamber, where a lens cannot capture the whole room, it is required that the zoom and focus of the camera can be adjusted from the control room. If the antenna and the DUT have to be monitored, a pan and tilt unit is very useful. The camera as well as the pan/tilt unit are connected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

For application with difficult light conditions (e.g. displays in cars) our cameras offer additional control functions for Iris control (ICT), wide dynamic range (WDR) and long time exposure (LTE).



High Definition Video (HD 1080 p)

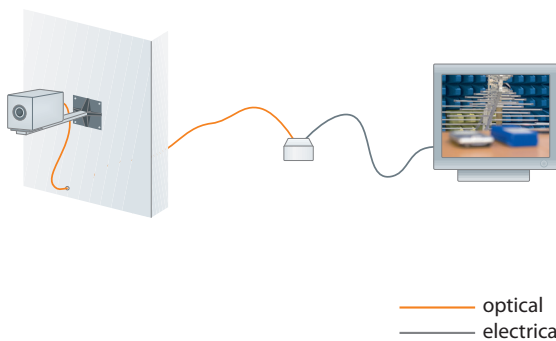
Modern mobile devices and also PCs and TVs use displays with very high resolution. In this case the analogue video may not offer enough resolution. The latest series camera offers a HD video uncompressed format (HD-SDI) with resolutions up to 1920 * 1080 pixels from sensor to display. In order to control and handle these massive data streams the HD Cameras need to be connected to HD-Controllers.

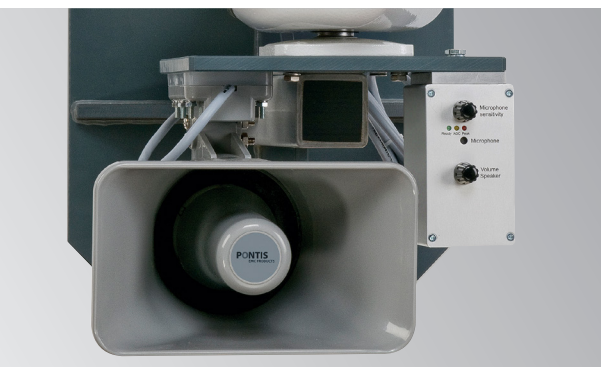


Small Chamber, GTEM cell and Mobile Applications: CAM5

The CAM5 is our small size 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, GTEM cells, pre compliance, small compact chambers and when the equipment under test (EUT) needs to be watched very closely (e.g. aerospace, telecoms, automotive).





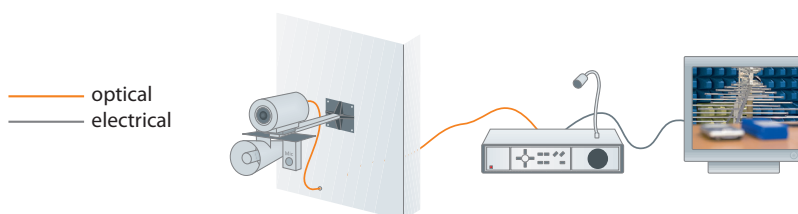
Acoustic Surveillance and Intercom System

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 system are controlled from one workplace. We offer controllers to drive up to 4 cameras and/or audio interfaces. To meet the various demands we offer three types of controllers: basic economic, regular / modular which can be extended by options and high demand by Audio's own "built in" seamless HW-SW solution Pecos.



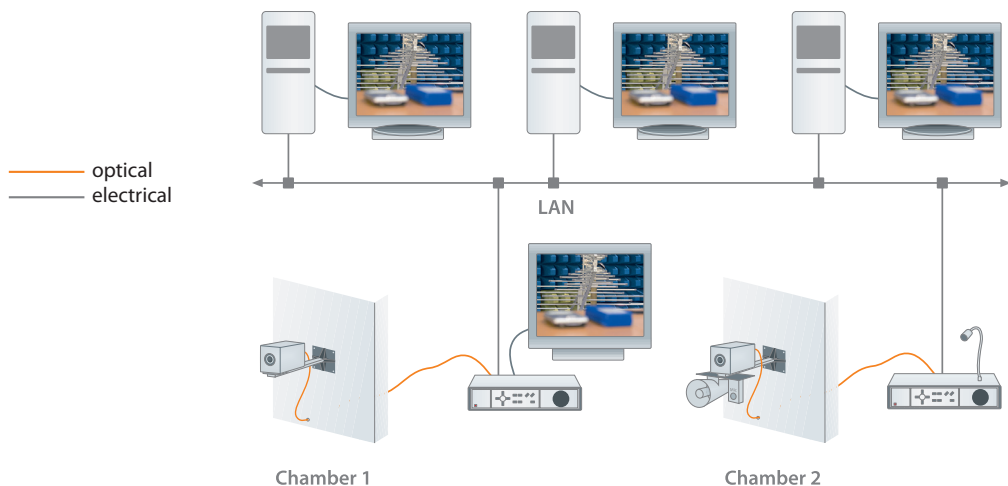
Networking, Documentation and EMC Test SW

If the cameras have to be accessed from different workplaces and/ or if the video streams of the cameras need to be recorded, LAN and DVR/NVR (digital video recording resp. network video recording) and storage is needed. Sometimes an interface to EMC Test SW is needed.

- Modular Solution: External devices like DVR/NVR, LAN, HDD, PC (also devices with several functions) can be connected to our regular controllers Con4 (FBAS) and HDCon4 (Full HD).
- Integrated-Pecos Solution: For high end demands we integrated "LAN-Pecos_DVR_ICT" inside our controllers.

Pecos, a seamless user interface solution, provides Audivo's own HW+SW that is integrated inside the controller: HDD, PC, LAN, DVR with customised event detection, proactive recording and administration of files, as well as ICT/WDR/LTE for difficult light conditions. The cameras can be controlled via frontpanel and/or also via LAN (Pecos SW Tool). Multiple Monitors can be connected to cameras directly and in parallel, also to the integrated PC board (split screen)

Pecos also provides a bidirectional interface to EMC Test SW. With corresponding drivers such data can be shown on screen and recorded as video overlay. Pecos data can be sent back to Test SW to initiate reaction (e.g stop a test).



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 transmission lines 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 shielded interfaces for CAN, LIN, HDMI, USB, RS232 or Ethernet.

Overview of Products

Video Cameras (200 V/m)

Cam5x	Miniature SD FBAS video camera with manual and remote zoom (-10 dB, 600 V/m stripline)
HDCam6x	HD video camera with HD-SDI interface (30 x zoom, full HD from sensor to display)
HDCam7x	HD video camera with HD-SDI interface (30 x zoom, full HD from sensor to display, -20 dB) integrated audio transmission
IPCAM7	HD video (1080p) with LAN/IP interface

Controllers for Audio and Video

Modular – ECO

Con4eco	Economic for basic demand: HD-SDI (1080p), 1 or 2 cameras Options: AUD: Audio intercom NVR: external network video recorder JS: Joystick for easy control and special functions (e.g. iris control, frame rate)
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Integrated – LAN

Con6x LAN-Pecos	HD-SDI (1080p), 1 to 4 cameras, PONTIS own HW-SW solution fully integrated in controller with Linux PC inside. Pecos-SW for local and remote control, recording and replay (DVR function) Options: AUD: audio intercom SW-IF: Interface to EMC test software (e.g. EMC32, Toyo and others) SW-Event: Special SW for automated immunity testing (event detection)
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Special Applications

Uni- or bi-directional audio intercom. Multipoint solution available
HeadSet for fixed or portable audio intercom units, for up to 7 channels
Head Restraint Adaptor to mount video camera e.g. inside vehicles

NEMP Camera

Specially shielded camera to withstand extremely high field strength e.g. NEMP, lightning.

IR Thermo Camera

Shielded IR thermo camera to monitor the heat of EUT or chamber.

Fibre Optic Converters (Shielded foConverter)

foEthernet/LAN	foUSB2.0	foRS232	foCAN
foLIN	foHDMI 1.2	foCharge	foRS485

More converters on www.pontis-emc.com

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