

KODOS V4 (KODOS V16) video capture board

Quick Start Guide

Basic Item Information and Technical Data

KODOS V4 (KODOS V16) video capture board (hereinafter referred to as board) is designed to convert analog signals from video cameras and active microphones connected to computer into digital signals.

The board is used as a component of the KODOS-VIDEONETWORK video surveillance system controlled by MS Windows 2000, MS Windows XP operational systems and KODOS-VIDEONETWORK software (SW).

The board is installed into a spare PCI-slot of the computer.

Table 1 – Performance Data

Interface loop		PCI V2.1
Power supply voltage, V		12 и 5
Overall dimensions, mm , maximum		190x125x22
Kit weight, g , maximum		460
Operating conditions:		
Ambient temperature, °C		+5 ...+70
Humidity at 25 °C, %		80
Video channel	Number of video inputs (KODOS V4), maximum	4
	Number of switched video inputs (KODOS V16), maximum	16
	Television signal standard	PAL, NTSC
	Video signal type	color, bw
	Wave resistance of coaxial cable connecting a video source with a video capture board, Ohm	75
	Video capture speed at 384x288 and 768x288 resolution (if controlled by the KODOS-VIDEONETWORK software), frames/s , maximum:	
1 channel	25	
4 channels	100 *	
Audio channel	Number of switched audio sources, maximum	4 (mono)
	Type of audio sources	Active microphone
	Audio signal frequency band, kHz , within the range	from 0.1 to 14.0
	Nominal audio signal input level, V	0.2 to 0.5
	Input resistance, kOhm	> 20,0
	Distance between the microphone and the audio capture board, m , maximum	300 **
* – total for all channels, but not more than 25 per a channel;		
** Microphones connection line is carried out as coaxial or double wire shielded cable.		

Standard Equipment

- | | |
|---|----------|
| 1 KODOS V4 (KODOS V16) video capture board | – 1 pc |
| 2 8-port DB-1 video/audio capture cable with BNC connectors (4 – video inputs, 4 – audio inputs) | – __ pc |
| 12- port DB-1 video/audio capture cable with BNC- connectors (8 – video inputs, 4 – audio inputs) | – __ pc |
| 3 8- port DB-2 video/audio capture cable with BNC- connectors | – __ pc |
| 4 Quick Start Guide | – 1 copy |
| 5 Package | – 1 pc |



Video capture board (front)

VID1-VID4



AUD1-AUD4



Cable is designed to connect 4 video cameras (VID1-VID4) and 4 microphones (AUD1-AUD4) (KODOS V4);

DB-1 cable is designed to connect 8 video cameras (Blue, VID1-VID4:channels from 1 to 4; green, VID1-VID4: channels from 5 to 8) and 4 microphones (Red, AUD1-AUD4) (KODOS V16);

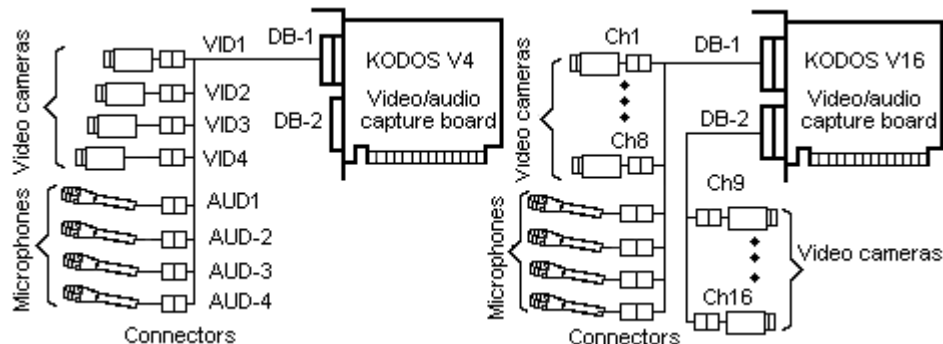
DB-2 cable is designed to connect 8 videocameras (Blue, VID1-VID4:channels from 9 to 12; green, VID1-VID4: channels from 13 to 16;) (KODOS V16)

Connecting video cameras and microphones to the board

Any assembling, connecting or maintenance operation must be carried out on fully switched off computer and devices connected to the board..

Due to substantial heat emission of the board necessary measures must be taken to provide for additional cooling of the board installation zone when installing more than 3 boards into the body of the system unit.

It is feasible to first arrange the communication cables, connect them to the cable BNC-connectors, and then connect the cable to the relevant connector DB-1 of the board.



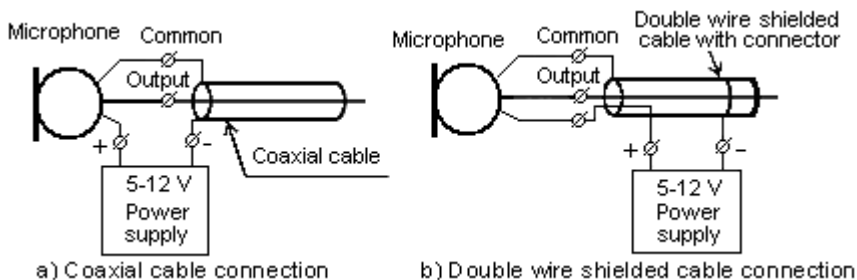
Video cameras and microphones connection diagram

The board video signal input level must be within 0.7 ± 1 V. The image quality gets worse when using connection cables having wave resistance exceeding the established requirements, or poor-quality plug connections, or if there are breaks in the cable eliminated by splicing or welding.

As a rule, video camera's video signal output level is 1 V. The tolerable attenuation of the signal at 6 MHz in the video capture board communication line is 3 dB, maximum (the limit value at the input is 0.7 V).

Maximum length of cable used for communication between a video camera and the capture board depends on the attenuation rate of the signal in this cable type.

To connect a microphone to the capture board input, the use of coaxial or double wire shielded cable is recommended. The connection line length should not exceed 300 m.



a) Coaxial cable connection

b) Double wire shielded cable connection

Methods of microphone connection

Notes on Operation

1 The board can interface with the input/output card (**KODOS I/O**) through IDE-cable to control the parameters of the video information conversion from TV cameras connected through the signals from external sensors of the burglar (fire) alarm system.

2 The board is solely purposed for operation controlled by the KODOS-VIDEONETWORK software. Prior to install the drivers for the board remove or uninstall the video capture devices installed earlier.

3 The board is an four-processor device that captures a television signal and converts it into digital signal.

4 After the capture board installation into the system unit casing and energizing the computer the device **drivers** are to be installed.

5 After completion of the drivers installation, push the screen button "Device manager" on tab "Equipment" in window "System properties". "**CODOS Video Capture Device**" and "**CODOS Audio Capture Device**" devices (each channel of the video/audio capture board is initiated as a separate device) should be displayed in the computer device list window.

"CODOS-VIDEO NETWORK" software enumerates (starting from zero) all **video capture devices** designating them respectively: «**0. FV-KODOS**», «**1. FV-KODOS**», «**2. FV-KODOS**» etc.

Audio capture devices are designated as "**Kodos Audio 1÷4**".

6 The capture board correct operation can be tested by means of the specialized testing utility "**FV-KODOS Diagnostics**" (**SSA_CAP_TESTS.exe** loading module) included into the KODOS-VIDEO NETWORK software set.

7 Detailed description of the KODOS-VIDEO NETWORK program and **Diagnostics** FV-KODOS utility interface is given in the document "KODOS-VIDEO NETWORK software Maintenance Guide".