

## MULTIEYE<sup>®</sup>-NET Software Network Videorecorder- and Management Software

Future proof, multi-functional, modular and scaleable. With MULTIEYE-NET software you will get a highly professional PC- and server-based video surveillance software (NVR = Network Video Recorder) with 2 – 32 IP video channels.

Regardless of the number of channels MULTIEYE-NET offers beside other features live-monitoring, recording, playback and remote surveillance. The software supports more than 800 of the most popular IP-cameras and videosevers from 80 different manufacturers and enables a fast and easy integration of cameras by automatic detection of the camera IP addresses on the network and maximum flexibility.

The activation of additional IP video channels is very flexible with the IP-1 or IP-4 licenses (extending to 1 or 4 channels) up to 32 channels per recorder.

In combination with the MULTIEYE VideoCenter III software projects with 1000+ cameras can be realized.

MULTIEYE-NET is an innovative and multifunctional software which, by its modular design, can be always modernized and adjusted to the customer-specific requirements.

The MULTIEYE software is based on technologies developed by artec technologies AG:

- The patented CVoD process makes event-related, time-shifted playback within networks.
- With the DirectStream technology, IP video data is recorded and processed directly. As a result, recording rates up to 800 fps and image data processing rates of up to 2.500 megapixels/second per recorder/server can be achieved.
- The MD indexing procedure enables ultrafast smart video analysis of recorded data, via networks as well.
- With the remote bandwidth throttle optimisation, video data is optimized in such a way that even megapixel cameras can be monitored via DSL lines, yet zoomed-in areas retain their maximum resolution when transmitted.

Included in delivery of the MULTIEYE-NET is the software on USB stick (user's manual and marketing material etc.), Quick Installation Guide and a USB-license dongle.

The MULTIEYE-NET software is the basic software of all MULTIEYE products. All functionalities are identical for all recorders (NVR/HYBRID, SmartWatch and GreenWatch) and for the DVR-Kits.

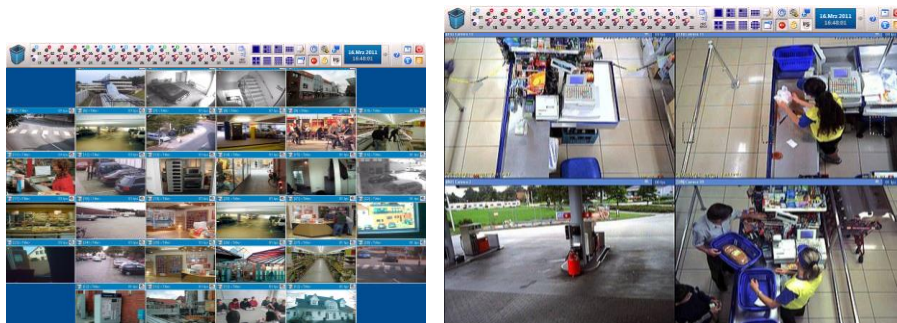


### Software Features

#### Operation

- ▶ Express installation & easy operation through Plug & Play

Via drag & drop with the mouse MULTIEYE-NET Software is easily operated. The user interface is clearly structured and user-friendly. Individual settings (e.g. personalized multiscreens) can be saved user-dependent.

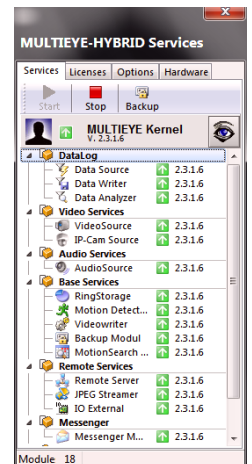


► Clear license concept

MULTIEYE-NET is an always expandable version. The software may be expanded manually or via the license server. All licenses are attached to a USB dongle; no internet connection is required for licensing.

► Expandability

MULTIEYE is set up modularly. Numerous software and hardware components are available for customized system solutions, like video expansion licenses, software modules like AutoBackup, Shell, VideoCenter II, DataLog, NetworkPlayer, ANPR number plate recognition. With the video cards (see DVR-Kits) MULTIEYE-NET can easily be turned into a hybrid video surveillance system



► BGV-cash point certified

MULTIEYE-NET software is examined by Germany's „BGV“ (Employer's Liability Insurance Association) and recognized as compliant with their video surveillance requirements for banking houses. The "BGV Kassen" approval certifies that the MULTIEYE-NET software can be used for video surveillance systems in banking and financial institutions. Special features such as pre- and post-alarm as well as suspect-alarm recording are also available to the end user.



► Quadplex® operation

features the simultaneous operation of

- Live display
- Recording
- Playback and evaluation
- Remote surveillance

► Support of common IP cameras and video servers

MULTIEYE-NET supports IP cameras and video servers by more than 80 manufacturers like

- ACTi • Advantech • Allnet • Apro • artec technologies • ArecontVision • Aviosys • AXIS • Basler • Bosch • Bosslan • Canon • Cellvision • Conceptronic • Connec Tec • Convision • DigiLan • Digitus • D-Link • Eltis • ELMO • ENEO • Everfocus • Eyetelligent • For-A • FlexWatch • Grand • Grandtec • Hawking • Hunt Intellinet • IOImage • IQEye • IPX • JVC • Leadtek • LevelOne • Lindy • Lilin • Linudix • Lumenera • Misumi • Mobotix • Moxa • Panasonic • Pixord • Planet • PTAV • Samsung • Santec • Siemens • Sony • Sanyo • SMC • Stardot • SparkLan • Surveyor • Toshiba • TRC • VCS • Visicom • Vivotec • Xannet • Y-Cam • Yoko.

New camera and video server profiles can be downloaded via LiveUpdater. Further details see camera compatibility list

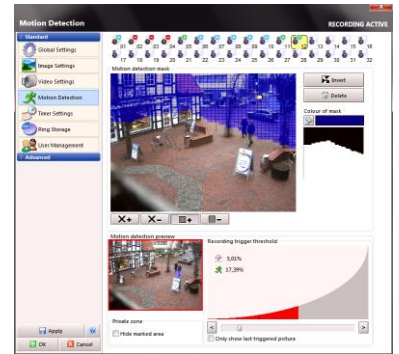
► High image data processing rate

With the DirectStream technology IP-video data are directly processed and recorded; thus recording rates up to 800fps and image data processing rates of up to 2.500MPixel/s can be processed per server.

## Functionality

### ▶ Motion Detection

All connected IP cameras and video servers are detected by a camera independent Motion Detection matrix with 2304 individual fields. Through this high matrix solution, specific object related surveillance fields can be marked.



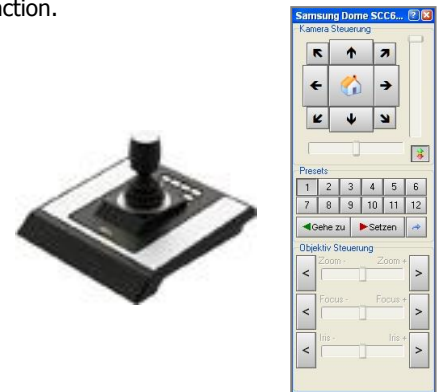
### ▶ Multi functional storage management

In MULTIEYE-NET you can choose between static and dynamic storage management. The dynamic recording arranges the video data automatically on the hard disk(s), for the static mode an individual storage capacity can be set for every video source. MULTIEYE-NET supports the operation with up to 24 hard disks/partitions or network drives and can manage up to 16TB per server



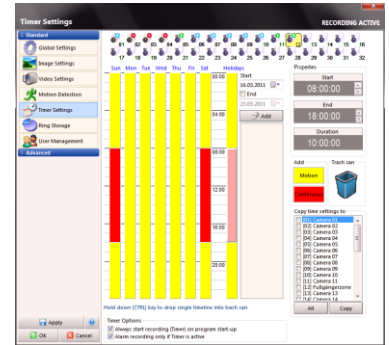
### ▶ PTZ control

Via software pop-up, joystick or directly in live display incl. Direct-Move function. Digital zoom during live display and replay.



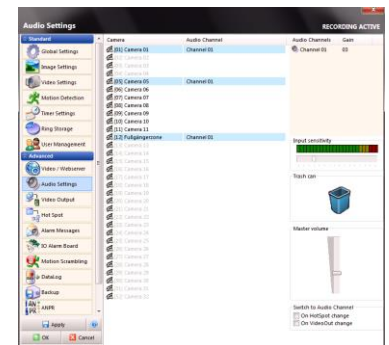
▶ Event controlled recording

Apart from the permanent recording or timer operation several or all video channels can be recorded event controlled, via motion detection, contact controlled via IO server, IP cameras or via signal words via the DataLog and SensorLog interfaces (COM, TCP, UDP).



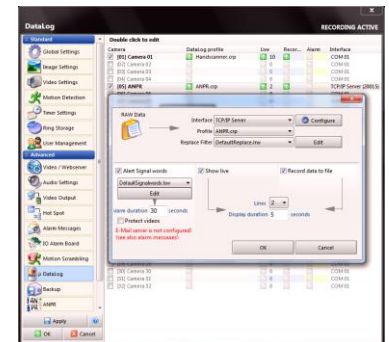
▶ Audio recording

Audio recording will be supported by MULTIEYE-HYBRID recorders and DVR Kits.



▶ Data interface

MULTIEYE-NET comes with a flexible data interface. With the DataLog module data from cash registers (POS), barcode scanners, ATMs, access control, number plate recognition systems via COM, TCP or UDP can be captured, processed, displayed, stored and analysed by full-text search. External video sensors can be integrated with the SensorLog module.



▶ 360°-surveillance/ImmerVision

MULTIEYE-NET supports panamorphic lenses by the company ImmerVision. Linked to a megapixel camera a 360° area can be surveilled completely - live and during replay. Via digital PTZ it is possible to zoom and operate in full screen, in the 2 x 180° display or in the quad display.



▶ Compatibility

MULTIEYE-NET offers a variety of interfaces and is compatible with:

- Video sensors: via:sys, IOimage via MULTIEYE SensorLog alarm center
- Video management system: –EBÜS/Accelence
- Facility management: WinGuard
- Access control: Delta Controls, Bewator 2010, Rosslare
- Cash register appliances: Casio, Huth, Vectron etc via protocol converter box NPC
- Number plate recognition: via MULTIEYE ANPR-Traffic or Gate

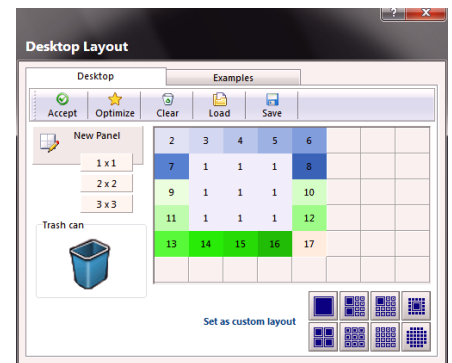




## Display

### ▶ Programmable Multiscreens with Hotspot monitor

A selection of 8 programmable multiscreens are available for the display of 1 to 32 cameras. The multiscreens can be stored user-dependent. The hot spot monitor is configurable individually and can be embedded or disembedded from the multiscreen and displayed on an extra monitor. With the optional VideoCenter II software or viewing station 1000+ cameras can be monitored.



### ▶ Digital Megapixel Zooming

To use the advantages of megapixel cameras with reduced bandwidth MULTIEYE offers the "hot zone mega pixel zooming" function. The user can mark a detail in the video image via mouse click. The marked area is then transmitted as full-screen picture in max. image quality



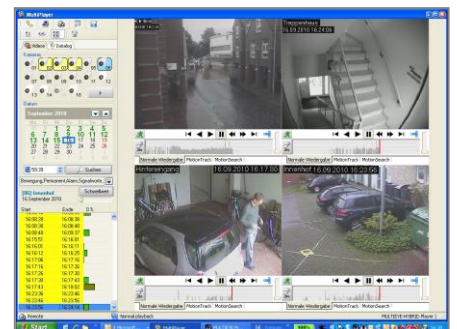
### ▶ Multi monitor operation

MULTIEYE-NET supports operation of up to four desktop monitors. Multiscreens, players, live images and hotspot windows can be individually arranged on the monitors



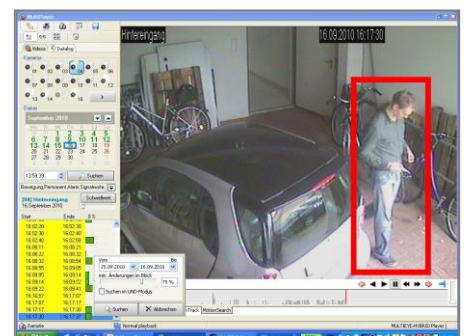
### ▶ Replay

The replay can be carried out by the local MultiPlayer or the NetworkPlayer. The players are visually and functionally identical and differ only in minor characteristics. They offer a four-fold display with motion histogram, video analysis with MotionSearch and MotionTracker, export function for pictures and videos and many other features. The replay can be operated and controlled via key combinations or jog shuttle



### ▶ Efficient and smart evaluation

For an ultra-fast evaluation of video data the player offers a highly efficient video analysis. Via the MD indexing system data quantities of several terabytes can be analysed within seconds. With the MotionSearch function event areas can be defined in order to have changes in the image displayed in an adjustable size. Further analysis can be carried out with MotionTrack via histogram timelines.



► Remote surveillance and configuration

Remote surveillance can be done via LAN, WAN, Internet or telephone connection, as live display as well as replay. Within MULTIEYE-NET the customers can choose between several license-free possibilities of remote monitoring:

- LiveViewer' with Pop Up alarm display, can be freely positioned on one or more desktop monitors
- Multiscreen for remote display and remote configuration of a recorder.
- Standard browser without ActiveX or Java add-on (PDA/mobile phone compatible)
- NetworkPlayer for simultaneous playback, video analysis and snapshots/video export – one license included in software.
- VideoCenter II is an easy-to-operate multifunctional site map based video management solution for monitoring up to 32 MULTIEYE recorders simultaneously. (optionally available)



► PDA support

The live cameras can be monitored via PDAs without installing additional software.



**Safety**

► Highest reliability

MULTIEYE offers a IP-video loss alarm. It also comes with watchdog functions for an automatic software and hardware start, crash recovery for a trouble-free resumption of operation after a blackout, MULTIEYE Shell for sheer MULTIEYE operation with access protection of the Windows level. With the S.M.A.R.T function hard disks are supervised, disk drive errors recognised and signalized. Via the alarm messenger system errors can be sent as critical S.M.A.R.T parameters.

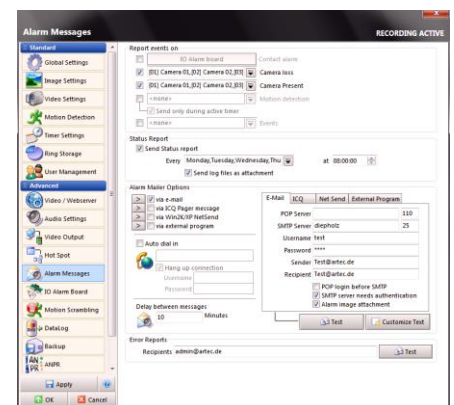
► System Restorer

The SystemRestorer stores the entire MULTIEYE-NET configuration (incl. user administration) and can restore these settings. Additionally, reference snapshots of every connected camera can be stored in order to compare these with camera positions in case of service being necessary.



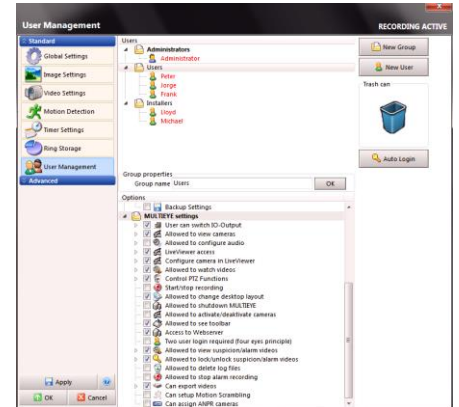
► Alarm and routine messenger

Alarm messaging upon movement, alarm contact or failure is possible via E-Mail, SMS, Windows messenger service and other external (third party) programs - with or without alarm picture. The integrated routine messenger automatically transmits - at pre-defined times - E-Mails with status reports and event logs. Ideal for remote controlling of the system's functionality.



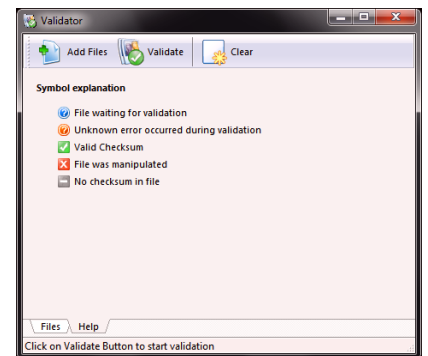
► User administration

MULTIEYE-NET offers a group-oriented user administration. User and user groups can be defined down to the camera level with different authorization. An integrated "four eyes" principle eliminates abuse.



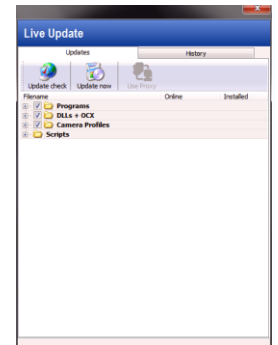
► Authentication through watermark

Videos or snapshots are protected with an invisible, digital watermark. With the MULTIEYE validator program (included in shipment of MULTIEYE-NET Software) videos and pictures can be checked for their authenticity.



► Live Updates

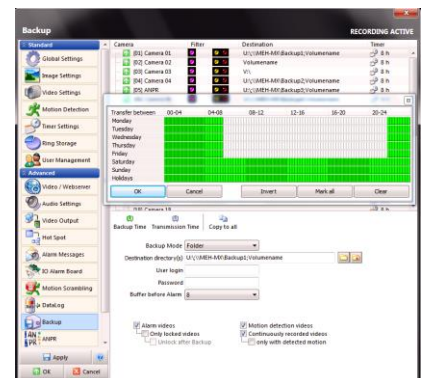
Software updates are available via internet from the MULTIEYE update server or can optionally be delivered in line with a support contract.



**Additional modules**

► Software modules

Numerous software and hardware components are available for customized system solutions, like licenses, software modules, like:  
 AutoBackup  
 Shell,  
 VideoCenterII  
 DataLog,  
 NetworkPlayer  
 PrivacyShield  
 ANPR numer plate recognition  
 and  
 video cards for extending to HYBRID recorder



▶ Privacy protected video surveillance

MULTIEYE-NET with the optional MULTIEYE PrivacyShield module scrambles all moving persons and objects in live display so that their identity is anonymised. Due to the exact scrambling their action is still identifiable. The protection can be enhanced by masking out certain image areas in the software. The recorded videos are multiply protected from unauthorized access. Automated deleting of the data and a special software component for the protection from intrusion of users in the network complete the privacy protected video surveillance package.



▶ SDK

The MULTIEYE-SDK (Software Development Kit) offers software developers the possibility to integrate of third party systems for control, transmitting live streams and remote enquiry of recordings and the alarm and user management, asynchronous event messaging from and to MULTIEYE systems. The SDK includes a collection of commands, which are embedded in a DLL.

▶ OEM, customizing and multiple languages

MULTIEYE-NET can easily be adjusted to a customer's CI. It is also possible to produce a customized OEM version. MULTIEYE-NET offers more than 8 languages in the standard version. New languages and characters can easily be added via a special context-oriented editor program.

## Scope of delivery

- 810159 2/32 channel MULTIEYE-NET Starter, Network Video Recorder and Management Software, Vers.2.3, expandable up to 32 channels by IP-1/IP-4.
- 810160 4/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers. 2.3, expandable up to 32 channels through IP-1/IP-4.
- 810158 4/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers. 2.3, incl. IP-HD module, expandable to 32 channels through IP-1/IP-4.
- 810165 8/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers. 2.3, incl. IP-HD module, expandable up to 32 channels through IP-1/IP-4.
- 810167 16/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers.2.3, incl. IP-HD module, expandable up to 32 channels through IP-1/IP-4.
- 810169 24/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers. 2.3, incl. IP-HD module, expandable up to 32 channels through IP-1/IP-4.
- 810168 32/32 channel MULTIEYE-NET, Network Video Recorder and Management Software, Vers. 2.3, incl. IP-HD module.
- 810162 IP-1 license for activation 1 additional IP-video linput.
- 810161 IP-4 license for activation of/up to 4 additional IP-video inputs.
- 810163 IP-HD module for use of multi-megapixel IP cameras with a resolution larger than 1.3 megapixels, server license for activation of all IP-video recorder inputs
- 810151 NetworkPlayer, software and server license for playback and storage of video sequences and still images over network,
- NG2004 Service Package for MULTIEYE



## Technical data MULTIEYE-NET

IP-video channels	Up to 32 channels. Available as 2-, 4-, 8-, 16-, 24- and 32-channel versions. With the IP-1/IP-4 licenses, the software may be enhanced by 1 or 4 additional IP video inputs respectively
IP-cameras and video servers	Support of common network cameras and video servers from presently more than 80 manufacturers
Image resolution IP-video	Standard up to 1.3 MPixel, expandable up to 20 MPixel per IP-video channel with the IP-HD license
Recording fram rate/ Image data processing rate	Up to 800 fps and up to 2.500 Mpixel/s, depending on CPU, image resolution, codec, compression, recoding frame rate and remote access.
Video codecs	JPEG, MJPEG, MPEG-4 and H.264
Alarm inputs, outputs	Up to 96 alarm inputs and 96 relay outputs through EX-IO Server or per IOs supported by IP-cameras/video servers
PTZ control	Via pop up menu, keyboard and/or tri axial joystick
Live monitoring	Via 8 programmable multiscreens with hotspot monitor functions
Text overlay	Time, date, free text to 50 characters, variable positioning, font type, size and colour selectable
Text imprint	With up to 10 lines @ 40 characters, for POS, ANPR etc.,
Motion detection	Matrix with up to 2034 individual fields, selection of unlimited no. of areas
Weekly timer	Adjustable per channel: continuous, motion detection, no recording, holiday function
Playback	1 – 4 fold display, simultaneous playback, Fast/Step forward/backward, support of keyboard shortcuts and jog shuttle
Search criteria, smart evaluation	Date, time, motion detection, MotionTrack, MotionSearch (image area search), motion histogram
IP-Video loss detection	By acustical and optical notification
Video export	In AVI format, single or multiple videos with internal player for external playback
Snap shots	In BMP or JPEG format
Authentication	Digital certification through invisible watermark in images and video files
Ring storage management	Dynamic or static recording, up to 24 hard drives, NAS/SAN
Pre, post, suspicion recording	Adjustable from 5 to 900 seconds for each camera, according to „BGV Kassen „
Password protection	Multilevel password protection, freely defi nable user groups with individual rights, also true "four-eye principle"
Remote monitoring	Via browser without plugins, LiveViewer with popup display and optical and/or audio alarm, network player for network-based analysis and playback, VideoCenter II optional
Remote configuartion	Via Remote Multiscreen (MRC)
Web- and video server	Integrated
Function reliability	Software watchdog, crash recovery, network loss detection, S.M.A.R.T control, system restorer
Alarm notification	Per email, SMS, ICQ, Windows News Service, external programs, with or without alarm snapshot
Routine notification	Automatic status reports of the recorder functions, programmable with/without log files, time and day of the week
Log book	yes
Software Update	Per live updater via the Internet or on a CD-ROM within the context of a service contract
Menu languages	D, DK, E, F, GB, H, I, NL, P, RO, S, SK, TR, others added continually
Compatibility	The software is compatible with all other products in the MULTIEYE family
System recommendation	Intel® based motherboard from version Q35, Multi core CPUs - recommended C2Q, RAM min. 2GB , RAM type DDR2/800 (or faster) SATA 24/7 server hdd, network 2x1Gbit/s, OS Windows XP, Server 2003/2008, Windows7 32+64 Bit., more details under document system requirements
Scope of delivery	Software on USB stick, quick installation guide and USB-dongle

\* MPixel/second represents a value for image processing speed. The values stated refer to the processing and encoding of image data in or of M-JPEG Codecs. Other values apply to the processing of other Codecs such as MPEG-4, H.264, transcoding of streams, recorder live display and remote monitoring. Calculation tables are available for dimensioning network-based video surveillance. Please contact our support personnel for exact planning.