

Reliable Company, happy customer

PCC Electronic makes this principles as a rule and determined company's quality policy in the whole of human-technology-system –product.

To produce beyond of the customer requests and expectations so,customer desire is the most important point in our quality policy.

To apply education programmes permanently,

To accord to the determined quality standards,

To reach quality and cheap cost.

PCC ELECTRONIC that constructed, applied and reached the best quality in it's products so, get customers satisfaction,

aim at a **leader** in TURKEY and **competitive** in the world market.

Cemil Özdemir

General Manager



ISO 9001: 2000 REGISTERED COMPANY



European Conformity



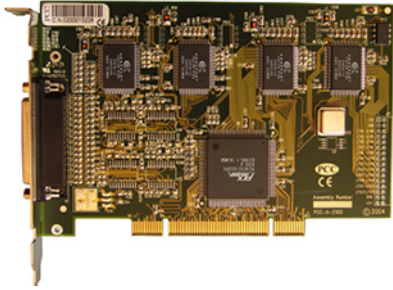
3D EYES PC BASED DVR SOFTWARE

DVR is a system that receives images from CCTV cameras, processes and records these images and forwards them to other users by internet, LAN, WAN, network. It is divided into two main sections: "PC Based" and "standalone".

3D EYES is a PC-based software. Images received from cameras are recorded on the PC's hard disk, and it is possible to reach these images and archive them by internet, network, LAN, WAN. Security systems must be reliable and installed.

It is used easily, directed and controlled in different conditions and events. The most important point is that these features can be used in practice.

3D EYES SOFTWARE has everything that you want.



em

3DEYES CARD
WITH EXTERNAL MUX

- . Enhanced Performance with External Multiplexer
- . 2 Channels Voice
- . 4- 64 Channels Video
- . Personal screen format
- . Time/event based recording
- . Searching with time or event
- . Quad and switch modes
- . Different sensitivity and mask region at the same window
- . 1-9 camera monitoring by internet at the same window
- . Motion Detection with adjustable sensitivity
- . Safe and Easy Network Connection
- . E-Mail
- . Voice Messaging
- . SMS
- . Digital Zoom
- . Integration with external equipment
- . Pan- Tilt control

Enhanced Performance with External Multiplexer

PCI Video Decoder chip which used in design of 3D Eyes hardware has an internal multiplexer. The performance of the PCI Video decoder splits into four channels while using the internal multiplexer and this results performance loss.

In EM Series the multiplexing process performs outside the PCI Video Decoder, so the performance of the chip can be used in single channel. This prevents the performance loss while the system is running in multiplexer mode and provides

As a result of using external multiplexers in design system has a video out.

3D EYES EM SERIES - 25 frame

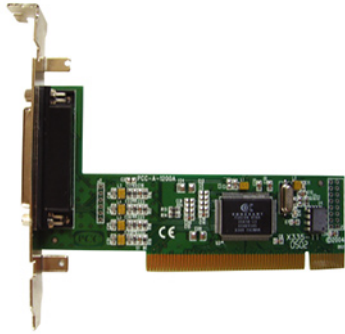
HARDWARE FEATURES

Number of Cards	1 CARD		2 CARDS		3 CARDS		4 CARDS	
	Maximum Camera Number	4	8	8	16	12	24	32
Recording Rate (frames/sec)-in Multiplexing mode	25	25	50	50	75	75	100	
Monitoring Rate (frames/sec)-in Multiplexing mode	25	25	50	50	75	75	100	
Sound	2 Channels External (Optional)							
Frame Size	2-40 kb							
Video Signal Format	PAL/NTSC							
Frame Format	768x576 or 800x600							
Multi Screen	1/4/9/16						1/4/9/32	
Video Out	Yes							
SOFTWARE FEATURES								
Network Client	Yes							
Web Server	Yes							
3-Level Security	Yes							
MINIMUM SYSTEM REQUIREMENTS								
Operating System	Windows XP, Windows 2000							
Processor	Celeron 1.7 GHz		Pentium 4 1.7 GHz				Pentium 4 2.0 GHz	
RAM	128 Mb		256 Mb				512 Mb	
Video Card	64 Mb							
Number of PCI Slots	1		2		3		4	

3D EYES EM SERIES - 100 frame

HARDWARE FEATURES

Number of Cards	1 CARD		2 CARDS		3 CARDS		4 CARDS		
	Maximum Camera Number	4	16	8	32	12	48	16	32
Recording Rate (frames/sec)-in Multiplexing mode	100	100	200	200	300	300	400	400	400
Monitoring Rate (frames/sec)-in Multiplexing mode	100	100	200	200	300	300	400	400	400
Sound	2 Channels External (Optional)								
Frame Size	2-40 kb								
Video Signal Format	PAL/NTSC								
Frame Format	768x576 or 800x600								
Multi Screen	1/4/9/16/32/64								
Video Out	No								
SOFTWARE FEATURES									
Network Client	Yes								
Web Server	Yes								
3 Level Security	Yes								
MINIMUM SYSTEM REQUIREMENTS									
Operating System	Windows XP, Windows 2000 (Service Pack 1)								
Processor	Pentium 4 1.7 GHz		Pentium 4 2.0 GHz				Pentium 4 2.4 GHz Dual CPU		
RAM	128 Mb		256 Mb				512 Mb 1024 Mb		
Video Card	128 Mb								
Number of PCI Slots	1		2		3		4		



3DEYES CARD WITH INTERNAL MUX

- . Internal Multiplexer
- . 2 Channels Voice
- . 4- 64 Channels Video
- . Personal screen format
- . Time/event based recording
- . Searching with time or event
- . Quad and switch modes
- . Different sensitivity and mask region at the same window
- . 1-9 camera monitoring by internet at the same window
- . Motion Detection with adjustable sensitivity
- . Safe and Easy Network Connection
- . E-Mail
- . Voice Messaging
- . SMS
- . Digital Zoom
- . Integration with external equipment

Internal Multiplexer

PCI Video Decoder chip which used in design of 3D Eyes hardware has an internal multiplexer.

In IM Series, multiplexing process performs inside the PCI Video Decoder chip, the performance of the PCI Video decoder splits into four channels while using the internal multiplexer.

3D EYES IM SERIES	25 frame			100 frame			
HARDWARE FEATURES							
Number of Cards	1 CARD	2 CARDS	3 CARDS	1 CARD	2 CARDS	3 CARDS	4 CARDS
Maximum Camera Number	4	8	12	16	32	48	64
Recording Rate (frame/sn)in Multiplexing mode	12	25	37	50	100	150	200
Monitoring Rate (frame/sn)in Multiplexing mode	24	50	75	100	200	300	400
Sound	2 Channels External (Optional)						
Frame Size	2-40 kb						
Video Signal Format	PAL/NTSC						
Frame Format	768x576						
Multi Screen	1/4/9/16/32/64						
Video Out	No						
SOFTWARE FEATURES							
Network Client	Yes						
Web Server	Yes						
3 Level Security	Yes						
MINIMUM SYSTEM REQUIREMENTS							
Operating System	Windows XP, Windows 2000						
Processor	Celeron 1.7	P4 1.7 Ghz.	P 4 2.4 Ghz.	P4 2.4 Ghz.		P4 2.8 Ghz.	
RAM	128 Mb			256 Mb		512 Mb	
Video Card	128 Mb						
Number of PCI Slots	1	2	3	1	2	3	4

matrix



3DEYES MATRIX SERVER
DVR, MATRIX SWITCHER, WEB SERVER

server

- . Plug and Play
- . Long Time Recording
- . Integrated System
- . High Performance
- . Real Time monitoring
- . Industrial Hardware Platform
- . Pan&Tilt Control
- . Cooler Case
- . 8 Alarm Input& 8 Alarm Output
- . Matrix Switcher Control by Keypad

With 3DEYES Matrix Server, user only connects cameras to the system. 16 and 32 cameras can be connected to the server.

With internal web server and network client user can watch cameras by LAN or Web browser.

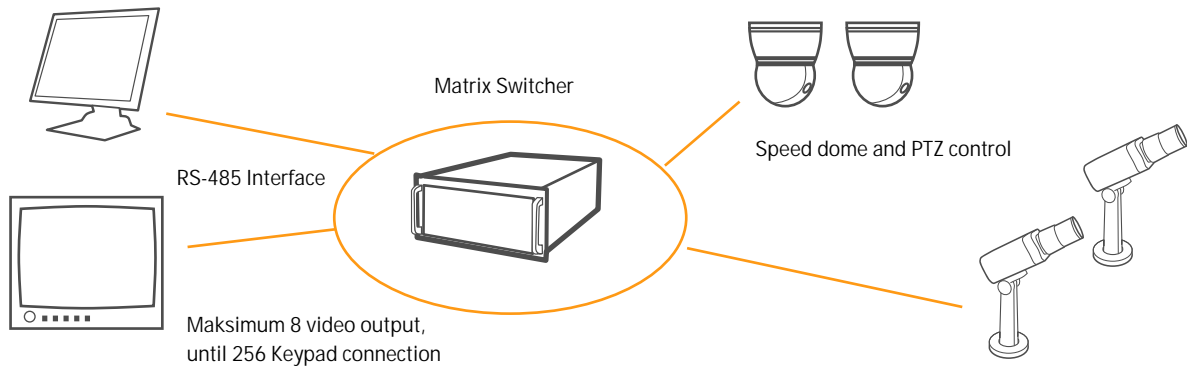
3D EYES Matrix Server has 3 levels web security.

Unlimited connections to be made to the system. With an interface more than one video Server can be watched as synchronized. Recording process can be organized from remote. 3D Eyes Matrix Server can control Pan&Tilt devices. Unchangeable Flash memory datas, used as HDD and provides an additional security to system. CPU temperature, Cooler RPM, UPS state indicators are on the hardware and as software based process activity situation can be watched.

Matrix Server has the situation control and Automatic Emergency Situation warning features. Special, cooler supported case, cooler supported HDD cases with Shock Preservers, protects the HDD from damages.

DVR + MATRIX SWITCHER + WEB SERVER

3DEYES Matrix Server is a Embedded XP operating system based, Matrix Switcher and DVR system.



TECHNICAL FEATURES

Video Inputs	Up to 32 (DSUB)
Video Outputs	Up to 8 (BNC)
Resolution	PAL 352x288, PAL 704x288, PAL 704x576 NTSC 320x240, NTSC 640x240, NTSC 640x480
Video signal	PAL, NTSC
Alert Input / Output	8 Input / Output
Compression	Software
Compression Standart	Motion Wavelet
Compression Level	5 Level
Operating System	Embedded XP
Maksimum Camera Number	Up to 32
Monitoring Rate (in Multiplexing mode)	70 (frames/sec)
Recording Rate (in Multiplexing mode)	100 (frames/sec)
Frame Size	1-5 kbytes
Video Signal Format	PAL/NTSC
Web Cam	Used
Network Client	Yes
Web Server	Yes
Remote Access	3 Level Remote Access
Web	Net Architecture - disordered Data Transfer Protocol- TCP\IP Remote Input - LAN, Dialup, IDSN, Internet Video Server Number in a Net - Unlimited. Number of workstations that remote created - Unlimited Number of Video Server which can be accessed from a Workstation - Unlimited
Video Recording Modes	Continuous On alert -triggered Software motion detection triggered
Picture Resolution	PAL 400x352, PAL 288x704, PAL 288x704 NTSC 480x320, NTSC 240x640, NTSC 240x640
Recording Time and total frame rate	242, 7 hours and 25 fps (Picture size - 2 KB, HDD Capacity - 160 GB)



3DEYES POS

SECURITY SOFTWARE FOR SHOPPING CENTERS

- Reduction of losses at shopping centers; incontrovertible proofs of trade violation (false discount cards, misappropriation of profit, fictitious return of products, imposition of clients, etc.).
- Enhanced quality of service; manager possess full information on personnel's actions, which greatly improves labor discipline. Network features of the system allow to receive information in minutes, even not leaving office.
- Registration of all purchases with indication of date, attachment of video record of both salesman and client.
- Remote control over a trade outlet operations from any point of the world.
- Centralized control of 3D EYES POS network.
- Operative real-time management.
- Powerful analysis toolset: basic and extended requests, search of specified events.
- Statistics of a certain product's sales, minimum and maximum sum of purchases at every cash register, analysis of every 3D EYES POS operator work.

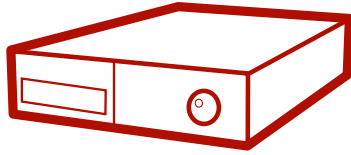
The 3D EYES POS digital system controls cash transactions and allows to combine video data with information printed on sales checks.

Store and Restaurant owners experience additional losses through the perception of an unsafe environment, through robbery and burglary, and resulting employee turnover. Until now, the only way to detect employee theft has been to search through hours of video... 3D EYES POS is a networked, digital video solution that synchronizes transaction data with the associated video. It can record video on a set schedule, continuously, or upon specific events. Suspicious transaction events are quickly investigated using 3D EYES POS powerful search features. Real-time monitoring of store floor, exit ways, and back office allows for detection of shoplifting incidents and employee theft. Comparing transaction data to video can easily identify unintended operational errors. Managers can supervise employees and control operations from a remote location, improving fraud prevention and operational and management productivity. It provides valuable customer service and marketing information by capturing in-store.

While 3D EYES POS search capabilities represent a major break-through, synchronizing transaction data to corresponding video is nothing new to the security industry. Early on, vendors offered text inserter devices that overlaid video with transaction data. Because both text and video were shown in a single window, these analog-based video systems made it very difficult to read the transaction data and see any image details. Transaction-based searches were impossible and videotape management and storage were a major headache.

Cost & Time Related Problems	3D EYES POS SOLUTION	USER BENEFIT
Employee Theft and Shoplifting	Search feature allows you to investigate suspicious point-of-sale transactions by displaying your search results with the corresponding video within seconds. Real-time monitoring at up to 60 frames Per second of entire store, exit ways, and back office (including alarm and motion activation features) results in the detection and deterrence of theft incidents.	Drastically reduces investigation time. Local or Remote store surveillance through high-quality digital video.
Employee Errors	The association of transaction data with video allows for quick identification of unintended employee mistakes.	Fast error detection. Use of recorded video for employee training purposes.
Employee Turnover and Training	Reduces temptation and opportunity for theft and poor work habits. Increases store safety and enhances monitoring of remote and single employee sites.	Increased employee retention.Faster and more effective employee training.
Employer Liability and Customer Service	Captures employee performance and activity, theft and fraud, and customer behavior.	Provides valuable customer service and marketing information
Video Storage	Recording options like record some/record all and motion-activated recording allow for video/transaction data storage .	Optimize storage through a number of recording options and settings.
Security	3D EYES POS allows a security system	Reduction in necessary on-site security personnel, loitering, and employee harassment.

3D EYES POS	
Monitoring	Real time monitoring on more than one point
Lan/Wan	Available
Supporting POS terminals	Unlimited
Database	MySQL
Recording	Search results and reports can be recorded as excell,PDF(Adobe Acrobat) or MSWord files.
SYSTEM REQUIREMENTS	
Operating System	Windows XP, Windows 2000 SP4
Processor (CPU)	Pentium IV 2.8MHz.
Graphic Card	128 MB
Memory	256 MB
Hard disk	120 GB



standalone

3DEYES STANDALONE
INTEGRATED DVR SYSTEM

- . Plug & Play
- . 4 Channels video and audio
- . Monitoring and controlling by network
- . Monitoring in Quad, PIP / POP, Switch mode
- . Digital zoom 2x
- . Motion detection
- . Real time monitoring and recording in all channels
- . Programmable recording frame
- . Programmable recording quality
- . Watermark
- . 4 alarm in, 1 alarm out
- . Control by keyboard and Jog-Shuttle
- . Searching in archives related to time or event
- . Image freezing
- . Optional recording (event or continuous)
- . Graphic OSD

3D EYES Standalone is an easy and quick to install integrated DVR system.

3D EYES Standalone System has playback, quick search, internet access, watermark, motion detection and zoom features.

You can watch all archive images by time or event based and system continues to record new images.

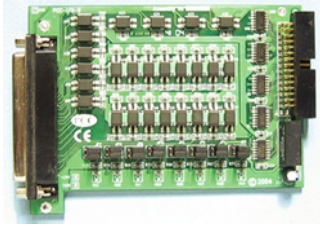
Network interface makes possible to reach and to control the system by network. Watermark function is your digital sign. Easy use with Jog-Shuttle and keyboard. It is possible that searching archives faster and easily with Jog-Shuttle function.

Monitoring is possible in Quad, PIP/POP(Picture in/on Picture), Switch modes.

You can watch the other images as small Windows in a main image. You can reach external equipment like sensor and siren by alarm inputs and outputs.

3D EYES STANDALONE DVR

VIDEO AUDIO INPUT/OUTPUT	INPUT	4 Ch. BNC 75ohm 1VPP 4 Ch.Audio, Audio Jack
	OUTPUT	4 Ch. BNC 75ohm 1VPP LOOP 1 Ch. BNC 75ohm 1VPP CVSB 1 Ch. S-VIDEO 1 Ch. Audio, Audio Jack
	SCREEN	Full,Quad
	MONITORING FEATURES	PIP/POP Available ZOOM Real time and monitoring the video archive (2X Digital) SWITCH Available (programmable time period) QUALITY Monitoring mode 768x576, Recording Mode 720x576 FRAME Real time watching, 50 Frame Recording mode
	RECORDING FEATURES	RECORDING Maksimum 2xHDD COMPRESSION Real time full duplex M-JPEG codec RECORDING MODE Continuous / Event based PLAYBACK Time / Event Search based MOTION DETECTION 12x16 Programmable motion detection windows
COMMUNICATION INTERFACE	NETWORK Remote control by TCP/IP SERIAL INTERFACE RS-232 ALARM 4 Alarm Input/ 1 Alarm Output KEYBOARD&JOG-SHUTTLE Available	



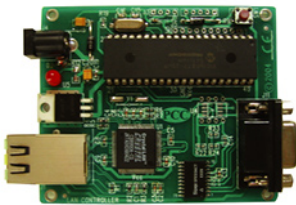
DVR I/O CARD

8 INPUT/ 8 OUTPUT EXTERNAL EQUIPMENT CONTROL CARD

- 8 Input / 8 output
- Control over GPIO

RS-485 I/O card is designed to control external equipment that connected to computer and embedded devices.

It makes possible to control equipments like sensor, siren by network.



LAN CONTROLLER

TWO WAY TCP/IP AND

- Connection between RS-485 and TCP/IP
- Controlling of equipments that work with RS- 232
- RS-485 side 15 KV isolation
- DC 12 V

This device is an network accessible, have the ability to make the conversion of RS-232 and RS-485 protocols between network protocols (TCP/IP, UDP etc.) in the both two directions.

LAN CONTROLLER has an IP number and it provides access to equipments that connected LAN CONTROLLER by using TCP/IP protocol.

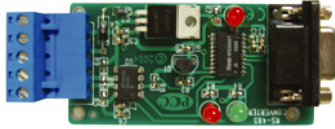
It makes possible to connection of the equipments that can be access by RS-232 and RS-485.

APPLICATION EXAMPLES

For smart homes, devices like air conditioner, central heating units and other examples that you should want to start or stop at any time can be controlled by network connection, even if you are not at home. You should light the lamps on or off.

The situation of fire, smoke sensors or motion detectors can be viewed from far stations over a network connection.

You should entegrate into your automation projects that using RS-232 or RS-485 protocols like access control. POS or factory automation and control all of them over a network connection.



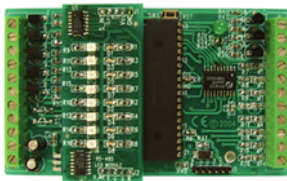
RS-232 / RS-485 CONVERTER

RS-232/ RS- 485 CONVERTER

- . RS-232 / RS-485 Two Way Conversion
- . RS-485 side 15 KV isolation
- . Automatic Baud Rate Setting
- . Maksimum 256 modules support
- . Maksimum 2048 modules support by repeater
- . Maksimum 1.2 km line length
- . DC 12 V

RS-485 I/O card is designed to solve the distance problem in control of external equipment that connected to computer.

You can control distant equipments .



RS-485 I/O CARD

8 INPUT/ 8 OUTPUT EXTERNAL

- . 8 TTL level input / 8 Open Collector Output
- . RS-485 side 15 KV isolation
- . Maksimum 256 modules support
- . Programmable Baud Rate
- . Easy control by command unit
- . Input / Output situation LED indicator
- . Control over RS-485
- . Maksimum 1.2 km line length
- . DC 12 V

RS-485 I/O card, is designed to control external equipment that connected to computer and embedded devices.

It makes possible to control equipments like sensor, siren by network.

