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# CASE STUDY

## AV Technology for Boardrooms

### ► left

An outside view of the boardroom.

### ► right

A view of the finished work desk with microphones in place and monitors hidden in their slots.



### ABOUT THE CUSTOMER

The Polish Power Grid Company (Polskie Sieci Elektroenergetyczne SA) is Poland's largest energy company. Its major areas of activity are energy generation asset management and local and international energy trade. PSESA owns power lines and stations and its distribution grid is used both by PSESA and other transmission system operators.



### THE REQUIREMENT

Supply audiovisual equipment for a new headquarters boardroom and lobby, including full HD projection, audio, video conference, and an integrated control system as well as a link to the auditorium.



### THE CHALLENGE

Only restricted space was available for equipment installation. Technology was to be used but not seen with tight systems integration and an invisible system when not in use. With non-expert users, system automation was mandatory.



### THE SOLUTION

A special table was designed with built-in Kramer switching equipment to allow easier connection for all participants plus shorter cable runs from the PCs to the matrix switcher. A small equipment rack was also built and co-located in the boardroom to give a clean looking installation that doesn't show any equipment unless in use.



### THE PROJECT DETAILS

The boardroom was equipped with various audio and video sources; a sound system, video conference system, integrated control system, a 60" plasma screen, and 16 individual LCD monitors, one for every seat.

The table has a specially designed metal structure with built-in switcher, matrix, scaler and distribution system (VP-321, VS-4X4CXL, VP-719XL, VP-12N) that allows every participant to connect to the AV system. The audio output is routed to an amplifier located in the small custom built equipment rack.

The rack is equipped with a VS-4x4CXL matrix switcher that enables cross-switching of RGBHV, Y/C, video, and audio signals for distribution to all monitors.

The system transfers AV signals to other locations such as the auditorium, lobby, reception desk, and reception area.



### CUSTOMER BENEFITS

The installed system fulfils all of the customer's requirements delivering seamless management of all installed equipment with no aesthetic problems and perfect quality images at all display points without intruding into the work space.

The switching system allows signal management and works seamlessly with the control system to provide a comprehensive solution to the problem of installing all required equipment in a highly restricted space.

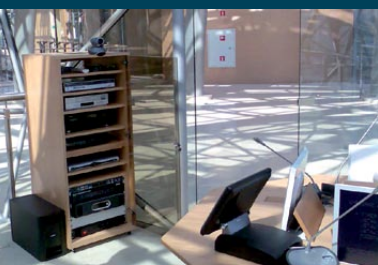


## APPLICATION DIAGRAM

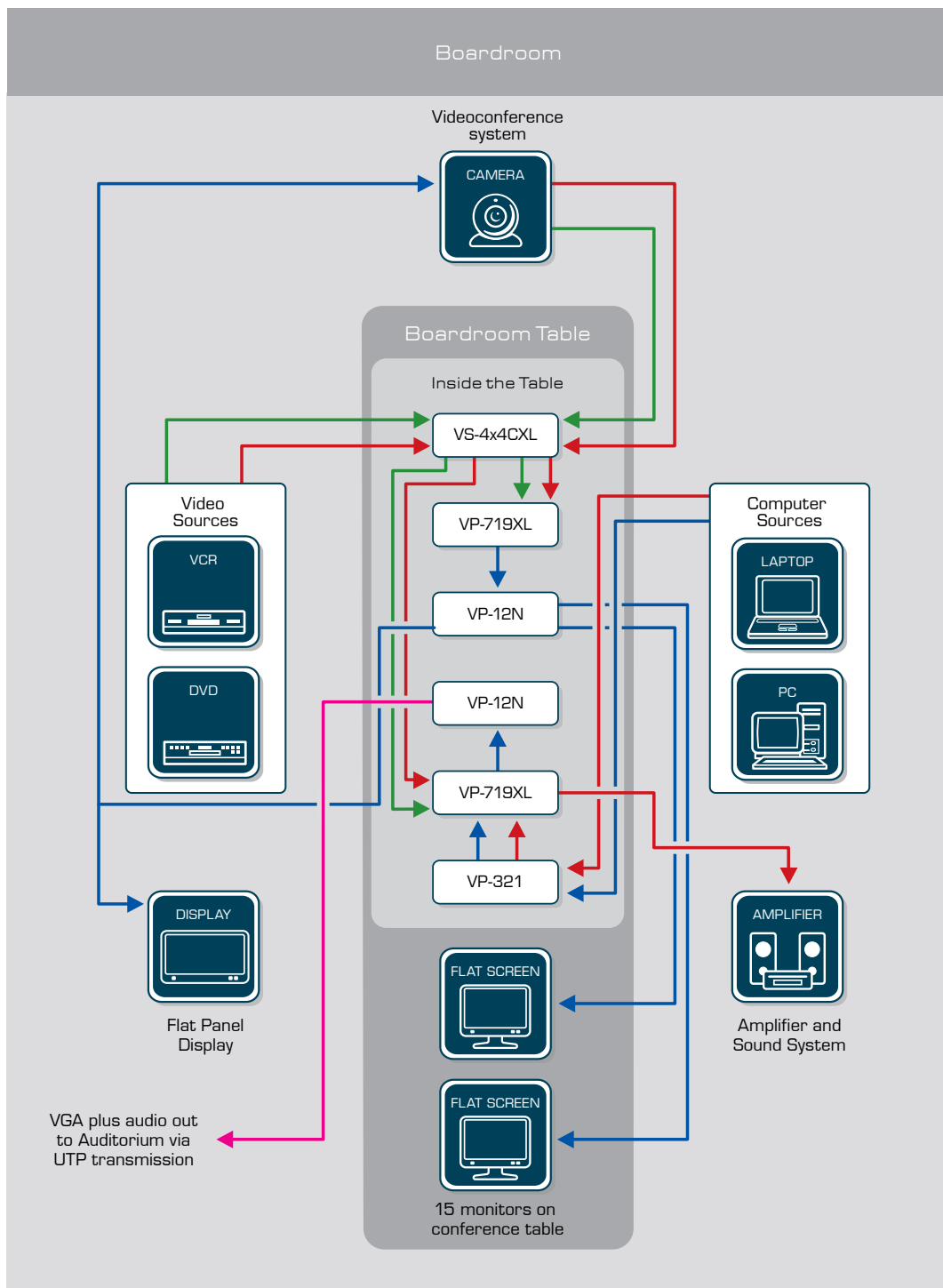
The diagram illustrates a partial schematic of the layout. Most of the routing and scaling is solved through the use of 6 Kramer systems installed under the boardroom table, providing a compact and reliable solution for most of the switching and image processing requirements. At the same time the UTP output of the DA (VP-12N) offers an excellent solution to the problem of distributing the signals over long distances.



- The table's metallic frame with most of the equipment installed. The custom-made metallic frame supports most of the routing and connection equipment as well as the built-in individual monitors.



- The small in-room equipment rack, also custom built for this particular installation.



### Cables:

Audio cable

VGA cable

s-Video cable

### Machines:

VS-4x4CXL - s-Video & Balanced Stereo Audio Matrix Switcher

VP-719XL - 7-Input ProScale™ Presentation Switcher & Computer Graphics Scaler

VP-12N - Computer Graphics Video Distribution Amplifier

with 3 Twisted Pair Transmitters

VP-321 - VGA/XGA Audio Switcher



KRAMER ELECTRONICS, Ltd.

3 Am VeOlamo St.  
Jerusalem, 95463, Israel  
Tel: + 972 2 654 4000  
Fax: + 972 2 653 5369  
E-mail: info@kramerelectronics.com

www.kramerelectronics.com