LookC
Web Enabled CCTV & Access

LookC 4x4

LookC 4x4 - Desktop DVR, web server touchscreen, CDR, 250Gb+, 16 channel evidence grade images, simple to use

>> MORE INSIDE

Viditag NEW

Viditag - Integrated CCTV and Access Control, two door controller, ethernet, Wiegand compatible, visual audit log, full web control 999 tags, 7 time profiles

>> MORE INSIDE

LookC Pro ix

LookC Pro ix - wall mounted, steel case touchscreen, UPS, 250Gb+, 16 channel evidence grade images, high security

>> MORE INSIDE

LookC AV NEW

LookC AV - Single channel MPEG recorder with synchronised audio, 250Gb 20 days - 400Gb 31 days ideal for interview rooms, front desks, entrances
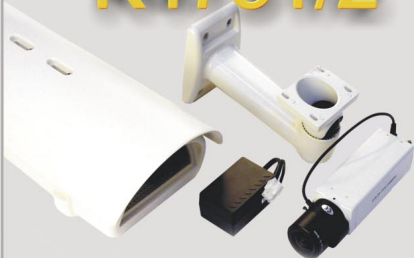
>> MORE INSIDE

2006
Catalogue

LookC 4x1 NEW

LookC 4x1 - Desktop DVR, web server touchscreen, CDR, 250Gb+, 4 channel evidence grade images, simple to use

>> MORE INSIDE

K4731/2

High Resolution Day / Night 420 TVL Camera Pack with external housing bracket, lens and power supply.
K4731 3-8mm   K4732 5-55mm lens

>> MORE INSIDE

K4720/1

Colour Day / Night 480 TVL IR Camera Pack with PSU

>> MORE INSIDE

K4713

Indoor Colour Dome Camera Pack with Varifocal 4-8mm lens, PSU & 20m BNC lead.

>> MORE INSIDE

LookC 4x4

High End CCTV
Made Simple

Easy Installation

The LookC 4x4 is pre-configured at the factory and can be recording video in seconds. You can access all of the main functions directly from the main screen using a mouse and pointer. The system is also pre-configured for VMD (Video Motion Detection) and will detect any movement in the field of view and mark the footage where this occurred. You can have up to 16 cameras connected using the optional Quad Extenders (Stock Code K5812). You can easily configure the system for 1 month's continuous recording or alternatively you can use Event mode.

Easy View

To view the cameras simply login using the supplied username and password and there will be a live display of all the cameras. You can zoom into any camera and also see movement being highlighted in red by the VMD processor.

Easy Playback

Looking at the recorded footage couldn't be easier, simply pick the day from the calendar and then click on the event or the time you wish to replay. You can playback all the cameras at the same time or you can zoom into just one.

Easy Networking

LookC 4x4 has a dedicated web server on its ethernet port, so remote viewing is simple using a standard web browser from any PC on the network. LookC provide expert network technical support over the phone.

Easy Internet

LookC's encrypted web server and inbuilt firewall mean that the system can be easily and safely installed on a broadband connection to the internet. This allows internet access from any web browser in the world using the serial number and unique username and password. You simply go to http://my.lookc.co.uk and enter your LookC's serial number and that's it.

LookC can provide a pre-configured ADSL router to make this installation easy (Stock Code K5503 ADSL Router). LookC recommend Zen Ltd for ADSL (http://adsl.zen.co.uk). LookC is compatible with ADSL services with floating IP addresses.

Evidence Grade Images

LookC signs each image recorded using its unique private key and part of this signature is displayed at the bottom of the video frame. Images from LookC have been used successfully in court including murder trials because you can prove:

1) Provenance: The images were recorded by that particular LookC.
2) Time: The image was recorded at the time stated.
3) Integrity: The images have not been tampered with since being recorded.
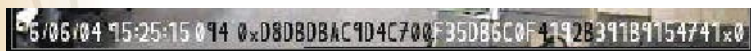
NEW Touchscreen Technology

- 4 Cameras
- Expandable to 16 Cameras
- High Speed 4 Frames Per Second
- Onboard CD Writer
- Video Motion Detector
- Up to 1 Month Recording
- 7 Day, 24 Hour Schedule
- Local Live Monitor
- Web Server for Remote Viewing
- Optional Touchscreen
- Connects to EPOS and ECR's
- Optional Access Control System
- Remote Configuration
- Easy to Configure & Use
- Email / SMS Alerts
- Email Alerts with Images
- SQL Transaction Database
- LAN / Internet / ADSL ready
- Modem Dial In Feature
- Multi User, Multi Level Access
- Remote Arm/DisArm
- Evidence Grade Signed Images
- Auto Recovery after Mains Failure
- Factory pre-programmed
- Hardware Watchdog
- 24 Months RTB warranty

Viditag™

Integrated CCTV & Access Control

"Connection OK"

"Access Denied"
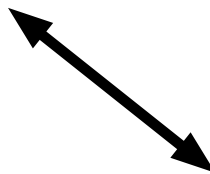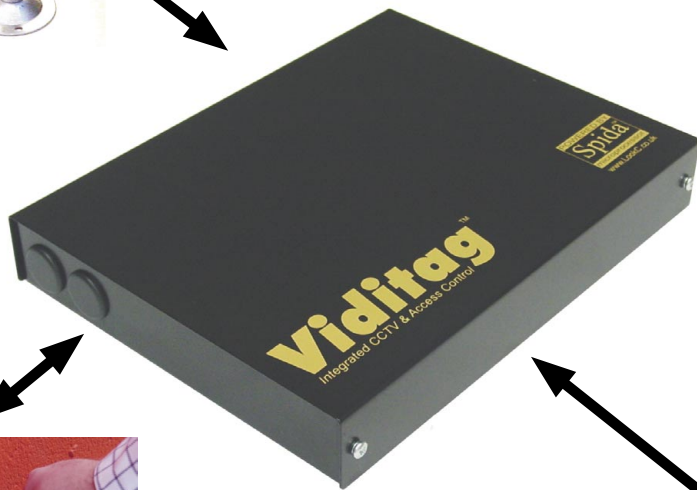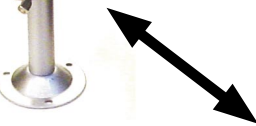
"Access OK"

NEW Viditag Access Control

Viditag is a new breed of access control system which is fully integrated with CCTV. You therefore have a video log of all door accesses, refusals and tag misuse. It can even send you an email with images when any tag is denied or a certain person enters the building.

The main method of subversion for proximity access control systems is masquerading - i.e. giving your tag to another unauthorised person for him to use. Where biometrics are resisted due to reliability or human rights reasons the integrated Viditag system provides the vital video audit log of accesses to back up the data used for time and attendance for example.

The Viditag system is fully web enabled allowing managers to administrate the system locally or remotely through the internet using the secure, encrypted web server embedded in the system.

- TCP/IP End to End - No serial links
- Access Control and CCTV in One System
- Immediate Visual Confirmation of Tag User
- Easy and intuitive to Use
- 7 Time Profiles
- 999 Tags per Door
- 2 Doors per Viditag Controller
- 16 Viditag Controllers per LookC
- Remote and Local Administration
- Alerts via email with Images Attached
- High Quality Evidence Grade Images
- Industry Standard Cameras
- Industry Standard Readers and Locks
- Industry Standard Network
- Quick Installation
- Fault Resilient Design
- Auto Discovery and Configuration
- Plug and Play Networked Controllers
- All of the benefits of LookC 4x4

Integrated CCTV & Access Control

Easy to Use

The Viditag system provides a local touchscreen (or alternatively standard monitor and keyboard) which gives you a fast and intuitive user interface where you can add new tag holders, suspend tag holders, review the access log events and manually override the door locks individually or collectively. The local monitor is so well laid out and simple to use that it reduces the amount of operator training required to a minimum.

Alerts via Email

Viditag allows the administrator to setup a series of alert patterns, when these patterns are matched then an alert is sent to your email account with images attached or alternatively to a secure monitoring station or your mobile phone as a picture message.

An alert pattern could be for example any 'denied access' event where someone has tried to access a secure area using a tag which does not allow them through. Alternatively you can use the system to send you an alert when a certain tag holder enters the building.

Web Enabled

The Viditag system is fully web enabled which means you can access the log and CCTV live image stream or recorded footage using a normal web browser. The web server inbuilt into each LookC system is fully encrypted and multi-level password protected so you can see the images and access control event log without fear that others can gain access to the system.

If you want to be able to remotely view images then you will need an ADSL connection and an appropriate router, both of which are available from LookC Ltd.

Remote and Local Admin

Viditag can be setup and maintained locally or remotely through the encrypted web interface. Administrators have the rights to configure different tags and change controller settings, whilst user rights can be limited to certain areas of the Viditag system

High Quality Images

The images generated by the LookC CCTV server are not only of the highest available quality but they are also individually signed by the server so that they can be used in court as evidence. The cryptographic signature proves the provenance and integrity of the image by printing a crypto code in the field of view of each image as well as embedding another code in the image file.

Industry Standard Cameras

Viditag uses industry standard PAL CCTV cameras and therefore you can be sure of compatibility for the future as well as the availability of a suitable camera for any situation.

Industry Standard Readers

The Viditag system design adopts the international Wiegand standard for readers ensuring compatiblity with the widest range of readers and keypads to suit any installation.

Ethernet Infrastructure

Since the Viditag controllers all have a native ethernet interface, installation is faster and more cost effective as existing ethernet cabling, outlets and switches can be used to provide the communications to the LookC server.

Other systems use old style, non-fault tolerant daisy chain serial buses and serial to ip converters which are complex and messy to install, provide little network security and are less reliable than straight forward ethernet enabled devices.

Easy Installation

Viditag is a true plug and play system, the controllers simply plug into the same network as the LookC server, they then auto-discover each other and announce that 'Communications are OK' using their inbuilt speech technology. This not only increases the speed of deployment but reduces time to locate problems. The LookC unit holds a pool of ip addresses which it will allocate to the Viditag controllers on start up, this Auto-IP function is like DHCP but will not interfere with an existing DHCP server.

Fault Resilient

There are a number of possible fault scenarios for a distributed system and the Viditag controllers have been designed to overcome these events without compromise to the system safety and security. If communications to the LookC server fail, the controller will carry on admitting people through the doors who have access rights for that time. If the controllers lose power and restart they will use a copy of the 'allowed' tags for each door from non-volatile memory.

LookC

Since the Viditag system has been built on the proven LookC platform, you can take for granted all of the high-end features of the LookC system, including - high strength encryption, multi-level user management, web enabled technology which is internet ready, proven reliability in the field, UK based providing excellent backup, NACOSS approved monitoring via secure servers and picture messaging to mobile phones in the event of an alert.

LookC provides you with all of these top grade features and benefits as you would expect from a world class leading CCTV system.

Casing

Viditag is supplied in a steel enclosure with 20mm holes in the top and bottom and through the back. There are dished mounting points for wall fixings and a 'keyhole' for quick location.

205mm · 40mm · 270mm
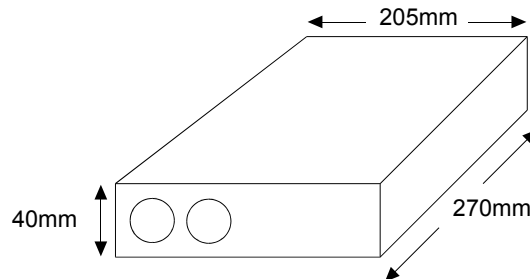
Specifications

Supply	12VDC (PSU supplied)
Power Consumption	150mA (without readers)
Reader Interface	Wiegand 12VDC
Reader Number	2
Reader Cable	6 core alarm cable
Reader Connector	Screw Terminal
Reader Distance	50m
Total Reader Power available	12VDC 250mA (fused)
Tags	999 per door
Tag Storage	Non-volatile Flash
Network Interface	Ethernet 10/100Mbit
Network Number	1
Network Cable	Cat5
Network Connector	RJ45
Network Distance	100m
Relay Contact Rating	48V 5A Max.
Compatible Lock Types	12VAC or DC, 24VAC or DC 48VAC or DC, up to 5A
Relay Number	2
Relay Cables	Alarm Cable (1A Max.) Use suitably rated equipment wire for higher current locks.
Relay Connection	Screw Terminal

Hints and Tips

Connecting Cables

LookC systems are mains powered whereas the cameras we supply require low voltage 12V DC. They require a mains outlet locally so a 12V power supply can be installed to power the cameras. The power supply units we provide have moulded mains plugs and low voltage 21.mm DC jacks so no cable junctions need to be made.

The video signal from the camera is low voltage, about 1V AC signal and therefore does not pose any danger but is susceptible to interference from other electromagnetic sources. This cable is normally shielded in a co-axial cable type and must have a characteristic impedance of 75 Ohms. It is not recommended to run camera cable for long distances close and parallel to other electrical cabling. Even a small proximity can have an exponential effect on reducing interference and cross-talk.

Video can be transmitted over different distances depending on the cable type;

Coax-Cable (75 Ohms)	max distance
Urm (flex)	250m
RG59 (coax)	250m
CT81 (low loss RG59)	350m
CT100 (low loss RG6)	450m
CT125	525m
CT167 (low loss RG11)	700m

The connector at the back of the camera will be either a BNC or a phono type. BNC is more common and crimp connectors and crimp tools are widely available to make-up these ends. LookC Limited can also supply 20m cable sets with camera packs to connect cameras to LookC units. These cable sets have moulded BNC connectors pre-made on each end.

Positioning LookC

It is important to take time when deciding where to position the LookC system before cabling begins. Here are some things to take into account:

1) The unit must be within a protected area (i.e. somebody would have to trigger a camera or a sensor in order to get to the LookC unit.)

2) The environment where the LookC unit is located must be clean, dry and cool.

3) Avoid positioning the unit in small cupboards or rooms without ventilation. The LookC system will dissipate several hundred Watts continuously as heat, so any enclosed space will warm up until eventually the system will shutdown.

4) LookC Pro ix system must be vertically wall mounted and where possible all cabling should be taken through the aperture at the rear of the unit.

Video Motion Detection (VMD)

All LookC systems have a VMD processor for each video channel. This compares the current image from a camera with the last. If a new object comes into the field of view it will trigger the system. To stop the system triggering around objects which are of no importance (e.g. cars moving up and down a road), LookC provides a mask for each camera. Mask the areas of the image which you are not interested in for them to be ignored by the system.

The nature of the triggers can be changed by imposing a double knock filter on the triggers in the 'Advanced Settings' section of software. Here, the number of triggers that are required within a certain time frame before a real trigger is posted, are defined. For example, a normal double knock setting would be 3 triggers within 10 seconds. This will greatly reduce the chance of false alarms.

Light Levels (LUX)

Every camera has a different sensitivity to light levels that is tested and expressed as the minimum LUX figure (i.e. the minimum amount of light required for the camera to work.) Light levels are normally measured using a light meter, but here is a rough guide to light levels;

50,000	Outdoors in British summer sunshine
5,000	Outdoors in overcast conditions
500	Indoor well lit office
300	Indoor minimum for easy reading
15	Outdoor under very good white street lighting
5	Outdoor with typical street lighting
1	Outdoor at twilight
0.3	Outdoor under full moon
0.0001	Outdoor under starlight

Most camera lenses have an automatic iris which limits the light level when conditions are too bright for the camera to work. This is controlled by the camera through a lead which plugs into the camera from the lens. Fixed lens cameras do this internally.

Pan Tilt and Zoom (PTZ)

PTZ units are a normally fitted where an on-site operator is available to actively steer the cameras and home in on trouble spots. The PTZ head can also be programmed to move to a certain preset position when a PIR is triggered for example and this of course is entirely autonomous.

If a PTZ solution is required it is recommended that the BBV TX1000 is used as this can be linked to the LookC systems and the PTZ cameras can be controlled via a web server from a remote location. Round trip times over the internet can make the PTZ camera difficult to control, but presets can be used quite effectively by this method.

Camera Lens Choices

Full bodied cameras allow different lens types to be added to get the required view. Fixed lens cameras are supplied with different lenses fitted to suit different applications.

The focal length is expressed for each lens type in millimetres, the lower the number the wider the angle of view. So a 1.6mm lens will be very wide angle and a 100mm lens will be very narrow angle or telephoto.

There are various lens pickers available, some are circular cards that allow you to compute the right lens for a particular situation. LookC provides a free online lens calculator to compute the right lens given the distance and size of the target. This is available on the www.lookc.co.uk website.

Here are some examples of the lenses needed in order to have a 2.5m object fill the width of the image at a given distance for a camera with a 1/3" imager.

Distance	Object size	Lens Size
2.5m	2.5m	4.8mm
5m	2.5m	9.6mm
10m	2.5m	19mm
20m	2.5m	38mm
25m	2.5m	48mm
50m	2.5m	96mm

To read the number plate of a car which is 2.5m wide at the other end of a car park which is 50m long a lens with a focal length of 96mm will be required.

It is now normal practice to simply use Varifocal lenses rather than try and pick the correct fixed focal length lens. So for example a 3 to 8mm Varifocal will cover most situations internally and a 5 to 55mm or 5 to 100mm Varifocal lens will cover most situations externally.

Site Surveys

It is important to ascertain the needs of your customer first and then to provide a site survey so both parties agree on the solution. It is best if these statements are in writing and signed off by both parties prior to installation.

Surveying Fundamentals

The most common problem we see when looking at poor installations stems from poor system design and surveying.

The main objectives of a CCTV system are;

1) To identify people or vehicles entering or leaving the protected area

2) To observe what those vehicles or individuals do in the protected area

A poor system design will attempt to fulfil these two objectives with just one camera. This is a false economy and will ultimately lead to poor customer satisfaction.

You must identify the entrances to the protected area and cover each one with

a camera and lens which frames that entrance so that a gate post or door post is just visible on each side of the image. See the examples of the two cameras used to effectively cover the site below.

The above identification camera clearly picks out the number plate, make model and colour of any vehicle entering or leaving the protected area. This is setup perfectly with one gatepost visible on each side of the video image.

The above observation camera does not allow identification of the vehicle or the occupants but does provide the vital information about what that vehicle does when in the protected area. Using both cameras the site has been properly covered and provides all the information the customer needs.

C and CS Mounting

There are two different lens types for full bodied cameras, C & CS. The full bodied cameras have a conversion ring fitted as standard to accept C mount lenses, therefore when using a CS mount lens you must remove the conversion ring from the front of the camera before fitting the lens.

If you do not remove this ring then you will be unable to get the lens to focus properly.

Connecting LookC units to a Network (LAN)

Each unit has its own web server that allows a number of users on a network access to live and recorded images using a normal web browser. The unit has an inbuilt ethernet port that allows it to be plugged directly into a LAN socket.

The LookC's IP address can not already be in use on the network on another computer. Consult the site IT manager before plugging the unit into the network. If no IT manager is available the networking section of the full LookC manual supplied on CD with each unit will provide the necessary information.

Connecting LookC units to the Internet

To connect units to the Internet so they can serve a web page to the internet the following items are required:

1) A broadband connection (e.g. ADSL, Cable)
2) A router with ethernet ports (LookC Limited supplies pre-configured ADSL routers)

LookC Limited can supply ADSL services, please call us for pricing and service availability.

LookC Ltd

C3, The Waterfront
Newburn Riverside
Newcastle upon Tyne
NE15 8NY

Tel: 0191 229 5720
Fax: 0191 229 5730

email: sales@lookc.co.uk
web: www.lookc.co.uk

LookC 4x4

The LookC 4x4 is the most popular LookC system ever. It combines an easy to use local monitor viewer with straightforward controls to review recorded footage, burn footage to the inbuilt CD Recorder and change the configuration.

The LookC 4x4 has 4 camera inputs as standard and this can be expanded to 16 using four Quad Exteneders. The Quad Extenders turn a single four frame per second channel in to four one frame per second channels.

The LookC comes pre-configured for four cameras and you can connect it and be recording in seconds.

As with the larger LookC Pro IX systems the LookC 4x4 signs every image using it own unique private key. This signature is printed in the field of view at the bottom of every image. This means that you can use the images in court as you can prove that the images were written by a particular server and have not been altered since being recorded.

The LookC 4x4 is also a fully functioning web server with SSL encryption so it can be used with confidence on an ADSL line and accessed from any web browser anywhere in the world.

Case Dimensions 410x325x105.

LOOKC 4X4	DESCRIPTION	PART CODE
	LookC 4x4 - no monitor, single 250Gb hard disc, 1 month	K5800
	LookC 4x4 - 17" CRT monitor, single 250Gb hard disc, 1 month	K5801
	LookC 4x4 - 15" TFT monitor, single 250Gb hard disc, 1 month	K5802
	LookC 4x4 - 15" Touchscreen TFT monitor, single 250Gb hard disc, 1 month	K5808
	LookC 4x4 - 17" TFT monitor, single 250Gb hard disc, 1 month	K5803
	LookC 4x4 - 19" TFT monitor, single 250Gb hard disc, 1 month	K5804
	LookC 4x4 - 19" CRT monitor, single 250Gb hard disc, 1 month	K5805
	LookC 4x4 - 22" CRT monitor, single 250Gb hard disc, 1 month	K5806
	LookC 4x4 - 42" Plasma monitor, single 250Gb hard disc, 1 month	K5807
	LookC 4x4 - 19 inch Rack Mount version, no monitor, single 250Gb hard disc, 1 month	K5821
	LookC 4x4 - 19 inch Rack Mount version, no monitor, multi drive 500Gb, 56 days.	K5831
	LookC 4x4 - 19 inch Rack Mount version, no monitor, multi drive 750Gb, 84 days.	K5841
	LookC 4x4 Quad Extender - allows four cameras to be plugged into a single LookC 4x4 channel. Requires v3.08 software revision or higher, software update CD's are available.	K5812
	LookC 4x4 15" Touchscreen TFT Upgrade - Plug in replacement monitor and software for existing monitor. LookC 4x4 serial number must be supplied with order.	K5907

	LookC 4x4 External Patch Panel - allows four video inputs and four trigger inputs to be connected to one LookC 4x4 channel.	K5818
	LookC 4x4 PTZ Software Plugin to control BBV TX1000 controller. Serial comms lead included.	K7123
	LookC 4x4 Fan Maintenance Kit, includes 2 fans and replacment security tag. Tag must be registered with LookC for warranty.	K5891

Archive Days

The number of Archive days quoted for each system is a guide to the number of days a recording will exist on the server before being overwritten by new images. This has been calculated for nominal conditions and may vary widely depending on image content and user settings in the LookC 4x4 system. Using Event mode as opposed to Continuous Mode will significantly elongate the recording time in almost all cases.

LookC 4x1

The LookC 4x1 is a smaller and lower cost version of the best-selling LookC 4x4. It has all of the major features of the 4x4 but with a maximum of 4 cameras.

Case Dimensions 410x325x105mm

LOOKC 4X1	DESCRIPTION	PART CODE
	LookC 4x1 - no monitor, single 250Gb hard disc, 1 month	K5720
	LookC 4x1 - 17" CRT monitor, single 250Gb hard disc, 1 month	K5721
	LookC 4x1 - 15" TFT monitor, single 250Gb hard disc, 1 month	K5722
	LookC 4x1 - 15" Touchscreen TFT monitor, single 250Gb hard disc, 1 month	K5724
	LookC 4x1 - 17" TFT monitor, single 250Gb hard disc, 1 month	K5723

Archive Days

The number of Archive days quoted for each system is a guide to the number of days a recording will exist on the server before being overwritten by new images. This has been calculated for nominal conditions and may vary widely depending on image content and user settings in the LookC 4x1 system. Using Event mode as opposed to Continuous Mode will significantly elongate the recording time in almost all cases.

LookC Accessories

LOOKC ACCESSORIES	DESCRIPTION	PART CODE
	Dlan Network Kit - comprises two mains adaptors which will transmit ethernet using the ring main cabling. Both sockets must be on the same mains phase. Sustained data rates of 300 Kbit/sec were seen in practice.	K5410
	Version 2 to Version 3 Hardware Upgrade Kit	K7008

	APC Line-R 600. 600W power conditioner for use in industrial areas or areas where there is likely to be fast transient power surges on the mains supply. Fit in any situation where there are high inductance, high inrush current or three phase loads nearby.	K4412
	Inactivity Monitor plugin license for specified LookC 4x4 or Pro ix	K5824
	Modem for PSTN dial-in. Allows a support engineer or customer to dial-in over a normal telephone line.	K4503
	Cat5 UTP Patch Cable, 3m.	K4502
	Cat5 UTP Patch Cable 'crossover' type colour coded red, 3m.	K4501
	Ethernet Switch, 8 port, 10/100 autoswitching.	K5404

Viditag Access Control

Viditag Access Control keeps track of who used which access tag and when by linking video recordings with a database of access tag usage and displaying the images next to the library image of that tag holder on the LookC system.

The system comprises of a software plugin for the LookC 4x4 or LookC Pro ix unit and up to sixteen Viditag door controllers. Tag holders can be added, suspended and their details edited using the local monitor touchscreen or via the web interface over the network. Equally the usage history of each tag holder can be seen using the local monitor or through the web.

Viditag Access Control has a system of door groups or security levels so that new tag holders can be given access to all of the necessary doors with one click. Each door controller can have two readers for two separate doors or for both ways on one door. Each controller can operate indepedently if the network connection to the LookC unit is down and contains a 'white list' of 999 tags in non-volatile memory. So even if the network fails and the power browns out the door will still be accessible using the tags already programmed in.

The Viditag Access Control system 'auto discovers' the door controllers when they are plugged into the same ethernet network, therefore installation and configuration is very straightforward.

VIDITAG ACCESS CONTROL	DESCRIPTION	PART CODE
	Viditag Access Control software plugin for the LookC 4x1, to interface to the Viditag Access Controllers. Up to 4 two door controllers can be networked with each LookC 4x1	K5706
	Viditag Access Control software plugin for the LookC 4x4 & LookC Pro IX, to interface to the Viditag Access Controllers. Up to 16 Controllers can be networked with each LookC.	K2100
	Viditag Access Controller. 2 door, stores 999 tags per door, steel enclosure with 12VDC 1A PSU. Interfaces to Wiegand readers. It is not advisable to use the controller's PSU to drive electromagnetic locks. Ethernet connection to LookC.	K2120
	Stainless Steel Access Control Reader, can be used externally or internally. Max cable distance to controller 50m. Cable type 8-core alarm cable.	K2130
	Access Control Proximity cards. Pack of 10.	K2110

	Access Control Proximity key-fobs. Pack of 10.	K2111
	Small stainless push to exit, flush mount, single gang.	K2027
	Green Dome push to exit, flush mount, single gang.	K2025
	4" Large stainless push to exit with surface back box.	K2026
	300Kg fail open magnetic lock complete with Z and L mounting kits.	K2112
	12V fail open, mortice lock or 'Rim Lock' suitable for Yale type locks. This lock is secure when 12V is applied to the input terminals.	K2114
	12VDC 2A Power supply. Wall mounted in steel enclosure with indicator LED's.	K2113

		K2028
	Green Break Glass emergency door release.	K2028

LookC Monitoring Software

LookC Monitoring LITE is a new package for cost effective monitoring of LookC systems. Using our extensive knowledge of professional monitoring stations, we have created a monitoring solution which is smaller scale and less expensive to deploy than the enterprise scale secure server solutions. The new package is aimed primarily at large organisations who wish to perform their own internal monitoring function.

The package is written for Windows 2000 & XP and provides a polling monitoring system for LookC V3 systems. The solution can be deployed effectively over ADSL connections upwards and does not have an upper limit on the total number of systems monitored, however there is a practical limit since the monitoring application uses the polling method rather than the interrupt type for the full blown secure server setup. LookC Monitoring LITE will pick up system default alerts or any user event type which has been created. The system also monitors the telecoms and will report any comms failure. The polling messages are fully encrypted with industry 128bit SSL as part of the LookC's PKI (Public Key Infrastructure) cryptography.

LOOKC MONITORING SOFTWARE	DESCRIPTION	PART CODE
	LookC Monitoring LITE - monitoring control room software for LookC systems, runs on Windows 2000 & XP. 12 month licence for monitoring 1 LookC system.	K9301
	LookC Monitoring LITE - monitoring control room software for LookC systems, runs on Windows 2000 & XP. 12 month licence for monitoring 3 LookC systems.	K9303
	LookC Monitoring LITE - monitoring control room software for LookC systems, runs on Windows 2000 & XP. 12 month licence for monitoring 5 LookC systems.	K9305
	LookC Monitoring LITE - monitoring control room software for LookC systems, runs on Windows 2000 & XP. 12 month licence for monitoring 10 LookC systems.	K9310
	LookC Monitoring LITE - monitoring control room software for LookC systems, runs on Windows 2000 & XP. 12 month licence for monitoring 20 LookC systems.	K9320

LookC Annual Service Packs

LOOKC ANNUAL SERVICE PACKS	DESCRIPTION	PART CODE
	LookC Software Service Pack. This Service Pack provides telephone support, software updates and remote software maintenance over dial-up or broadband link. 12 months cover.	K1900
	LookC ADSL 250 Service Pack. This Service Pack provides a 250Kb ADSL service. Pre configured router, telephone and remote support. For compatible BT telephone lines. 12 months.	K1905
	LookC Software & Hardware Service Pack. This Service Pack provides telephone support, software updates, configuration backup, remote software maintenance and hardware advance replacement by courier within 3 working days, carriage paid by LookC. 12 months	K1901
	LookC Software & Hardware OnSite Service Pack. This Service Pack provides telephone support, software updates, remote software maintenance and hardware advance replacement by on site engineer within 2 working days. 12 months cover.	K1902
	LookC Software & Hardware OnSite 24-7 Service Pack. This Service Pack provides telephone support, software updates, remote software maintenance and hardware advance replacement next working day by on site engineer. 12 months cover.	K1904
	Call out charge for an engineer in England. (this cost is included in service packs K1902 K1904).	K1910
	Hourly Rate for on-site engineer. (this cost is included in service packs K1902 K1904).	K1911

LookC EPOS

The LookC EPOS system gives better control of 'over the counter' POS fraud that now costs retailers around £2.7Bn a year.

The LookC EPOS CCTV system connects up to four ECR's per unit and as many LookC EPOS systems as required can be attached to a local or wide area network.

The system provides transaction data that is searchable, allowing easy identification of any product, price, operator combination and then the ability to review the video of these transactions.

The system can be configured to provide active alerts when suspect transactions are made as well as generating online live reports covering everything from no-sales statistics to stock checking.

There is a full brochure at http://www.lookc.co.uk/

LOOKC EPOS	DESCRIPTION	PART CODE
	LookC 4x4 EPOS with 17" CRT monitor, 250Gb hard disc, CDR, 1 month	K5871
	LookC 4x4 EPOS with 15" LCD monitor, 250Gb hard disc, CDR, 1 month	K5872
	LookC 4x4 EPOS with 15" touchscreen TFT, 250Gb hard disc, CDR, 1 month	K5873
	LookC 4x4 EPOS package including four cameras (K4169) with 5 to 40mm varifocal lenses, brackets, power supplies, four serial converters	K5826
	Geller APDVEC1 Serial Vectron Pos Mini Adapter. Converts the Geller/Vectron RJ45 connection from the ECR to a standard 9 pin serial D type.	K5819
	LookC 4x4 EPOS software plugin, to acquire data from ECR's and EPOS systems and store in extened database with video data. (Does not include K5817 for serial Tills)	K5816
	LookC 4x4 Serial to IP converter for use with LookC 4x4 EPOS	K5817
	LookC 4x1 EPOS software plugin, to acquire data from ECR's and EPOS systems and store in extened database with video data. (Does not include K5817 for serial Tills)	K5705

LookC Demonstration Systems

LOOKC DEMONSTRATION SYSTEMS	DESCRIPTION	PART CODE
	LookC 4x4 - Demo Unit with four cameras, 17" CRT monitor and integral literature stand, software defaults to 'demo' mode on switch on.	K5810
	LookC 4x4 - Demo Unit with four cameras, 15" TFT monitor and integral literature stand, software defaults to 'demo' mode on switch on.	K5809
	LookC 4x4 - Demo Unit with four cameras, Touchscreen 15" TFT monitor and integral literature stand, software defaults to 'demo' mode on switch on.	K5827

	LookC 4x4 Portable Demo System	K5828
	LookC 4x4 EPOS - Demo Unit with four cameras, 15" TFT monitor and integral literature stand, software defaults to 'demo' mode on switch on. Complete with EPOS software.	K5835

LookC AV

The LookC AV system records from 1 camera and 1 audio input at very high quality and frame rate.

The system is designed to be deployed in clusters on a network giving secure web access to recordings to authorised users only.

Typical applications of LookC AV are generally where there is a risk of physical or verbal abuse to staff or where there may be fast moving events and when there is a need to have more management information about customer and employee behaviour. Some examples are: Hospital A&E Desks, Casino Tables, Council Rent Offices, Point of Sale situations, fast food outlets.

LOOKC AV	DESCRIPTION	PART CODE
	LookC AV single channel, full motion video and audio, desktop case, 250Gb storage with CDR. Typical recording duration of 20 days.	K5751
	LookC AV single channel, full motion video and audio, desktop case, 400Gb storage with CDR. Typical recording duration of 31 days.	K5752
	LookC AV single channel, full motion video and audio, 1U 19in rack case, 250Gb storage with CDR. Typical recording duration of 20 days.	K5756
	LookC AV single channel, full motion video and audio, 1U 19in rack case, 400Gb storage with CDR. Typical recording duration of 31 days.	K5757
	Condenser omni-directional mic with pre-amp for use with LookC AV.	K5754

LookC Pro ix

The **LookC Pro ix** is a professional CCTV server. It records from up to 16 channels simultaneously at a rate of 1 frame per second with up to 4 frames per second in burst mode. Each image is compressed and cryptographically signed before being stored in the archive on the internal hard drive.

The images are automatically over-written with the latest recordings when the drive becomes full. The major advantage here is that no tapes have to be changed or drives removed. The system is self contained and requires no human intervention in the normal course of continuous recording.

This unit can also be configured in Event Mode where it only records images when there is movement in a camera's field of view or when a hardware or user trigger has been activated.

The LookC Pro ix has hardware trigger inputs for each video channel that are compatible with standard alarm sensors and sensor loops. Therefore a PIR or door contact can be used to automatically 'mark' video footage when triggered. These can also drive events with software configurable actions, such as operating an output relay, sending an email with attached images, uploading video footage to a secure monitoring station or simply storing this footage locally or off-site.

LOOKC PRO IX	DESCRIPTION	PART CODE
	LookC Pro ix - 4 channel, single drive 250Gb hard disc, 30 days	L0430
	LookC Pro ix - 4 channel, multi drive 500Gb hard disc, 60 days	L0460
	LookC Pro ix - 4 channel, multi drive 750Gb hard disc, 90 days	L0490
	LookC Pro ix - 8 channel, single drive 250Gb hard disc, 15 days	L0815
	LookC Pro ix - 8 channel, multi drive 500Gb hard disc, 30 days	L0830
	LookC Pro ix - 8 channel, multi drive 750Gb hard disc, 45 days	L0845
	LookC Pro ix - 12 channel, single drive 250Gb hard disc, 10 days	L1210
	LookC Pro ix - 12 channel, multi drive 500Gb hard disc, 20 days	L1220
	LookC Pro ix - 12 channel, multi drive 750Gb hard disc, 30 days	L1230

	LookC Pro ix - 16 channel, single drive 250Gb hard disc, 7 days	L1607
	LookC Pro ix - 16 channel, multi drive 500Gb hard disc, 15 days	L1615
	LookC Pro ix - 16 channel, multi drive 750Gb hard disc, 22 days	L1622
	LookC Pro ix Plug In Software and comms lead for BBV TX1000 compatible PTZ controller.	K7123
	LookC Pro ix site plan drawing service	K9203
	Four channel upgrade for 4, 8 and 12 channel LookC Pro ix units.	K7004

Archive Days

The number of Archive days quoted for each system is a guide to the number of days a recording will exist on the server before being overwritten by new images. This has been calculated for nominal conditions and may vary widely depending on image content and user settings on the LookC pro ix system. Using Event mode as opposed to Continuous Mode will significantly elongate the recording time in almost all cases.

LookC Pro ix Rack Mount

LOOKC PRO IX RACK MOUNT	DESCRIPTION	PART CODE
	LookC Pro ix - 4 channel, 19in rack mount, multi drive 1000Gb hard disc, 120 days	LRM04120
	LookC Pro ix - 8 channel, 19in rack mount, multi drive 1000Gb hard disc, 60 days	LRM0860
	LookC Pro ix - 12 channel, 19in rack mount, multi drive 1000Gb hard disc, 40 days	LRM1240
	LookC Pro ix - 16 channel, 19in rack mount, multi drive 1000Gb hard disc, 30 days	LRM1630

LookC Training

LOOKC TRAINING	DESCRIPTION	PART CODE
	LookC Certified Installer Course - 1 day	K9101
	General CCTV 1 day course (based on a group of 10)	K9102
	LookC Central Station Operator Course 1 day (based on a group of 10)	K9103

Routers

ROUTERS	DESCRIPTION	PART CODE
	ISDN Router	K5501
	Router Reboot Lead, for use with LookC Pro ix models only.	K4500
	ADSL Router with inbuilt 4 way ethernet switch. (Includes one Splitter Filter K5504)	K5503

	ADSL splitter and filter. This plugs into a standard BT socket and provides a filtered BT socket and an RJ11 for the ADSL router. One of these is supplied with our ADSL routers as standard.	K5504

RF Video Transmitters

RF Video transmitters send video across open ground without any cabling. They require line of site between the sender and the receiver units. If there are structures in the transmission path the performance will be degraded or may not work at all if the construction is metal.

RF VIDEO TRANSMITTERS	DESCRIPTION	PART CODE
	IP65 External Video transmitter and receiver pair. Range 300m Max under perfect line of site conditions. Baseband 1.3Ghz. Pack includes 2 x antennae and 2 x PSU. You can have one 1.3Ghz receiver and transmitter working on the same site.	K2200
	IP65 External Video transmitter and receiver pair. Range 300m Max under perfect line of site conditions. Baseband 2.4Ghz. Pack includes 2 x antennae and 2 x PSU. You can have four sets of 2.4Ghz receiver and transmitter working on the same site.	K2201
	IP65 External Video transmitter and receiver pair. Range 300m Max under perfect line of site conditions. Baseband 5.8Ghz. Pack includes 2 x antennae and 2 x PSU. You can have twelve sets of 5.8Ghz receiver and transmitter working on the same site.	K2202

Camera Packs

The LookC camera packs are the most popular cameras from the camera sections below packaged with power supply, 20m BNC to BNC lead and lens. This provides you with everything you need for an installation with LookC 4x4.

CAMERA PACKS	DESCRIPTION	PART CODE
	Camera Pack consisting of: Silver Bullet Colour Camera 330 TVL with 4.0mm lens K4126, power supply unit K4401, 20m BNC to BNC lead K4505.	K4701
	Camera Pack consisting of: Silver Bullet Colour Camera 330 TVL with 6.0mm lens K4122, power supply unit K4401, 20m BNC to BNC lead K4505.	K4702
	Camera Pack consisting of: Silver Bullet Colour Camera 330 TVL with 8.0mm lens K4123, power supply unit K4401, 20m BNC to BNC lead K4505.	K4703
	Camera Pack consisting of: Silver Bullet Colour Camera 480 TVL with 4.0mm lens K4134, power supply unit K4401, 20m BNC to BNC lead K4505.	K4705

	Camera Pack consisting of: Silver Bullet Colour Camera 480 TVL with 6.0mm lens K4135, power supply unit K4401, 20m BNC to BNC lead K4505.	K4706
	Camera Pack consisting of: Silver Bullet Colour Camera 480 TVL with 8.0mm lens K4136, power supply unit K4401, 20m BNC to BNC lead K4505.	K4707
	Camera Pack consisting of: Colour Dome Camera 480 TVL with 4.0mm lens K4164, power supply unit K4401, 20m BNC to BNC lead K4505.	K4710
	Camera Pack consisting of: Colour Dome Camera 480 TVL with 6.0mm lens K4165, power supply unit K4401, 20m BNC to BNC lead K4505.	K4711
	Camera Pack consisting of: Colour Dome Camera 480 TVL with 8.0mm lens K4162, power supply unit K4401, 20m BNC to BNC lead K4505.	K4712
	Camera Pack consisting of: Colour Dome Camera 480 TVL with 4 to 8mm varifocal lens K4161, power supply unit K4401, 20m BNC to BNC lead K4505.	K4713
	Camera Pack consisting of: Colour Day Night Camera 480 TVL with IR and 4.3mm lens K4145, power supply unit K4401, 20m BNC to BNC lead K4505.	K4720
	Camera Pack consisting of: Colour Day Nigth Camera 480 TVL with IR and 6.0mm lens K4146, power supply unit K4401, 20m BNC to BNC lead K4505.	K4721
	Camera Pack consisting of: Colour Day Night Full Body Camera 420 TVL K4168 with varifocal 3 to 8mm lens K4235, Bracket K4323, power supply unit K4401, 20m BNC to BNC lead K4505.	K4730

	Camera Pack consisting of: Colour Day Night Full Body Camera 420 TVL K4168 with varifocal 3 to 8mm lens K4235, power supply unit K4409, 20m BNC to BNC lead K4505 and heated housing K4307 and bracket K4310.	K4731
	Camera Pack consisting of: Colour Day Night Full Body Camera 420 TVL K4168 with varifocal 5 to 55mm lens K4255, power supply unit K4409, 20m BNC to BNC lead K4505 and heated housing K4307 and bracket K4310.	K4732
	Camera Pack consisting of: Colour Day Night Full Body Camera 420 TVL K4168 with varifocal 5 to 55mm lens K4255, power supply unit K4401, 20m BNC to BNC lead K4505 and bracket K4323.	K4733
	Camera Pack consisting of: Colour Day Night Full Body Camera 480 TVL K4169 with varifocal 5 to 55mm lens K4255, power supply unit K4409, 20m BNC to BNC lead K4505 and heated housing K4307 and bracket K4310.	K4750
	Camera Pack consisting of: Colour Day Night Full Body Camera 480 TVL K4169 with varifocal 5 to 55mm lens K4255, power supply unit K4401, 20m BNC to BNC lead K4505 and bracket K4323.	K4751
	Camera Pack consisting of: Colour Vandal Resistant, Day Night, Dome Camera 480 TVL with 4.3mm lens K4170, power supply unit K4401, 20m BNC to BNC lead K4505.	K4760
	Camera Pack consisting of: Colour Vandal Resistant, Day Night, Dome Camera 480 TVL with 6mm lens K4171, power supply unit K4401, 20m BNC to BNC lead K4505.	K4761
	Camera Pack consisting of: Colour Vandal Resistant, Day Night, Dome Camera 480 TVL with varifocal 4 to 8mm lens K4172, power supply unit K4401, 20m BNC to BNC lead K4505.	K4762

	Camera Pack consisting of: Colour Full Body 1/2", 580 TVL K4155 with varifocal 6.5 to 52mm lens K4246, power supply unit K4409, 20m BNC to BNC lead K4505, heated housing K4307 and bracket K4310.	K4770
	Camera Pack consisting of: Colour Full Body 1/2", 580 TVL K4155 with varifocal 6.5 to 52mm lens K4246, power supply unit K4401, 20m BNC to BNC lead K4505 and bracket K4323.	K4771

Camera Pack Accessories

CAMERA PACK ACCESSORIES	DESCRIPTION	PART CODE
	BNC to BNC barrel connector. Connects two BNC terminated cables (K4505) together.	K4790
	20m video cable with BNC connectors on each end	K4505

Full Body Colour Cameras

FULL BODY COLOUR CAMERAS	DESCRIPTION	PART CODE
	1/2" Low Light camera with Enhancer, 580 TVL.	K4155
	1/3" Day/Night camera, 420 TVL.	K4168
	1/3" Day/Night camera, 480 TVL.	K4169

NOTES:

All cameras in this section have C and CS lens mounting options using adaptor rings and are compatible with video and direct drive iris lenses.

Direct Drive Lenses

DIRECT DRIVE LENSES	DESCRIPTION	PART CODE
	1/3" varifocal lens, 1.6 to 3.4mm, CS Mount.	K4242
	1/3" varifocal lens, 3.0 to 8.0mm, CS Mount.	K4235
	1/3" varifocal lens, 2.9 to 10.0mm, CS Mount.	K4253
	1/3" varifocal lens, 5.0 to 55mm, CS Mount.	K4255
	1/3" varifocal lens, 5.0 to 100.0mm, CS Mount.	K4254
	1/2" varifocal lens, 4.0 to 10.0mm, CS Mount.	K4244

	1/2" varifocal lens, 6.0 to 13.0mm, C Mount.	K4245
	1/2" varifocal lens, 6.5 to 52.0mm, C Mount.	K4246

Fixed Lens Colour Cameras

FIXED LENS COLOUR CAMERAS	DESCRIPTION	PART CODE
	Anti-vandal, 4.3mm lens, 380 TVL. Suitable for internal or external use.	K4150
	Anti-vandal, 6.0mm lens, 380 TVL. Suitable for internal or external use.	K4151
	Anti-vandal, 8.0mm lens, 380 TVL. Suitable for internal or external use.	K4153
	Day/night with Infra Red illumination, 4.3mm lens, 480 TVL. Suitable for internal or external use.	K4145
	Day/night with Infra Red illumination, 6.0mm lens, 480 TVL. Suitable for internal or external use.	K4146
	High resolution, 'silver bullet', 4.0mm lens, 480 TVL. Suitable for internal or external use.	K4134
	High resolution, 'silver bullet', 6.0mm lens, 480 TVL. Suitable for internal or external use.	K4135
	High resolution, 'silver bullet', 8.0mm lens, 480 TVL. Suitable for internal or external use.	K4136
	Standard resolution 'Silver Bullet', 4.0mm lens, 330 TVL. Suitable for internal or external use.	K4126
	Standard resolution 'Silver Bullet', 6.0mm lens, 330 TVL. Suitable for internal or external use.	K4122
	Standard resolution 'Silver Bullet', 8.0mm lens, 330 TVL. Suitable for internal or external use.	K4123

Dome Colour Cameras

DOME COLOUR CAMERAS	DESCRIPTION	PART CODE
	High resolution dome camera, 4 to 8mm varifocal lens, 480 TVL. Suitable for internal use.	K4161
	High resolution dome camera, 8.0mm C mount lens, 480 TVL. Suitable for internal use.	K4162
	High resolution dome camera, 6.0mm C mount lens, 480 TVL. Suitable for internal use.	K4165
	High resolution dome camera, 4.0mm C mount lens, 480 TVL. Suitable for internal use.	K4164
	1/3" SuperTuff anti-vandal, day/night fixed dome camera with infra red illumination, 4.3mm lens, 480 TVL. Suitable for internal or external use.	K4170
	1/3" SuperTuff anti-vandal, day/night fixed dome camera with infra red illumination, 6.0mm lens, 480 TVL. Suitable for internal or external use.	K4171
	1/3" SuperTuff anti-vandal fixed dome camera, 4.0 to 8.0mm varifocal lens, 480 TVL. Suitable for internal or external use.	K4172

Power Supply Units

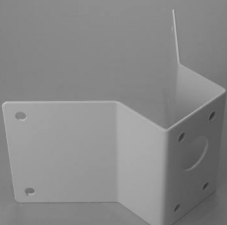| POWER SUPPLY UNITS	DESCRIPTION	PART CODE
	12V, 500mA, inline camera PSU with 2.1mm DC jack.	K4401
	Video and Power camera lead adaptor.	K4402
	DC power lead with moulded 2.1mm jack on one end, length 1.5m.	K4403

	12V, 400mA PSU to fit inside K4305.	K4404
	12V, 400mA PSU to fit inside K4306.	K4405
	12V, 400mA PSU to fit inside K4308 and K4309.	K4406
	12V, 400mA PSU to fit inside K4316 and K4317.	K4408
	12V, 400mA PSU to fit inside K4307 and K4337.	K4409
	12V, 1A metal cased PSU	K4410
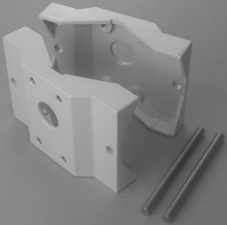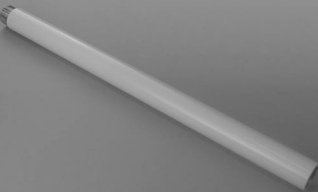
Housings

HOUSINGS	DESCRIPTION	PART CODE
	External aluminium housing, IP66 rating, top opening, 240V heater, length 300mm.	K4305
	External aluminium housing, IP66 rating, 240V heater, length 300mm.	K4338
	External polycarbonate housing, IP66 rating, 240V heater, length 420mm.	K4307
	External polycarbonate housing, IP66 rating, 240V heater, length 360mm.	K4337
	Internal vandal resistant ceiling mount housing.	K4308

	Internal vandal reistant corner mount housing.	K4309

Housing Brackets

HOUSING BRACKETS	DESCRIPTION	PART CODE
	External with cable management for use with K4305 and K4307.	K4310
	External general pupose housing bracket.	K4311
	External column bracket for use with K4305 and K4306	K4312
	Corner mount bracket for use with K4310 and K4311.	K4313

	Pole mount bracket for use with K4310 and K4311	K4314
	Reinforcing Support Plate and waterproof junction box.	K4315
	Ceiling mount bracket with cable management.	K4320
	Ceiling mount bracket for use with K4306.	K4321
	500mm extension bracket for use with K4320 and K4321.	K4322

Internal Camera Brackets

INTERNAL CAMERA BRACKETS	DESCRIPTION	PART CODE
	Aluminium internal bracket with pan and tilt adjustment.	K4323
	Polycarbonate internal bracket with pan and tilt adjustment.	K4324
	Black polycarbonate internal bracket with ball joint, telescopic adjustable from 125 to 190mm.	K4332

Monitors

MONITORS	DESCRIPTION	PART CODE

	17" CRT VGA Black Monitor. Includes onsite warranty by manufacturer.	K5902
	15" TFT VGA Black Monitor. Includes onsite warranty by manufacturer.	K5903
	15" Touchscreen TFT Monitor	K5907
	17" TFT VGA Black Monitor. Includes onsite warranty by manufacturer.	K5905

	2 channel SVGA video splitter for attaching up to two monitors to LookC systems	K5401
	4 channel SVGA splitter for attaching up to 4 monitors to a LookC system	K5405
	2 metre video cable for K5401	K5402
	10 metre monitor extension for K5401	K5403
	25 metre monitor extension for K5401	K5408
	30m USB extender for use with touchscreen monitors. Comprises of two units, one at each end which convert the USB signals for transmission over Category 5 UTP cabling (not supplied).	K5420
	Tilt & Turn wall mount bracket for 15" TFT monitors	K5834

Additional longer VGA extension cables can be made to order up to 65m in length. Please call sales with your requirements.

Video Amplifiers

VIDEO AMPLIFIERS	DESCRIPTION	PART CODE
	1 in 8 out	K7115
	4 in 8 out	K7104

UK POLICE REQUIREMENTS FOR DIGITAL CCTV SYSTEMS

This document offers guidance to potential users of digital CCTV systems, where the pictures are intended to be used by the police or are likely to be used in an investigation. For CCTV recordings to be effective in detecting and investigating crime they must be fit for purpose and easily accessible by police investigators. For digital CCTV there are four main areas that must be considered:

QUALITY - are the pictures good enough?

STORAGE - are the pictures stored appropriately?

EXPORT - can the pictures be easily exported from the system?

PLAYBACK - can the pictures be easily viewed by authorised third parties?

By ensuring that your digital CCTV system is capable of meeting a few simple requirements, the potential evidential value of the pictures can be greatly increased and the time taken by the police to access and process them greatly reduced. Supporting notes are provided on the reverse of this sheet to clarify the requirements.

QUALITY WHAT RESOLUTION? WHAT COMPRESSION? HOW MANY PICTURES PER SECOND?

1. Specify your requirement - decide what you want to see and where, and select a system that will do it.
2. View the recorded pictures or print out, not the live screen, to assess the system performance.
3. The system clock should be set correctly and maintained (taking account of GMT and BST).
4. Picture quality should not be reduced to fit the available storage capacity of the system.
5. Regular maintenance should be conducted on all aspects of the system.

STORAGE WHAT SHOULD I KEEP? HOW SHOULD I KEEP IT?

6. The system should be operated and recorded pictures retained in a secure environment.
7. Electronic access controls, such as passwords or encryption, should not prevent authorised access to the system or recordings.
8. The system should have sufficient storage capacity for 31 days good quality pictures.
9. The system should be capable of securing relevant pictures for review or export at a later date.

EXPORT HOW MUCH VIDEO SHOULD THE SYSTEM EXPORT AND IN WHAT FORMAT?

10. A system operator should be available who is able to replay and export recordings.
11. A simple system operator's manual should be available locally to assist with replay and export.
12. The operator should know the retention period of the system and export time for various amounts of data.
13. The system should be able to quickly export video and stills to a removable storage-medium, with time and date integral to the relevant picture.
14. Export should include any software needed to view or replay the pictures.
15. The system should have an export method proportionate to the storage capacity.
16. Pictures should be exported in the native file format at the same quality that they were stored on the system.

PLAYBACK CAN THE PICTURES BE EASILY VIEWED?

17. The playback software should:
    - have variable speed control including frame by frame, forward and reverse viewing;
    - display single and multiple cameras and maintain aspect ratio i.e. the same relative height and width;
    - display a single camera at full resolution;
    - permit the recording from each camera to be searched by time and date;
    - allow printing and/or saving (e.g. bitmap) of pictures with time and date.
18. The time and date associated with each picture should be legible.
19. Once exported to removable media it should be possible to replay the files immediately.

Supporting Notes:

QUALITY - are the pictures good enough?

1. Before installing a CCTV system you should have a clear idea of what you want the system to do and how it should perform. This should include exactly what you want to see and where, e.g. recognise the face of someone walking through a doorway, read a vehicle registration number or record a particular type of activity, such as walking across a room, exchange of money or an assault. More detailed guidance on how to do this can be found in PSDB publication 17/94 CCTV Operational Requirements Manual. This is available free from the Home Office website. http://www.homeoffice.gov.uk/docs/or_manual.pdf

   There are no definitive performance criteria for video to be legally admissible. It is for the court to decide whether the pictures are accepted, and this is done on the grounds of relevance to the case, reliability of the evidence, etc. The appropriate resolution, level of compression and number of pictures per second will be determined by what you wish to see in the recording. If you can't see it then it's not fit for purpose. It should not be expected that enhancement features, such as zoom controls, will provide extra detail.

   A good way to ensure that the system is capable of achieving the requirement is to do a subjective test. Set-up a camera and get a volunteer to walk through the door or park a car in the place of interest and record the pictures. This should be done under the conditions that the system is intended to be used - performance of the system may be different when there are a number of cameras being recorded.

2. The quality of the recorded or printed pictures may differ from the live display.

3. Time and date information is often critical to an investigation. If it is incorrect this can drain police time and resources.

4. The quality of the pictures should not be compromised to allow more to be squeezed onto the system. There is some scope however for using a sliding scale of image quality based on time since recording. For example, high quality high frame rate video for the first 24 hours with gradually increasing compression or decreasing frame rate after this, but retaining useful images up to 31 days. This would be dependent on the nature of the installation and the type of recordings being made. Guidance should be sought from your local police force.

5. To ensure continued quality of recording it is essential that regular maintenance of all aspects of the system be conducted - especially camera focus, cleaning of lenses, housings, etc.

STORAGE - are the pictures stored appropriately?

6. Access to the system and recorded images should be controlled to prevent tampering or unauthorised viewing. A record should be kept of who has accessed the system and when. Further information on this can be found in the BSI document 'Code of Practice for Legal Admissibility of Information Stored Electronically' (BIP0008) or from your local Crime Prevention Officer.

7. Electronic protection methods that require proprietary software or hardware will hinder an investigation if they prevent the pictures from being provided to authorised third parties, e.g. police and CPS. Physical methods of access control, e.g. system in a locked room, are just as effective if documented appropriately.

8. It is important that recordings cover a sufficiently long period to assist in investigations. Retention beyond 31 days may be useful in some circumstances, but should not affect the quality of the more recent recordings.

9. It should be possible to protect specific pictures or sequences, identified as relevant to an investigation, to prevent overwriting before an investigator can view or extract them.

EXPORT - can the pictures be easily exported from the system?

10. and 11. It is unlikely that the investigator will be familiar with the operation of your system. To facilitate replay and export a trained operator and simple user guide should be available locally.

12. and 13. Export of medium and large volumes of data can take a substantial period of time. The operator should know the retention period of the system and approximate times to export short (e.g. 15 minutes), medium (e.g. 24 hours), and large (up to all of the system) amounts of data.

14. If the software needed to replay the pictures is not included at export, viewing by authorised third-parties can be hindered. Export of a system event log or audit trail, and any system settings with the pictures will assist with establishing the integrity of the pictures and system.

15. The amount of video that an investigator will need to export will be dependent on the nature of the investigation. For example a shop robbery may only require a few stills or a short sequence, however a more serious incident such as a murder or terrorist related enquiry may require anything up to all the video contained on the system to be exported. It is essential that the system is capable of doing this quickly and to an appropriate medium. An ideal solution for medium-to-large downloads, would be for the system to have the facility to export to a 'plug-and-play' hard drive. Export and recording should be possible at the same time without affecting the performance of the system.

16. The system should not apply any compression to the picture when it is exported from the system as this can reduce the usefulness of the content. Also, the picture should not undergo any format conversion that affects the content or picture quality.

PLAYBACK - can the pictures be easily viewed by authorised third parties?

17. and 18. The replay software must allow the investigator to search the pictures effectively and see all the information contained in the picture and associated with it.

19. It should be possible to replay exported files immediately e.g. no re-indexing of files or verification checks.

LookC *AV*

LookC *AV*

LookC AV is a single channel video and synchronised audio mpeg recorder. It is network addressable only and is designed for covert or remote site applications such as;
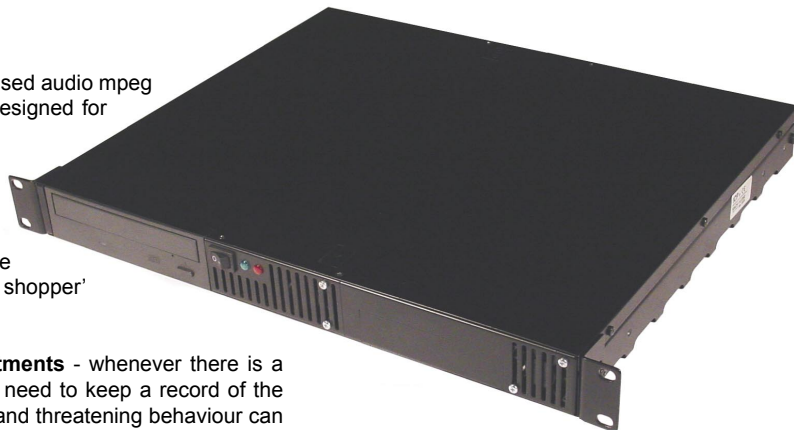
Retail Management - the LookC AV system has been successfully used by mobile phone retailers to check on suspect transactions and as a training aid for their staff. It has proven to be better value and more cost effective than 'mystery shopper' services.

Front Desks in Rent Offices, Casualty Departments - whenever there is a high stress, customer facing role then there is a need to keep a record of the video and audio of the exchanges so that verbal and threatening behaviour can be supported with evidence.

Temporary Deployment - for enforcing ASBO or other orders concerned with undesirable behaviour and noise.

Interview Rooms - rooms used for staff discipline, job interviews, negotiations, tax inspectors and police. The AV provides an excellent long term record which can be copied from the system and stored in the PC indefinitely.

When audio is added to video the footage becomes invaluable in proving who said what and when. LookC AV is an excellent tool which can be running all the time, ready to provide that vital piece of information.

The LookC AV is available in a 1U rack format or a desktop casing

- **High frame rate video and audio**
- **MP3 audio quality**
- **Video and audio synchronised**
- **Long term continual recording**
- **Scheduled recording**
- **Remote access with web browser**
- **Fully encrypted transmissions**
- **Retail management tool**
- **Evidence for verbal abuse**
- **Duty of care role for front desks**
- **Remote site management**
- **Covert or overt**
- **Remote microphone & camera**
- **Hardware watchdog**
- **Industry standard MPEG files**
- **Easy deployment on ADSL**
- **Easy deployment on LAN**
- **Fast Installation / Minimal Config.**

Replay

The LookC AV system records in the industry standard mpeg format and this is playable on the standard Windows Media Player (XP is recommended).

You simply log onto the secure web page served by the LookC system and identify the section of mpeg which you would like to download by entering a date, start time and end time. The system will then prepare a single mpeg for you to download.

Depending on the drive size and the quality settings the LookC AV will record continually 24 hours a day for in excess of 31 days.

Encryption

All data passing to and from the LookC AV system through the network is encrypted to a key strength of 128bits. Therefore no one can obtain passwords by 'listening in' to the data packets travelling across the internet or LAN.

Scheduling

The LookC AV has a 24 hour, 7 day scheduler so that recording will only take place when the risk is present. In this way the number of recording days can be extended substantially, for example if the recording is scheduled for 8 hour weekdays only instead of continual 7days a week then the number of recorded days will be 4 times those stated i.e. 80 days for 250Gb drives and 124 days for the 400Gb drives.

Ordering

There are two drive size options, 250Gb and 400Gb and two case options, rack and desktop. This give four product combinations;

K5751   LookC AV, Desktop Case, 250Gb hard disc, 20 days
K5752   LookC AV, Desktop Case, 400Gb hard disc, 31 days
K5756   LookC AV, 19" Rack Case, 250Gb hard disc, 20 days
K5757   LookC AV, 19" Rack Case, 400Gb hard disc, 31 days

The mpeg video footage from the LookC AV can be downloaded across the internet and replayed in the standard Windows Media Player

LookC *Monitoring LITE*

LookC Monitoring LITE

LookC Monitoring LITE is a new package for cost effective monitoring of LookC systems. Using our extensive knowledge of professional monitoring stations, we have created a monitoring solution which is smaller scale and less expensive to deploy than the enterprise scale secure server solutions. The new package is aimed primarily at large organisations who wish to perform their own internal monitoring function.

The package is written for Windows 2000 & XP and provides a polling monitoring system for LookC V3 systems. The solution can be deployed effectively over ADSL connections upwards and does not have an upper limit on the total number of systems monitored, however there is a practical limit since the monitoring application uses the polling method rather than the interrupt type for the full blown secure server setup. LookC Monitoring LITE will pick up system default alerts or any user event type which has been created. The system also monitors the telecoms and will report any comms failure. The polling messages are fully encrypted with industry 128bit SSL as part of the LookC's PKI (Public Key Infrastructure) cryptography.

LookC Monitoring LITE alert window where an alert is replayed and the reason code logged together with any notes

Alerting

The LML package can be launched as part of the Window's startup if required or launched by the operator. When initiated the software will start polling the list of LookC machines which it has the details for, when it detects a new event on any of the LookC systems it will launch a system modal window which comes to the front of any other software running.

The user can then review the video, write comments, press one of the 'reason' code buttons and even open up a logged in session directly to that LookC's web address with one click.

When any form of alert is incoming but has not been dealt with, an audible siren sounds through the Windows normal sound system.

Fail-Over

Since the software is a self contained solution, systems failure can be effectively managed by having a standby second Windows computer which is pre-installed with LML and a secondary connection to the internet. This setup can then be mirrored at another control room site through reciprocal agreement and therefore provide a complete fail over, backup system.

Logging

The system keeps daily logs in the form of CSV files which can be easily used in reporting functions in Excel or imported easily into database applications. All operator and automated actions are logged providing the managers with excellent traceability.

Support

LookC will provide telephone and on-line support for the LookC Monitoring LITE application for the duration of the licence period. This includes software updates to the application itself and also help in the configuration of the LookC systems being monitored if they are covered by an appropriate LookC Service Pack.

Ordering

Call your nearest LookC representative to discuss the solution and to get a demonstration. The software is available for a low cost annual licence which varies depending on the number of LookC systems which are being monitored.
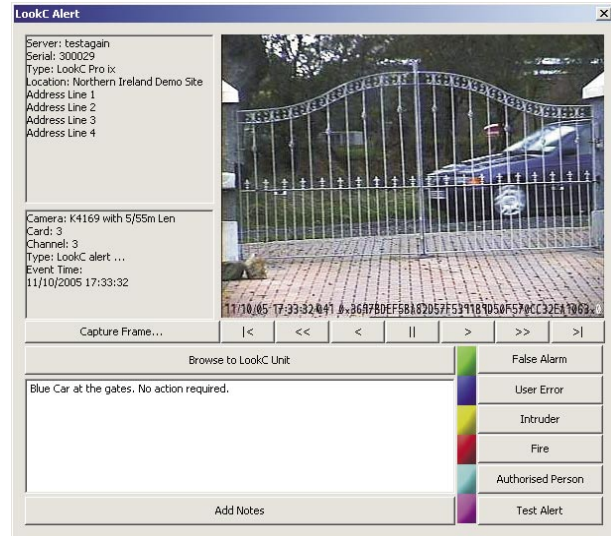
- **Constant comms check**
- **Configurable polling**
- **Replays event footage**
- **Audible alert**
- **Displays site information**
- **Pre-defined reason keys**
- **Jumps in front of other windows**
- **Complete daily audit logs**
- **Excel compatible**
- **Fully encrypted data transfer**
- **One touch login to site**
- **Fast and easy training**
- **Operator log**
- **Automatic grey listing**
- **Compatible with all V3 LookC's**
- **Online support**

The logs stored by LookC Monitoring LITE are in .CSV format and are therefore compatible with industry standard tools such as Excel and can be imported into database applications

LookC Pro ix V3

LookC Pro ix

The LookC Pro ix is the top of the range LookC system, incorporating physical security features, cryptography and software features which cannot be found anywhere else. It is primarily a full featured DVR with a fully encrypted web server and is deployed on a local area network LAN, wide area netork WAN or internet.
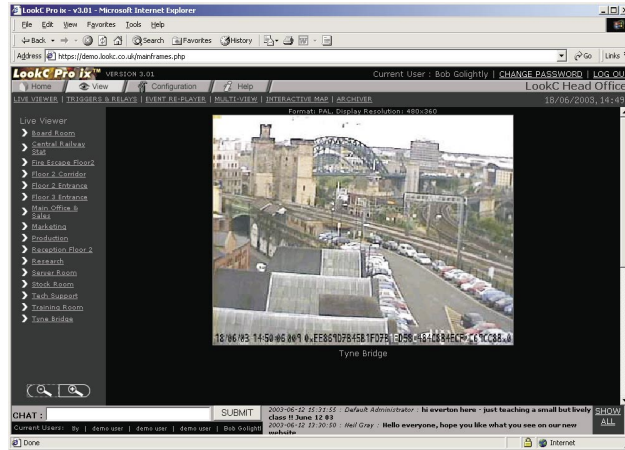
This industrial strength server is built into a purpose deigned double steel skinned security cabinet incorporating battery backed PSU which is wall mounted. All connections are made through the back of the cabinet. Unlike any other system the physical security matches cryptographic security, where as other lower specification DVR manufacturers ignore both issues.

Remote Viewing

Like all LookC systems the Pro ix is network and internet ready, allowing the user to view live images, recordings and change configuration settings through a standard web browser (*without having to install plug-ins or bespoke software)*. This means personnel can share live images, of the reception area for example, or managers can access encrypted data from the system using any web browser on the internet.

LookC Pro ix can be networked onto a LAN in minutes and serve video information to any authorised person using an encrypted transmission protocol. The unit can also allow access from the internet through a broadband or ADSL connection at the same time as being networked on the LAN. LookC Pro ix can be accessed by a direct dial link using the optional modem.

Schedule

Site monitoring requirements usually vary at different times of the day and night. For this reason LookC Pro ix uses a Scheduler that controls which configuration is running during a specified time period. When the next scheduled configuration falls due (e.g. at close of business) it automatically moves the system into the new configuration. This configuration will then be changed when the next scheduled configuration is due (e.g. start of business the following day.) Configurations can be added and removed easily from the Scheduler ensuring the LookC Pro ix is flexible enough to meet all operational requirements.

Encryption

All of the data which is transmitted by the LookC Pro ix system is encrypted, including the login usernames and passwords at a strength of 128bits. This is a higher security level than banks use for credit card transactions.

- 4, 8, 12 or 16 Video Camera Inputs
- Up to 4 Frames per Second Triggered Recording
- Up to 107 Days Continuous Recording
- Extended Recording Time in Event Mode
- Remote Viewing & Advanced Setup via Browser
- Multi-Camera Display
- Video Motion Detection with User Defined Masks
- Event Replay by Activity List
- Username & Password Protection
- Serves Images on Encrypted Web Page
- Email Alerts with Images
- Serves to Many Users at Once
- Audible Alerts
- Easy to Configure & Use
- Software & Hardware Watchdogs
- Auto Recovery After Mains Failure
- Sefton, ARC, Chubb & Group4 Monitoring
- LAN / Internet / ADSL Ready
- Fully Networkable
- Wall Mounted
- No External Leads or Connectors
- Anti-Tamper Steel Enclosure
- Increased Frame Rate in Alarm Mode
- Evidence Grade, Encrypted, Signed Images
- Configuration Un-Changed by Power Failure
- Supplied with UPS
- Accepts Modem for Dial In on Phone Line
- 24 Months RTB Warranty
- Demo Site: http://demo.LookC.co.uk