# SMART HOME SECURITY PRODUCT GUIDE 2018



SUPPLYING TECHNOLOGY AND ENTERTAINMENT FOR TODAY'S SMART HOME

# WELCOME TO OUR SMART HOME SECURITY GUIDE



### KARL BRETT Technical Sales Specialist

This guide has been created for you to keep you up to date with products within our Smart Home Security portfolio. If you require any further information on any brands within this guide please don't hesitate to contact me.

Here at Invision my role is Sales Specialist for Smart Home Security products. I have worked for Invision for four years and have an in-depth knowledge of all our products within the security sector that we supply into the custom install market. I have a close working relationship with our manufacturers to provide you with the correct specification and technical information so if you have any questions I'm here to help!

Karl Brett Technical Sales Specialist



### MARK TAYLOR Commercial Director

Invision is the UK's fastest growing distributor of market leading systems for today's Smart Home, supplying professional installers with innovative products and integrated solutions.

Our investment in products, training, service and support will continue during 2018, to provide you with one stop access to all the products you need for your next installation. Remember that we stock so you don't have to! All products are available on a next day delivery service to UK mainland destinations.

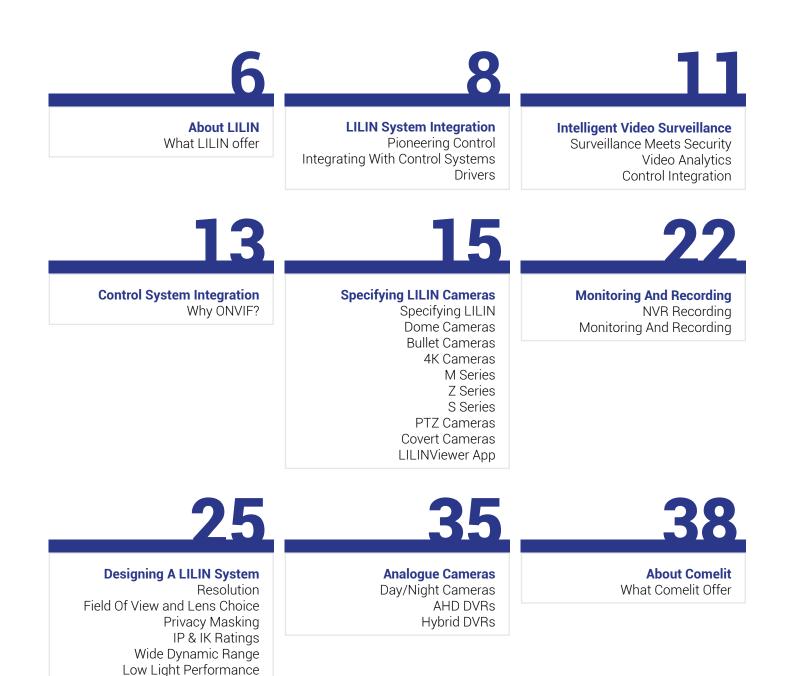
Our new 2018 product guides, organised by market category, are designed to bring you the very latest information from our exceptional product portfolio and I would welcome your feedback.

Mark Taylor Commercial Director





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Training is a valuable part of Invision and one of our key strategies. Providing you, our trusted installers, with the highest standard of training is an upmost priority. Our aim is to give you all the resources to go out and win the business you need.

We provide courses which are practitioner-led, theory and practical based. On our courses you will learn a wide range of skills and expand your product and applications knowledge.

Learning the theoretical side of the products you sell is one thing, but making them work to their full potential is another - and that is the key to our training ethos!

See what we can offer you below...









# ABOUT LILIN





### WHAT LILIN OFFER...

LILIN, is a global IP video manufacturer of IP video cameras, recording devices, and software with over 30 years of experience. Throughout the years, the company has maintained its dedication to Creativity, Progress, and Excellence, providing expertise in digital video with a strong focus on innovation moving forward.

LILIN's vision is to become a total solution provider in the IP surveillance industry. Besides reinforcing its leading position in Taiwan, LILIN will spare no effort in strengthening its international presence, therefore as to present practical and state-of-the-art network surveillance solutions to the global market.

Established in New Taipei City, Taiwan in 1980, the company has quickly grown to be among the worlds' leading manufacturer in the advanced IP video surveillance industry. LILIN is dedicated to the design, development, manufacture, and marketing of a broad range of networking surveillance solutions. LILIN is proud to have strong relationships with over 50 valued software and integration partners, and is recognized as the first camera company to become ONVIF-conformant.



### PIONEERING CONTROL, VIDEO INTEGRATION, HDMI MATRIX INTEGRATION

Pioneering Control: LILIN were the first to the market with control system integration and still lead the way by a considerable margin. They make integration very simple, with a single driver for all cameras and a single driver for all models of LILIN NVR which also works with the Decoder. This straightforward integration is only possible through LILIN's commitment to the CI market for their products. LILIN write all the control drivers directly or through professional driver developers and maintain their firmware so that control integration keeps working seamlessly.

Video Integration: The next element of integration is the ability to display the camera or NVR video stream in the control system GUI, whether that is a native in-wall panel, remote control or app. This enables convenient viewing at the point of client interaction. This element does not need a driver as the LILIN video streams conform to standard H.264 and MJPEG streaming formats that are compatible with all control systems. LILIN ensures that its camera design and firmware releases maintain the consistent performance and compatibility for streaming video in the control system GUI.

HDMI Matrix Integration: The final key element of integration is display of HD video on the TVs in the house. The control system GUI does not usually display full HD video, however the NVR and decoder have a HDMI output. This output can be connected directly to a display or connected to HDMI matrix allowing the client to view video in 1080p HD full frame rate on a large screen providing the best viewing experience. With the control integration they can select the cameras or NVR using the control system interface from the comfort of their armchair with the control system handling all the necessary background switching and view live video or review recordings. Should a camera detect movement, this is passed to the control system via the driver and an event can then be initiated like pausing a movie and switching to a full screen camera view.







**LILIN** have established themselves as an industry leading manufacturer of IP surveillance systems, intent on building and diversifying their product range and providing a wide choice of products to offer their clients. Integration drivers provide full, two way integration with leading control solutions for all compatible network cameras, as well as one way control of DVRs/ NVRs.

Offering a full complement of pan, tilt and zoom controls, as well as monitoring of MJPEG or H.264 streams on an iPad, these drivers provice all the control functionality the client will need. For the security concious, motion and tamper variables can be programmed to alert the user, initiate recording, and/or trigger ay appropriate action within the control system. The ability to save and recall preset camera positions at high speed, and with accuracy is an added bonus.

The DVR/NVR driver provides a complete set of one way commands, providing the user with the ability to easily navigate through the on screen menus and review recorded camera footage and monitor your premises from anywhere in the world with remote access.

### **INTEGRATION MATRIX:**

LILIN Series	AMX	Control4	Crestron	ELAN g!	RTI	Savant	URC
LILIN IP Camera	✓	~	~	~	~	✓	✓
NVR	~	~	~	~	~	~	~
AHD DVR	✓	~	~	~	~	✓	✓



### DRIVERS

### **CAMERA DRIVER**

Once the drivers are installed, the control processor communicates directly over IP with the cameras on the network, enabling the following features:

- Full camera PTZ control
- Zoom and autofocus of Z series cameras
- Save and recall preset camera positions
- Alarm monitoring which can be used to initiate events and macros.
  - For example, switching the camera to the TV in use when motion is detected

### **NVR DRIVER**

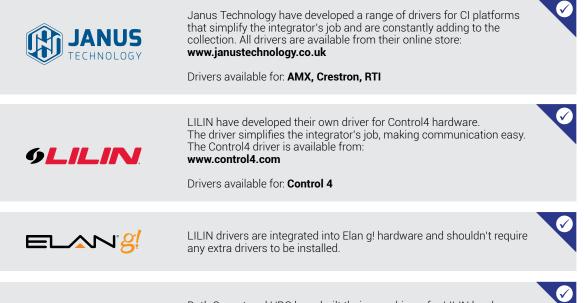
The driver for the NVR allows full one way control of all functions over IP including full and split camera views and access to search for recorded footage by date and time. When integrated with a control system and matrix, the user can view live cameras and recordings from the comfort of their living room.

### DECODER DRIVER

The decoder provides a HDMI output to display IP camera streams or act as a second NVR monitor output, it is controlled over IP by adding another instance of the NVR driver **(one way control)**.

### **DRIVER RESOURCES**

The following drivers are available for **FREE** online to help you integrate LILIN hardware with your preferred control system:



SAVANT 🖭

Both Savant and URC have built their own drivers for LILIN hardware. The drivers are available from each of their dealer portals respectively.

**NOTE:** The supported resolution within the control system is usually a maximum of 720 x 480. Frame rates will also vary according to each control system capability. For full HD and full frame rate viewing, use the HDMI output from an NVR or decoder.

### SIMPLE DEVICE DISCOVERY PROTOCOL - SDDP

Control4 SDDP is software that is built into a manufacturer's product to make integration with a Control4 system seamless. Incorporating Control4 SDDP technology into new products is a great way for companies to easily enter the rapidly growing home and commercial automation industry.

### How Control4 SDDP Works:

- Leading consumer electronic brands integrate Control4 SDDP into projectors, Blu-ray players, panel TVs, AV receivers and a variety of other wired and wireless devices.
- Dealers add these devices to a Control 4 system and the controller automatically recognises them.
- If the dealer chooses to include the device, then the correct driver is automatically added to the project and the device is installed

LIN SYSTEM INTEGRATION

### WHERE SURVEILLANCE MEETS SECURITY

As the leading brand globally for video surveillance in the Smart Home market, LILIN have been incorporating Intelligent Video Surveillance (IVS) video analytics within cameras for over 10 years. LILIN HD IP cameras are capable of performing simultaneous security and surveillance applications whilst offering deep integration with leading automation systems.

**VIDEO ANALYTICS:** LILIN's Intelligent Video Surveillance (IVS) cameras feature on board analytics that provide intelligent solutions, automatically analysing captured video. IVS can detect, classify and count the behaviour of objects within a specified scene to improve parameter security of improve security within certain areas. **CONTROL INTEGRATION:** With integration with automation systems that control modern Smart Homes, installers can customise alerts and triggers to suit specific and user requirements.



Detects motion in as scene, the area can be customised and the sensitivity adjusted to suit the specific requirements.

Z Series, M Series, S Series, Ultra Series



An alarm is triggered when ambient sound exceeds predetermined levels.

Audio Detection

Z Series, M Series, S Series, Ultra Series



### Tripwire

Tripwire allows up to 8 lines/rectangles to be drawn within a camera image, movement from either direction will trigger a motion detection alarm.

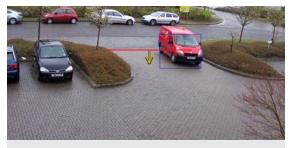
Z Series, M Series



### Face Detection

When a Human face is recognised, LILIN cameras can send alerts or customer notifications.

Z Series



**Direction Detection** 

When a preconfigured line is crossed in a programmed direction at the customer site, the LILIN camera generates an event and counts the entry.

S Series



Advanced Motion With a four pass filter for seperating static objects, this results in a more accurate motion detection algorithm.

Z Series, M Series

### WHERE SURVEILLANCE MEETS SECURITY



### Zone Entering

Capable of tracking up to 32 individual ID object boxes, analytics can cound people entering and leaving zones.

S Series



### **Object Counting**

Counting the numbers of objects entering or exiting an area over a specific duration. A virtual area can be drawn over a camera image with anything passing through being logged and counted.

Z Series, M Series



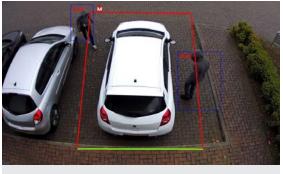
Tripwire and Semaphore Create alarms when up to 8 tripwire lines are crossed when a specific colour is shown in the chosen area. Example: Tripwires becomming active at traffic lights.

M Series



Tamper Detection An alarm is triggered automatically when the camra detects someone attempting to cover, vandalise or move the lens.

Z Series, M Series, Ultra Series



Zone Crossing as Perimeter Movement from either direction crossing up to 8 tripwire lines can trigger alarms with up to 32 individual ID object tracking boxes.

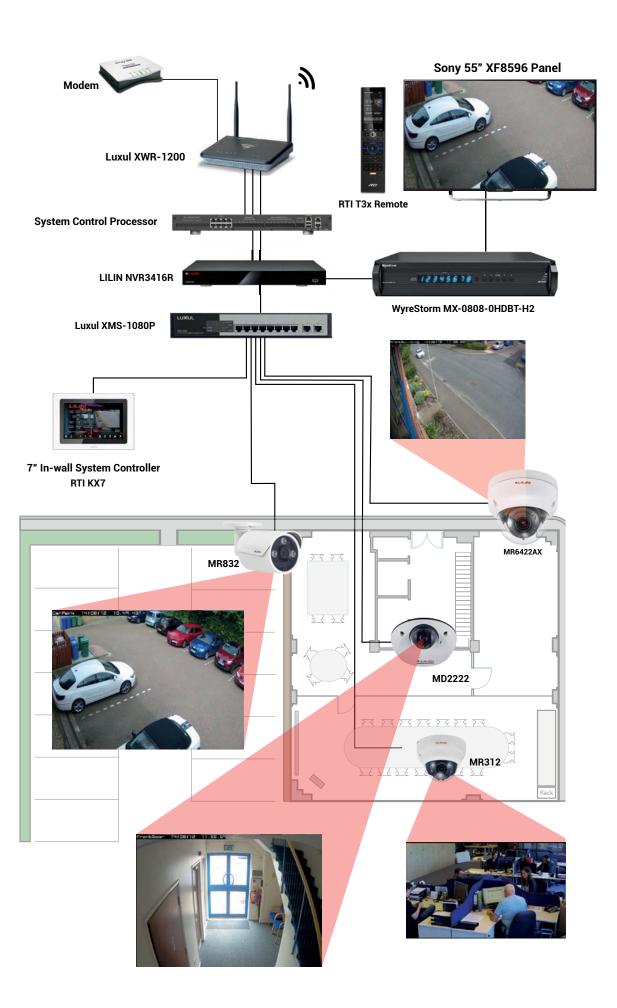
S Series



Zone Crossing

Movement from either direction crossing up to 8 tripwirelines within a camera can trigger alarms with up to 32 individual ID object tracking boxes.

S Series



### FULLY ONVIF COMPLIANT

ONVIF is committed to the adoption of IP in the security market. The ONVIF specification will ensure interoperability between products regardless of the manufacturer.

### The cornerstones of ONVIF are:

- Standardisation of communication between IP based physical security
- Interoperability between IP n=based physical security products regardless of the manufacturer
- Open to all companies and organisations

The ONVIF specification defines a common protocol for the exchange of information between network video devices including automatic device discovery, video streaming and intelligence metadata.

Through ONVIF, LILIN products are able to work smoothly with other brands in the video surveillance market, all LILIN IP cameras are ONVIF Profile S compliant to ensure quality integration.

# ONVIF is an open industry forum for the development of a global standard for the interface of IP based physical security products.

### Why ONVIF?

- Reliable interoperability for flexible, cost effective solutions
- Simplified installation
- Greater freedom to choose products around your specific needs
- Future proof systems for secure investment

### **ONVIF Compatible NVRs**



Onvif

### **ONVIF Compatible Cameras**



### SPECIFYING LILIN

All LILIN cameras stream high quality video with a minimum full HD 1080p resolution at 20 frames per second with a 2MP or bigger CMOS sensor. All cameras support POE or POE+ with the option of local 12v or 24v power if required.

To ensure you pick the right camera for the job, LILIN have designed several different model series. These help you to pick and choose the features best suited to your installation and keep the high performance cameras at a competitive price point.

These series comprise of: S Series, PTZ, Ultra, Z Series and the M Series. All of these include SenseUp +, MSD card recording capabilities and are ONVIF profile S compliant\*. The capabilities of the cameras vary throughout the series and all series are available in a wide range of chassis to suit almost any surveillance need.



### MR832

**MR832** Outdoor rated HD 30M IR Range Fixed Lens IP Camera in the M series features 1080P at 30fps frame rate, built-in SenseUp+ technology to deliver stunning video in low-light conditions.

Utilising intelligent image signal processing, 2D WDR function, ePTZ, Region of Interest (ROI), AGC control, and 3D Noise Reduction, the combination successfully delivers the ultimate low-light image without motion blur. The IP66-rated housing is designed to help the camera body withstand rain and dust and ensures operation under a multitude of harsh weather conditions

Support with PoE, privacy mask, White balance, and minimum illumination 0.15 Lux at F2.0 Low Light Mode.

### Standard specification across the LILIN IP camera range

- HD resolution of 1080P or greater, the same resolution as a high definition movie.
- WDR (Wide Dynamic Range) compensates for bright backgrounds to maintain detail and contrast on the foreground image.
- SenseUp+ for the best low light performance.
- H.264 and MJPEG streaming for high quality recording and viewing.
- Power over Ethernet cable (POE) for a neat single category cable installation
- ONVIF Profile S: A universal standard to access and view cameras.

- Day/night switching (IR cameras). At night, the camera will automatically switch to black and white to provide a clear image.
- Superior video quality at efficient bandwidth (typically 2mbps).
- Motion detection alarms to alert, initiate event and to aid location incidents in recordings.
- SD card storage (most models)
- 1 or 2 way audio (most models)

### **DOME CAMERAS**

LILIN Dome cameras are available in M, Z and S Series. They are ideal for discreet internal installations and all feature WDR to help with difficult internal lighting situations.

NOTE: Don't position cameras too close to light fitting or looking directly at light sources.

- Available in M and Z Series
- Internal and external models available
- Internal 2 or 3 way gimbal
- Built-in IR (on selected models)

Chassis/Body	Description		Int/Ex	Dimensions (Ex. Bracket)	Series/ Model
Low Profile Mini Dome	*	Ideal for discreet installation		105 x 39mm	MD2222E4
Mini Dome		White body camera with polycarbonate cover	ody camera with polycarbonate cover Int 105		MR312
Varifocal Mini Dome	ifocal Mini Dome Can be mounted on ceiling		Int	150 x 134mm	MR2922
Vandal Resistant Dome	nt Dome White body camera with polycarbonate cover		Ext	130 x 115mm	MR6422
Turret Style	•••	White body turret style camera	Ext	145 x 130mm	ZMR6522X

### BULLET CAMERAS

AMX

Control

LILIN's Bullet range come with built-in IR, with IR distanced ranging from 30m to 60m and all bullets come with SenseUp+ and WDR for excellent picture quality.

NOTE: Don't position cameras too close to light fitting or looking directly at light sources.

Available in M and Z Series • IP66 rating for external use • Built-in IR

Chassis/Body	Description			Dimensions (Ex. Bracket)	Series/ Model
30 Meter IR		Outdoor HD 30M range fixed lens IP camera	Ext	68 x 69mm	MR832
Bullet Style 1080p		Outdoor HD 30M range varifocal IP camera	Ext	68 x 69mm	MR8422X
Bullet Style 4mp	~	Outdoor HD 30M range varifocal IP camera	Ext	68 x 96mm	MR8442 (4MP)
Bullet Style 4K	•	4K Ultra HD auto focus IR HP IP bullet camera	Ext	102.5 x 102.5mm	ZR8182 (4K)
60 Meter IR		Auto focus outdoor bullet camera	Ext	116 x 112mm	ZR8022X10

ELAN g!

CRESTRON

RTI

SAVANT

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### **4K CAMERA SERIES**

The external IP camera supports 4K (4072x3046) and 3840x2160 at 30FPS high resolution and a much wider field of view than 1080p cameras. The internal 4K box camera UHG1182E can be fitted into an IP housing unit for external use

- Ulta HD 12 megapixel CMOS image sensor .
- 4K True h.264 AVC High Profile video compression
- H.264 and Motion JPEG multi profile video streaming
- Digital PTZ

- Tampering, audio motion detection alarm function
- Day and night (IR cut removable)
  - 2 way audio supported
  - Digital I/O: 1 in, 1 out



### **ZHR8182EX**



### ZHR6482EX2: 4K DOME

- 4K resolution
- 3.6-10mm
- varifocal lens
- 30FPS
- 30M IR
- IP66/ IK10 rated Motorised zoom
- **IVS** features
- PoE
- **COMING SOON**

### **M SERIES BULLET**

The MR8442X Outdoor HD 30m-Range IR Varifocal IP Camera features 4MP at 20FPS, built in SenseUp+ technology to deliver stunning video in low light condition. Utilising intelligent image signal processing, 2D WDR function, AGC contol and 3D Noise Reduction, the combination successfully delivers ultimate low light images without motion blur.

- Outdoor Bullet Camera
- IR cut filter to day/night operations .
- IP66 rain and dust resistant

- 30m IR night vision
- 4mp resolution at 20FPS

The IP66 rated housing is desgined to prevent the camera from being damaged by rain and dust, ensuring smooth operation under various demanding weather conditions. The support of POE, privacy mask and white balance, as well as the minimum illumination 0.15 Lux at F1.4 can certainly satisfy multiple applications.



### **M SERIES DOME CAMERAS**

As with all M series cameras, the MR2922X HD 30m-Range IR Varifocal Dome IP Camera features 1080p at 30FPS built in SenseUp+ technology to deliver stunning video in low-light conditions, and intelligent video surveillance (IVS) functions. Utilizing intelligent image signal processing, HDR, AGC control, and 3D Noise Reduction, the combination successfully delivers the ultimate low-light image without motion blur.

- IR cut filter for day/night operations
- 30m IR night vision

- 1080p resolution at 30FPS
- Hygh Dynamic Range



### Z SERIES TURRET CAMERAS

LILIN have introduced two new variations on their hugely popular MR652 camera- 1080P and 4MP varifocal turrets with auto zoom/focus capability! The ZMR6522X and ZMR6542X are equipped with a motorized lens which allows users to automatically focus the camera remotely, through a click on the browser and comes equipped with a number of IVS functions including tripwire, advanced motion detection and tamper detection. The turret design separates the camera and IR modules, reducing the potential for IR reflection that can occur with the traditional dome. Both Z series turrets feature a 2.8-12mm lens with a 30M IR distance and are vandal resistant.

- Full HD or 4 megapixel CMOS image sensor
- H.264 and Motion JPEG video streaming
- 2D WDR function
- IVS supported
- ONVIF Profile S supported

- Day & night (IR cut filter removable)
- Auto focus with motorised lens
- Digital PTZ supported

**GLILIN** 

4MP available



### S SERIES BULLET CAMERAS

The S Series delivers HD 1080p at 60FPS providing a smooth and crisp image. SenseUp+ technology delivers high quality images in low light conditions and its ability to auto focus and auto zoom means that the camera can be focused once installed, meaning that you don't have to be at the camera to focus it.

### The user also gets the benefit of a motorised zoom that can be controlled from a range of control interfaces.

- 2 megapixel CMOS image sensor
- 60FPS at 1080p
- H.264 and MJPEG streaming 4 streams
- ONVIF Profile S
- POE

- Day/night switching (IR Cameras)
- WDR (Wide Dynamic Range)
- Motion detection alarms
- Digital PTZ (pan, tilt, zoom)



### PANORAMIC CAMERAS

LILIN's panoramic cameras provides a 360° view without any blind spots, and has various layout options including quad, split and 180° panoramic view.

This latest fisheye fixed dome network camera introduced by LILIN, featuring a detailed 6-Megapixel resolution CMOS sensor with superb image quality. The flexible design of FR3362 allows it to be applied in various IP surveillance environments. The FR3362 delivers clear images via multi-streaming H.264 and Motion JPEG video up to 3072 x 2048 pixels, and also offers electronic pan, tilt, and zoom function that allows can give users access different video modes including: 180° panorama view or 360° source image view.

### FOCUS: FR3362

The **FR3362** is a fixed dome IP security camera featuring a fisheye lens for 360° panoramic wide angle view without any blind spots. The fisheye lens with high resolution provides 360° wide view surveillance, and the panorama function with quad view enables 4 different angle images to display for recording and monitoring at the same time.

- Full HD 6.0 megapixel CMOS image sensor
- True H.264 AVC High Profile video compression
- 3D noise reduction
- 2D WDR function
- 360-degree view of entire scene without any blind spots
- Available in 4K UHD



**NOTE:** Don't install higher than 3m | use the optional back box for single point cable entry.

### PTZ CAMERAS

LILIN's Speed Dome PTZ cameras offer a fully motorised 360 degree pan and tilt, enabling the camera to point and zoom in to any area as well as intant switching to preset positions initiated by the user and on preset tours. Internal PTZ domes can be powered with POE+ but external PTZ domes require a 24v local power supply or a 24v injector.

Capable of making 360° continuous rotations with a speed range of 0.1°-300° per second, users can accurately position the camera to identify specific targets. The 30x optical zoom and 16x digital zoom capacity give the PSR5024 an impressive range

- Outdoor PTZ
- 60FPS
- Motorised zoom up to 30x optical, autofocus
- High speed motorised pan/tilt
- Joystick control available
- large range of brackets available

- 128 presets and tour functions
- Wide Dynamic Range up to 93dB
- 1080P resolution
- IP66 rated
- Dynamic privacy masking
- Internal and external models.



### **PSR5024**

### FOCUS: PZD6422X3

LILIN's stunning new 'mini-PTZ', the PZD6422X3, offers PTZ functionality packed into a 3" dome for discreet monitoring. Capable of making continuous 270' rotations, this camera comes with 256 preset positions and a powerful 3X optical zoom. IP66 and IK10 rated, this camera is suitable for both internal and external applications.

- 3x optical zoom lens (3.35-10.5mm)
- Day and night (IR cut removable)
- True H.264 AVC high profile video compression
- HDR function up to 100dB
- 3D noise reduction (MCF)
- PTZ control
- Up to 256 programmable preset positions
- Auto-pan function
- Digital 1 input/1 output
- ONVIF support



# **VECIFYING LILIN CAMERA**

### **COVERT CAMERAS**

The main unit and sensor unit 3.7mm pinhole lens are connected by a 6 meter long cable providing flexibility when wanting to place the main unit elsewhere - resulting in the possibility for a completely covert camera. With it's small body, yet high performance, the IPC0122 provides the perfect discreet solution.

With the advantage of being IP, you can stream high resolution images. It's also capable of sending alarms when the camera is tampered with - meaning any security breaches or crime can be dealt with immediately.

- Full HD 2MP CMOS image sensor
- H.264 and Motion JPEG multi-proful video streaming
- 3D noise reduction (MCTF)
- 2D WDR function
- Digital PTZ supported
- Tampering/audio/motion detection alarm
  - 2-way audio supported
- SD card supported

.

- Digital I/O: 2 in, 1 out
- ONVIF supported

### FOCUS: IPC0422

Marine day/night dome IP camera, ideal mounting on everything from boats to cars. The camera comprises of a stainless steel camera housing designed to protect from corrosive and industrial environments. The main unit and the camera unit are connected together by 6m long cable in providing definite flexibility to place the camera and main unit in separate locations.

- Full HD 2 megapixel CMOS image sensor
- H.264 AVC/MPEG-4 part 10 real time video compression
- Digital PTZ supported
- Tampering/audio/motion detection alarm function
- High efficiency IR LED, radiant distance up to 16m
- Day and Night (IR cut removable)
- 2 way audio supported
- IR distance 16m









### LILINViewer: MOBILE APP CONTROL



Available for download now:





Advanced camera control, all from the palm of your hand. The LILINViewer application turns your phone or tablet into a full suit of smart control features. Trigger relays, focus and zoom, full PTZ control and even change the view of your 360° camera from your phone.

### Preset Views

The LILINViewer application allows for preset views to be set allowing for rapid camera control.

### Up to 16 camera displays

Display 16 live camera streams simultaneously on your iOS or Android device.

### Store & group up to 160 cameras

The LILINViewer app can store up to 160 cameras in 10 individual camera groups allowing you quick access to different locations whenever needed.

### Easy navigation

Pinch and zoom as feel natural on your device to zoom into the scene for greater detail.

### Compatible with iOS & Android

Use your favourite devices to access LILIN cameras hassle free!

### Video playback

Watch recorded footage from your NVR or from a cameras individual SD card.

### **Receive alarm events**

No matter where you are or what is happening, with alarm events being sent directly to your phone, there is no need to panic.

**NOTE:** The perfomance of the LILINViewer App can be effected by the use of port 80 and 8080 when using 3/4G (depending on your service provider). Changing the external port used by the device in the router may improve performace.

### **Camera Specifying Tool**

Specifying LILIN cameras just got easier, simply go online to **camera.LILIN.co.uk** to get started!

- Pick whether the camera will be internal or external
- Choose the style and functionality
- Select the resolution, desired frame rate and lens

Once complete, you're left with the cameras that match your requirements.



### **NVR RECORDING**

### **Standalone Network Video Recorder**

The system is equipped with an ARM Cortex A9 Dual core processor with maximum recording throughput at 144 Mbps, and with two external eSATA connector ports for additional expansion up to 48TB. Setup of parameter such as IP address and basic IP camera configuration can easily be performed with LILIN setup wizard - IPScan and WS-Discovery, making the NVR 3 Series the easiest NVR system to use. With local VGA and HDMI display (with Full HD resolution at 1920x1080) and mouse and keyboard input available, configuring LILIN NVR is simple.

Model	Model Description	
NVR3216	The NVR3216 offers a maximum of 480FPS across 16 channels with an internal storage of up to 2 hard drives providing up to 16TB storage.	16TB
NVR3416	The NVR3416 offers a maximum of 480FPS across 16 channels with an internal storage of up to 4 hard drives providing up to 32TB storage.	32TB
NVR3416R	Designed for the Custom Install market, the NVR3416R comes in a 19" rack mountable 1U chassis; it offers 480 frames per second across 16 channels, with a throughput of 144Mbps and an internal storage of up to 4 hard drives, providing up to 32TB storage.	32TB
NVR3816         The NVR3816 offers a maximum of 480FPS across 16 channels with an internal storage of up to 8 hard drives providing up to 48TB storage.		48TB



### 4K NVRs

LILIN's 5 series NVR is the most powerful NVR in the market to date; capable of offering 4K resolution recording across all 32 channels, unlike most competitors who can only support a limited number of channels. The NVR5832 offers 960FPS recording, with a total throughput of 300Mbps. The unit has 8 internal hard drive bays, providing up to 64TB storage, and comes equipped with a 4K HDMI output and P2P compatibility for secure and easy remote access. This stylish 19" rack mountable unit is finished in high gloss black to compliment any install.

NOTE: full specifiations can be found on page 80.

Model	Model Description	
NVR5832	The NVR5832 offers a maximum of 960FPS across 32 channels with an internal storage of up to 8 hard drives providing up to 64TB storage.	64TB
NVR5832S	LILIN's newest RAID compatible NVR, the NVR5832S is capable of recording at 4K resolution on all 32 channels. The NVR5832S has a hot-swappable capacity of 64TB (8 x 8TB HDD) and can be ordered pre-configured with RAID 0,1,5 or 6	64TB





### MONITORING AND RECORDING

### **Recording Time**

The maximum recording time depends on the number of cameras recording, the resolution and the frame rate that they are recording at. The recording frame rate can be lowered to increase recording time (a minimum of 15FPS provides a good quality moving image) alternatively you can maintain the FPS and increase the storage.



**NOTE:** Your specific system requirements for NVR sizes based on image quality, frame rate, recording time and quanitity can easily be calculated using LILIN's online storage calculator. Visit: **www.LILN.tv/bandwidth-and-storage-calculator** 

### **HD Decoder**

The aware winning standalone HD Decoder (VD022) is a simple monitoring solution that enables you to view HD streams from your IP cameras without the need for a PC.

You can display up to 16 HD streams on a single HDMI monitor at 1080p. The virtual matrix feature means it can be used to display the video output from NVRs/DVRs in different locations. It can be operated with IR remote, keyboard, web interface and touch screen monitor.

NOTE: A maximum of 3 decoders can be connected to a single NVR at any one.

### VD022

The smart solution to expanding your IP system, the VD022 HD decoder allows you to connect a monitor with a single camera or 16 cameras as a quad view. As you can incorporate numerous HD decoders into your IP system it is possible to have multiple monitor locations.



### **Camera SD Card Recording**

Most LILIN cameras can record to micro/SD cards with capacities of up to 128GB. The recordings can be continuous or triggered by an alarm event. Playback can be viewed through the web browser, LILIN app, navigator or directly from the card. Ensure you use a good quality SD/MicroSD card (minimum speed class 10).

### HINT:

To view the camera in full HD, add an NVR or Decoder which provides a HDMI ouput.



### RESOLUTION

With any LILIN camera, it is important to consider how much detail is required particularly where identification of people or objects like car number plates is critical. The measure of the detail contained in a 1m wide section of the image is expressed as 'pixels per meter'.

A 1080p screen is made up of 1920x1080 pixels, the horizontal resolution (1920) divided by the width of the field of view in meters gives the number of pixels per meter. The higher the pixels per meter value, the greater the resolution in the image. So when it is digitally zoomed in you will see a greater level of detail for identification purposes.

The larger the viewable area, the less detail there will be in any given section of it. The effect of this is that when an area of interest is magnified, pixelation will occur. This could make something like a car number plate unreadable.



66 Pixels/Meter

Ideal for general surveillance such as capturing information in traffic jams or crowds.



131 Pixels/Meter

Ideal for forensic detail such as recognising a face or capturing a car's number plate.



262 Pixels/Meter

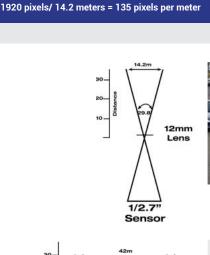
Ideal for high detail surveillance such as capturing casino tables or cash counting rooms.

1920 pixels/ 42 meters = 45.7 pixels per meter

### EXAMPLE: Reading a car's number plate

This diagram illustrated how the field of view widens where the lens focal length is reduced. If the object you wish to identify is a car number plate and the horizontal width of the screen is 42m at the target distance:

Alternatively...



79.

1/2.7"

Sensor

3.3mm Lens



ZMR6522 Lens set to 12mm Distance to target: 30



ZMR6522 Lens set to 3.3mm Distance to target: 30m

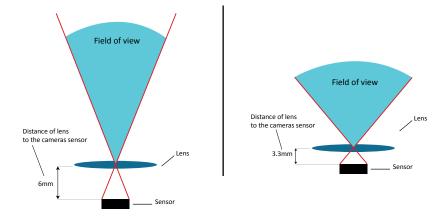


### FIELD OF VIEW AND LENS CHOICE

### **Field of view**

Both the lens choice and sensor size of all LILIN cameras dictates how wide the field of view is and also how fine the pixel count is. So the image can be zoomed in without excessive pixelation losing image detail.

There are three factors that determine the field of view: Size of image sensor, lens focal length and distance to target. The diagram below illustrates how the field of view widens when the lens focal length is varied - zooming in and out.



NOTE: Use LILIN's online camera resolution calculator - not only will it tell you your field of view, but also your pixels per meter. www.meritiliin.com/en/support/tool/camera

Camera installation heigh	6		Metres •	
Camera distance to the targ	et 15		Metres	SCENEWIDTH CAMERA INSTALLATION
Scene width	12		Metres	HEIGHT
Camera Models	Focal Length (mm)	Pixels/ft	Pixels/m	CAMERA DISTANCE TO TARGET
IMEGAPRO 3M	10.6	52	171	

### **Types of lens**

### There are two types of lenses available: Fixed focal length and Varifocal



### Fixed Focal Length

The lens has a fixed focal length and corresponding field of view (example: 4mm, 6mm). This cannot be changed.

### Varifocal

The focal length can be set anywhere between two fixed points widening or narrowing the field of view (example: 30mm wide to a narrower 12mm). Remember, varifocal is a manually adjusted lens, not a motorised zoom. For this function, use the Z Series range.

### **PRIVACY MASKING**

'Privacy masking' is the common term covering the need to restrict what can be seen by means of Closed Circuit Television (CCTV) systems. It applies equally to images displayed in real time for surveillance purposes and images for later use.

There are two key articles of UK legislation that determine the legal requirements for privacy masking, the Human Rights Act 1998 and the General Data Protection Regulation (GDPR).

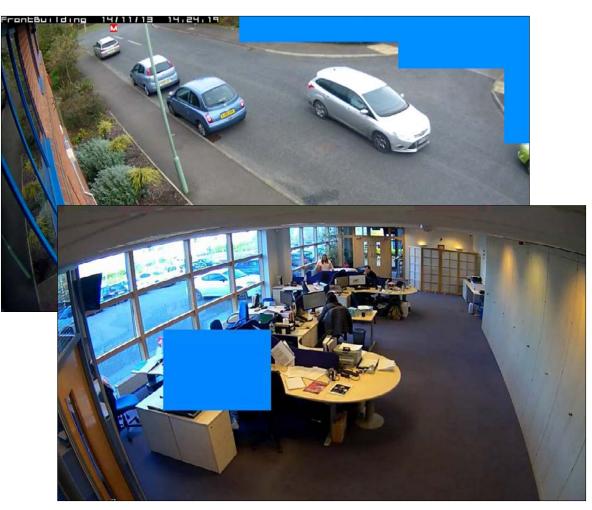
NOTE: The following is guideline only.

For surveillance installs on commercial premises you must comply with GDPR and display a sign indicating there is surveillance with your contact number displayed. The general public have a right to see recorded images but you can charge for this service. The use of cameras for limited domestic household purposes may be exempt from GDPR, however the Information Commissioners office offers further guidance. Full info can be found here: http://ico.org/for\_the\_public/topic\_specific\_guides/cctv



The most effective way to restrict the field of view of a camera is by careful selection of camera position and lens field of view to prevent the camera from overlooking private areas.

With fixed cameras this can be relatively straightforward, but with moveable Pan, Tilt and Zoom (PTZ) cameras this may involve setting pan and tilt movement limits either physically or within the control system's settings to restrict the horizontal and or vertical rotation of the unit. If control system settings are used to limit the field of view, it is important to make certain that these are protected via a key switch or pass code so that they cannot be subsequently altered or overridden by unauthorised persons.



### **IP AND IK RATINGS**

### **IP Ratings**

An IP rating is an 'Internation Protection Rating'. It indicated the level of environmental protection the camera enclosure has against the ingress of solid materials like dust and water, both of which would have harmful effects on the internal electronics.

### For example, dust:

The first IP rating digit indicates the level of protection provided against an ingress of solid foreign objects.

- ✓ IP5 Ingress of dust is not entirely prevented, but it will not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.
- ✓ IP6 No ingress of dust.

The second number IP rating digit indicates the level of protection provided against the harmful ingress of water.

- IPx4 Splash proof: Water splashing against the enclosure from any direction will have no harmful effect.
- IPx5 Water jet proof: Water projected by a nozzle (6.3mm) against the enclosure from any direction will have no harmful effects.
- Powerful water jet proof: Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction will have no harmful effects.
- IPx7 Submersible: Ingress of water in harmful quantities will not be possible when immersed up to 1m.

NOTE: Don't confuse environmental IP (International Protection) ratings with network IP (Internet Protocol).

### **IK Ratings**

An IK rating refers to the degree of protection provided by enclosures for electrical equipment against external mechanical impacts.

External LILIN cameras conform to high standards of environmental protection, IP66 or 67. In addition to this, the vandal proof cameras conform to the highest impact resistance, IK10.

### For example, MR6422

The MR6422 is suitable for mounting externally and can be fitted at a lower level where physical attack may be possible due to it's high IP and IK rating. **IP67, dust tight and submersible in water with the max. IK10 impact resistance.** 

PLILIN MR6422

IK Rating Protected Against		Equivelent to		
IK00	Not protected	N/A		
IK01	0.14 joules impact	0.25kg mass dropped from 56mm above impacted surface		
IK02	0.2 joules impact	0.25kg mass dropped from 80mm above impacted surface		
IK03	0.3 joules impact	0.25kg mass dropped from 140mm above impacted surface		
IK04	0.5 joules impact	0.25kg mass dropped from 200mm above impacted surface		
IK05	0.7 joules impact	0.25kg mass dropped from 280mm above impacted surface		
IK06	1 joules impact	0.25kg mass dropped from 400mm above impacted surface		
IK07	2 joules impact	0.5kg mass dropped from 400mm above impacted surface		
IK08	5 joules impact	0.5kg mass dropped from 300mm above impacted surface		
IK09	10 joules impact	0.5kg mass dropped from 200mm above impacted surface		
IK10	20 joules impact	0.5kg mass dropped from 400mm above impacted surface		

### WIDE DYNAMIC RANGE

Wide Dynamic Range (WDR) is a standard feature across the LILIN range, it is an improved type of 'Backlight Compensation' and provides a much better image quality where there is a brighter background than foreground in the camera's field of view.

When the background of an image is brighter than the foreground there will typically be a silhouette effect of the people or objects in the foregound. WDR digitally adjusts exposure in both the bright and darker areas of the image which maintains an optimum level of detail in both the shadows and bright parts of the image.

### WDR OFF



With WDR off you get silhouette effects as the background is brighter than the foreground.

### WDR ON



Turning WDR on all silhouettes are reduced as the exposure is digitally adjusted.



### P-IRIS

Whilst conventical DC lenses open and close the Iris based on light levels with no regards to how this will affect the depth of field of the image, P Iris lenses work in cooperation with the camera software considering light levels whilst optimising the depth of field.

P-iris Lens



### P-iris Cameras

There are 4 models in 2 chassic, a bullet and a mini dome. With a 4MP and 1080P model respectively.

### Bullet Cameras Mini Domes

ZMR8142X-P ZMR8122X-P

ZMR6422AX-P
 ZMR6442AX-P

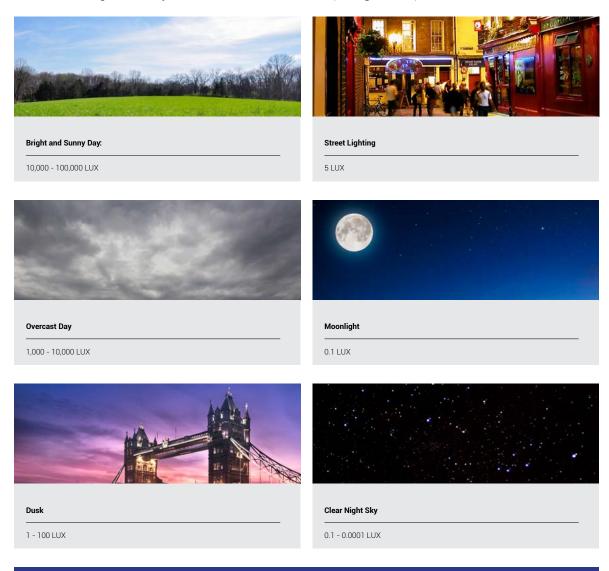
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x

### LOW LIGHT PERFORMANCE

### Lux Sensitivity

Bullet cameras are ideal for external use, though it's important to consider the light levels they will be operating in. LUX refers to the amount of light illuminating an image. In surveillance camera specifications, it refers to the level of light required for a camera to pick up a quality image. A camera with a good low light capability will have a lowe LUX rating. For example, MR832 has 0.1LUX at F1.4 (low light mode).



### Lux Sensitivity

Manufacturers have traditionally utilised from integration technology to improve the light light performance in CCTV cameras. Whilst effective at producing a low light image, 'motion blur' is a common problem in aread with movement. SenseUp+ technology from LILIN greatly improves low light performance without the need for IR illumination. It ulitises intelligent image signal processing with a highly sensitive CMOS sensor. AGC control and 3D noise reduction provide the ultimate low light image without any 'motion blur' or noise. SenseUp+ is the equivalent of what some other manufacturers refer to as 'Starlight' or 'Darkfighter'.

NOTE: This is real footage.





### WHAT IS INFRARED?

Infrared is light that cannot been seen by the naked eye. It is light that has a wavelength between 700 and 1,100nm, just beyond the human visible spectrum.

LILIN bullet cameras have IR illuminators built in cover up to 60m. IR ranges are started as a maximum, specify longer ranged to provide some neadroom and allow for absorption and dissipation.

Note: Check the specification for the IR beam angle. This is often narrower than the camera's field of view.



Material	Typical Reflectance (%) white light	Material	Typical Reflectance (%) white light
Standard White Paper	75	Cast Iron	25
Aluminium	75	Open Country (trees/grass)	20
Glass Windows	70	Wood (mahogany/walnut)	15-40
White Cloth/Fabric	65		
Concrete (new)	40-50	Brickwork (new)	15-30
Light Oak Wood (varnised)	40-50	Brickwork (old)	5-15
Plasterboard	30-60	Concrete (old)	5-15
Bright Steel	25	Matte Black Paper	5

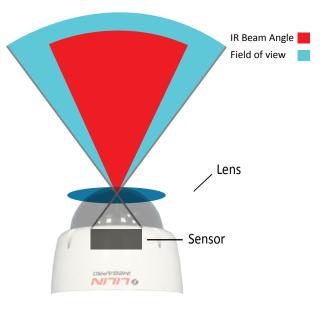
**NOTE:** IR reflects different depending on its target surface. For example, grass has a reflective value of 20% whilst a glass window has a reflective value of 70%. **Pointing your camera directly at a reflective surface will result in a bright spot**.

### **Day/Night Cameras**

During the day you get a true colour rendition, and at night the camera switches to monochrome and the IR cut filter is removed making the camera responsive to IR light.

The higher specification bullet cameras feature larger IR arrays to give longer illumination. This draws more current than standard POE can support so these models are POE+.

Check the specification for the beam angle of the IR. This is often narrower than your camera's field of view.



### **NETWORK DESIGN**

Switch choice is important, if you specify a slower switch than the required network bandwidth, you will create a bottleneck and this will dramatically reduce performance, impacting connection stability.

- Make sure the switch has enough ports for the job
- Port speed 10/100 or Gigabit is sufficient when connecting to cameras directly
- · Backbone speeds require a minimum of a Gigabit connection as they are handling multiple streams of data
- Make sure there s a Gigabit port provided for all NVRs in the system and to link to another local switch
- Max cable length is 100m
- Structured cabling is generally set at a maximum of 90m which leaves 10m for tails and loss due to patching
- · Cable should NOT be run alongside power or devices which emit EM interference (at least 3ft separation)
- Don't flatten cable or bend too much as this will remove the benefit of the twisted pair.



### LUXUL XMS-1010P

### Managed or Unmanaged?

The power and quality of service (QoS) cannot be regulated. If you're using a managed switch, it is recommended that QoS is turned off.

Only use a managed switch if you have a specific requirement within the network design.

### Larger Network Designs

The following points should be observed on top of the standard rules listed above.

### 100m maximum can be exceeded using:

 Linking switches by SFP ports utilises fibre optic technology to maximise the distance that can be run over a Gigabit connection ensuring optimum performance.

### Addition of switch at 100m:

Utilisation of cable extension products designed for purpose. For example, Veracity Long Span can provide POE+ links of up to 600m on Cat6 or up to 300m on coax. **Please call our support team for further information.** 

### Using a Switch to Extend the Network

When you reach 90m, if there is a location where a few cameras can be star wired, then a POE switch is ideal at this point.

It will provide an additional 90m run per port.

```
NOTE: The switch supplying the uplink to the remote switch should be a Gigabit. It doesn't need to be POE as it is not connecting directly to the cameras.
```

### **POWER OVER ETHERNET**

### What is PoE?

Power over Ethernet (POE) integrates power into a standard LAN infrastructure. It enables power to be provided to a network device, such as an IP camera, using the same cable that is used for network connection. This means that the camera only required a single Cat5e (or greater) cable and it eliminates the need for power outlets at the camera locations.

There are two standard types of PoE. One can be supplied from a PoE switch, this is ideal for multiple camera installations. Alternatively, a PoE injector can be used in conjunction with a normal switch.

- PoE: The original standard, 802.3af, provides up to 15.4W to each device
  - **PoE+**: A new standard, 802.3at, provides up to 25.5W of power to each device

CLASS 0	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0.44-12.95W	0.44-3.84W	3.84-6.49W	6.49-12.95W	12.95-25.5W

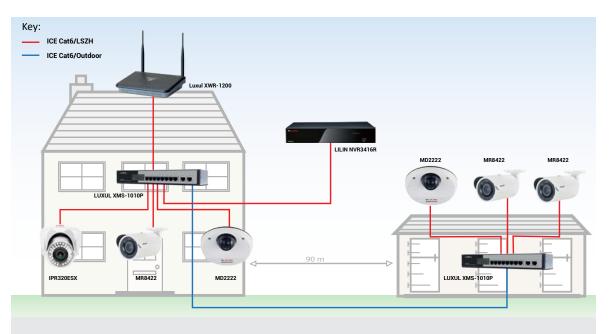
NOTE: Ensure you check your camera specification in order to make sure you get the correct switch.

### **PoE Switches**

The overall PoE power putput of the switch is important to consider when specifying your PoE switch.

For example, you may have a 24 port PoE switch but that doesn't necessarily mean it can power 24 PoE devices all at once. For this to be true, the switch would need an overall power output of least 370W. make sure your switch has enough power by multiplying the number of cameras have by either 15.4 (standard PoE) or 25.2 (PoE+) depending on their power requirements. This sum needs to be less than the overall power output of your PoE switch.

- 24 Port PoE switch with overall power output of 280W
- Number of standard PoE cameras needing power is 18
- Equation: 18 x 15.4 + 227W needed to power all 18 cameras (just under what the swtch can ouput)
- The same rule applies for PoE+ based on 25.5W needed per camera



\* ICE Cat6/Outdoor based on 90m run outdoor with internal run of 5m each end to total 100m switch to switch

### **Project Planner**

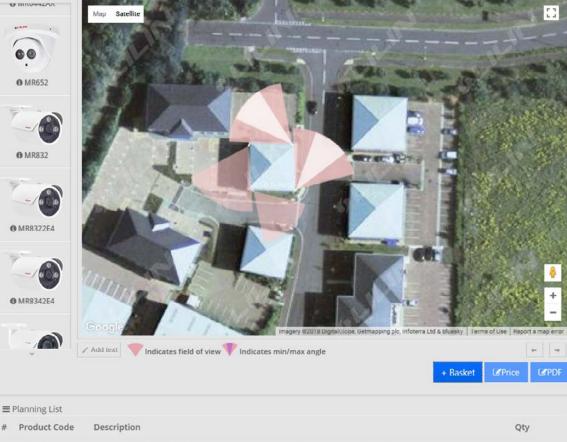
Ever wanted to be able to drag cameras onto an image of your site, move and scale cameras based on their angle view and create a shopping list of the products you require to complete a system, in complete confidence? Now you can with the LILIN Project Planner.

### Here's how it works

Step 1: Upload your own image or search for your chosen location using Google Maps.

**Step 2:** Drag and drop different cameras onto your chosen site. Move, scale and rotate cameras based on the lens angle. The planner will calculate your bandwidth and storage requirements to make selecting an NVR easier.

**Step 3:** Now you are ready to print a PDF of your protect or you can send it through to us so we can provide you with a quote. The project can be edited at any time making it easy to add to your list of products if required.



	nunning cisc		
#	Product Code	Description	Qty
1	MR6442AX	M Series, 4MP, 20FPS, D/N External vandal resistant dome, 25M IR, 2.8-12mm, PoE/12Vdc	1
2	MR652	M Series, 1080P, 30FPS, D/N External vandal resistant dome, 20M IR, 4mm, PoE/12Vdc	1
3	MR832	M Series, 1080P, 30FPS, D/N External bullet, 20M IR, 4mm, PoE/12Vdc	1
4	MR8442X	M Series, 4MP, 20FPS, D/N External bullet, 20M IR, 2.8-12mm, PoE/12Vdc	1
5	NVR3416-4TB	16 Channel NVR, 1080P Display up to 5MP recording, 480FPS, 144Mbps network throughput, 4TB	1 🔒

### Visit: www.LILIN.tv/Project Planner to start your new project!



### ANALOGUE CAMERAS AND RECORDING

### Day/Night 1080P/4MP AHD Camera Series

LILIN'S AHD (Analogue High Definition) cameras enable you to install a reliable analogue solution that integrates smoothly with all other analogue eqipment.

- Full HD 1080p/4MP
- AHD Cameras transmit data that is not encoded resulting in no process and no delay in real time
- Up to 300m transmission distance
- Defog Function and 4 Zone Privacy masking
- Seamless compatibility with standard analogue

### AHD652

Material	IP Control	Audio	PoE	LILIN App	HTML 5	SD Card	Remote Alarms	H.264
IP System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AHD System	No	No	No	Yes	No	No	No	No

### **AHD Digital Video Recorders**

Available in 4, 8 and 16 channels, this AHD range of DVRs can display AHD cameras with a resolution of up to 1080p. They are also compatible with legacy hardware, enabling the use of any BNC camera.

When added to a control system, the DVR can be controlled via IR commands or the Analogue camera streams can be added to the control system as MJPEG streams. these streams are encoded to the control system via the DVR.

Model	Description	Hard Drive Range
DHD304	4 Channel AHD digital video recorder, compatible to 960H analogue camera, "Up The Coax" AHD camera supported, each channel independant record frame adjust, video transmission up to 500m (cable depend- ant), Privacy Masking, up to 6TB HDD Supported, HDMI and VGA outputs	1TB - 6TB
DHD308	8 Channel ADH digital video recorder, compatible to 960H analogue camera, "Up The Coax" AHD camera supported, each channel independant record frame adjust, video transmission up to 500m (cable depend- ant), Privacy Masking, up to 6TB HDD Supported, HDMI and VGA outputs	1TB - 6TB
DHD316	16 Channel ADH digital video recorder, compatible to 960H analogue camera, "Up The Coax" AHD camera supported, each channel independant record frame adjust, video transmission up to 500m (cable depend- ant), Privacy Masking, up to 12TB HDD Supported, HDMI and VGA outputs	1TB - 12TB

### Hybrid Digital Video Recorders

LILIN'S Hybrid Digital Video Recorders are able to record AHD/CUI/TUI/Analogue and IP. Costing little more than analogue proucts, they offer 4 times the resolution in 1080p. As the DVRs can be wired in RG59 COAX, in many installs existing COAX can be used.

Backwards compatible with older analogue CCTV equipment. The DVRs bring together old and new technology.

Model	Description	Hard Drive Range
DHD504	4 Channel Hybrid standalone digital video recorder, 4MP H.264 LILIN IP camera supported, UTC AHD camera supported, up to 8TB HDD, Smart search playback with simulate HD camera, Privacy masking	1TB - 8TB
DHD508	8 Channel Hybrid standalone digital video recorder, 4MP H.264 LILIN IP camera supported, UTC AHD camera supported, up to 8TB HDD, Smart search playback with simulate HD camera, Privacy masking	1TB - 8TB
DHD516	16 Channel Hybrid standalone digital video recorder, 4MP H.264 LILIN IP camera supported, UTC AHD camera supported, up to 8TB HDD, Smart search playback with simulate HD camera, Privacy masking	1TB - 16TB



### VARIFOCAL LENS

Manually adjust the focal length of the camera to zoom in and out. Motorised on some models.

### WDR

Wide dynamic range. This compensates for bright backgrounds to maintain detail and contrast on the foreground image.

### DAY/NIGHT

Day/night cameras switch between colour and monochrome displays based on light levels.

### **IK RATINGS**

International classification for the degrees of protection provided by enclosures for electrical equipment against external mechanical images.

### IR

Infrared is light invisible to naked eye, typically used to illuminate darker areas in a camera's field of view.

### FPS

Frames per second. A high FPS results in smooth video recording. Higher frame rates will not miss any motion. typically used in Casinos and Banks.

### **AUTO IRIS**

The lens will automatically adjust to allow an optimum level of light through.

### **IP RATINGS**

Ingress protection rating. This classification protects against dust and water ingress. All outdoor cameras and sensors will have an IP rating.

### VR

Vandal Resistant, physically protected from damage and IK rated.

### DI/DO

Digital input/output. Provided by cameras to further integrate with third party systems. E.g., control, monitoring and security.

### LUX

LUX is the measurement of light levels.

### PTZ

Pan, tilt and zoom. This allows for 360° motorised movement and can zoom to any area in the field of view.

### POE

Power over Ethernet. This allows for a single Cat5e cable (or greater) to supply power and data to the camera.

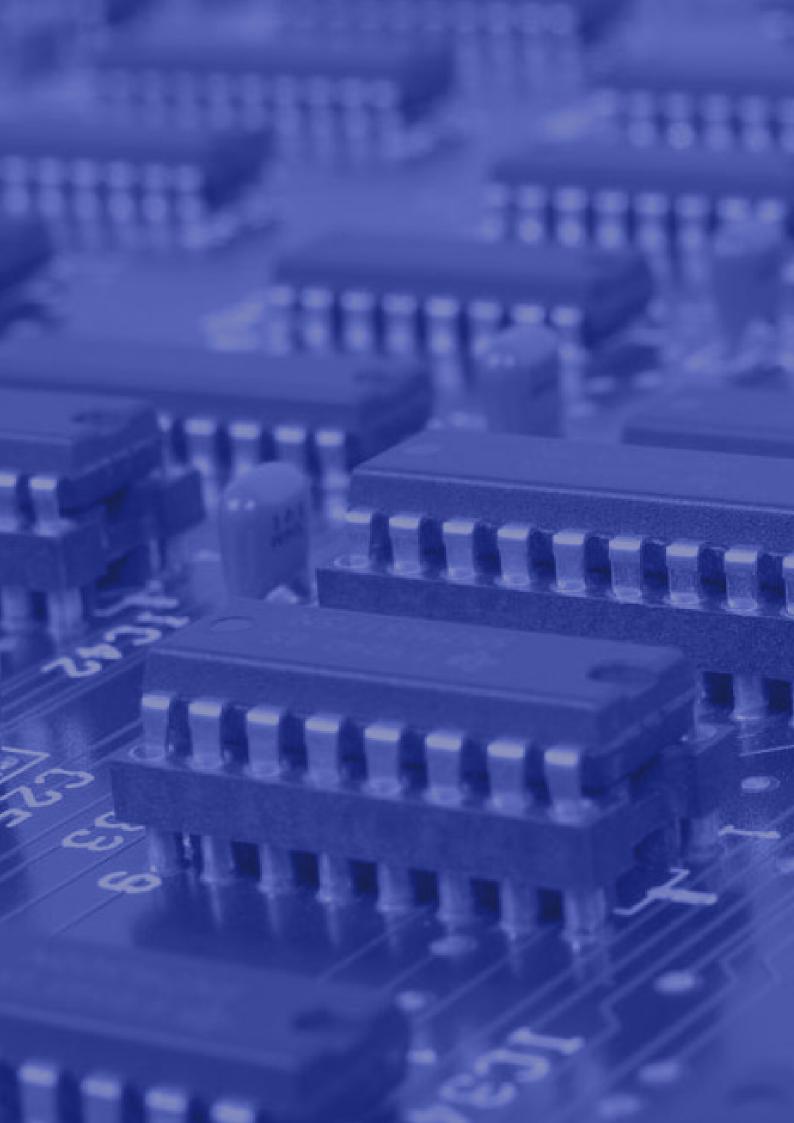














# ABOUT COMELIT





### WHAT COMELIT OFFER...

Founded in 1956, Comelit Group SPa is an industrial company operating on a worldwide scale and specialising in the design and manufacture of video entry, video surveillance, anti-intrusion, home automation, access countrol and fire protection systems. The company has a strong international vocation thanks to its close ties with the area in which it was created and in which it's headquarters are still located today (Val Seriana, to be precise).

Comelit exports to over 70 countries worldwide and, in addition to their Italian headquarters, has 15 branches located in strategic areas in which the company operates; from Europe to the Far East, the United States and the Middle East. This articulated sales structure integrated shared know how with awareness of specific requirements in each market.

Comelit makes looking to the future their mission, Innovation through continuous investment in manpower and technology finds an outlet in the design of new solutions dedicated to improving the quality of everyday life by maximising simplicity and functionality.



### **ViP System**

### A System for all settings

ViP System represents the evolution of video entry technology and the services connected to it, with a new dimension linked to data transmission offering performance suited to modern residential, commercial, industrial and advanced tertiary scenarios: from individual residences to large complexes, in new constructions, renovated buildings and modernised systems and structures alike.

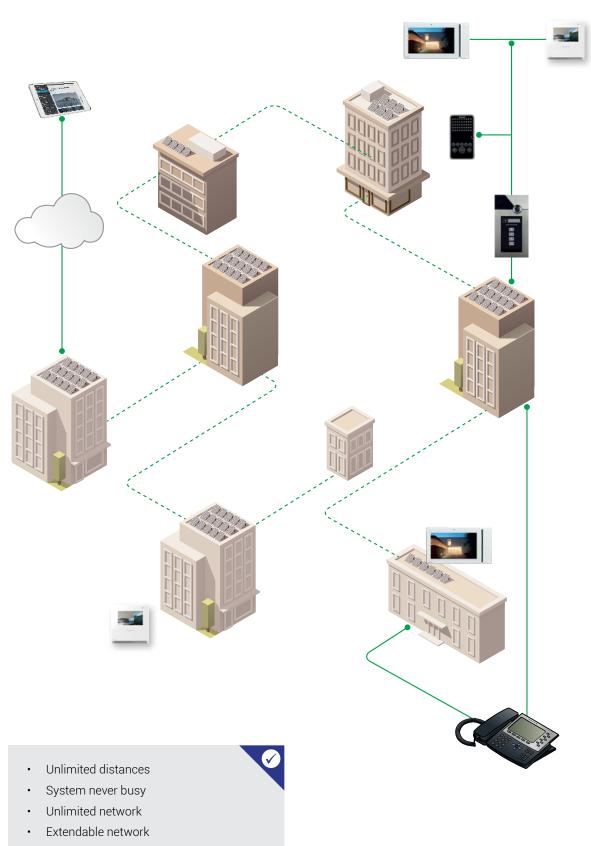
Serves and unlimited number of users, with simultaneous conversations and no distance limitations. A single backbone on a LAN (specific or using existing), to which the devices are connected via an RJ-45 plug.

### **Small Residential**



- Integration with smartphone and tablet
- Local and remote answer •
- Available in kit form
- Easy installation and programming •

### Medium/Large Residential



Central and remote power switchboard

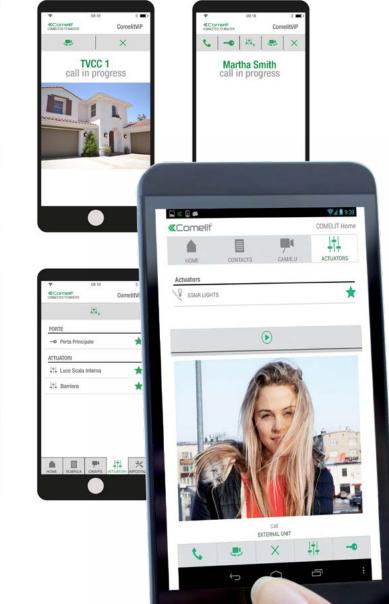
### MONITOR WHEREVER YOU ARE

The Comelit app manages door entry and other advanced functions even from a 3G network. The Comelit app is available for both smartphones and tablets. The app can be downloaded free of charge from the App Store and GooglePlay.

### **Comelit VIP Remote allows:**

- Answer calls from external units
- View and manage cameras .
- Make and receive calls from other internal units (in contacts list) and from other devices
  - View of videos recorded from external units and CCTV (Video Memory)
- Control actuator to manage lofts, gates, barriers, etc.





# SYSTEM FOR ALL SETTINGS

### MONITOR WHEREVER YOU ARE



### FOCUS: 30NE6 Touch AV Entrance Panel - 3454H

Stainless steel flush mounted entrance panel (fitted level with the wall) with 8" capacitive touch screen featuring high visibility and impact proof glass.

Allows customisation of the virtual buttons and viewing of general apartment block messages. Fully configurable via ViP Manager.

Fitted with RFiD reader for the local lock control, an additional relay for various uses and proximity and brightness sensors for optimal operational management.

- 8" backlit colour HD capacitive touch screen
- 2 stainless steel finishes: mirrored at the top and brushed at the bottom
- Complete with motion sensor to increase the brightness when the panel is approached
- Attactive and intuitive fully graphic interface
- 4 different call modes: name search, code, alphabetic entry and button
- Voice messages and visual indication for hearing aid users
- Integrated RFiD reader

•

- Customisable welcome message and graphics for every button and user
- User interface in 16 languages
- Door unlocking with numeric
- External unit supplied complete with audio/video module
- Dimensions 185mm x 345mm
- Requires 1569A power supply





### 30NE6 Sense Digital Cap Sense AV Entrance Panel - 3452

Flush mounted entrance panel with 3mm thick stainless steel plate. Complete with 128x64 dot LCD graphic display and 15 buttons integrated in the plate. It can also be used to customise an initial welcome message and can operate with a duel user interface language. Integrated RFiD reader can be used in conjunction with SimpleKey.

- Audio/video external unit in AISI 316 steel
- 2 surface finishes: polished finish at the top and brushed finish at the bottom
- Backlit 128x64 pixel graphic display
- Alphanumeric keypad made using exclusive 'sense' technology: the metal surface is touch sensitive
- Keys with Braile characters
- Voice messages and visual indications for hearing aid users via pictograms on the display
- Night time lighting with an accessory that also functions as a rain shield
- User interface in 16 languages
- Door unlocking with numeric code or badge
- Flush mounted external module. 4mm thick. Supplied complete with flush mount box.
- Dimensions: 18.5x34.5cm
- Requires 1595 power supply

### **30NE6 Analogue Audio Entrance Panel - 3204X**

1

2:.

5 :

8:

0.:

4

7 ::

3"

6::

9 ·:

\*\*\*

Flush mounted entrance panel with 3mm thick stainless steel plate; buttons integrated into the plate, with no mechanical movement, as it utilises capacitive technology applied to metal for the first time, thanks to CapSense<sup>™</sup> technology which detects the imperceptible impression made by fingertip on the surface of the steel. Name card holders with LED lighting and front access for name replacement. Complete with ViP audio unit.

- Audio and audio/video external unit in AISI 316 steel
- 2 surface finishes: polished finish at the top and brushed finish at the bottom
- Available in 1 to 12 button versions (4 button module pictured)
- Call buttons made using exclusive CapSense™ technology
- Voice messages and LED light indications
- External unit supplied complete with audio or AV module
- Name plates easily replaced
- Sturdy and extremely durable
- Flush mounted external module. 4mm thick. Supplied complete with flush mount box
- Requires 1595 Power Supply.



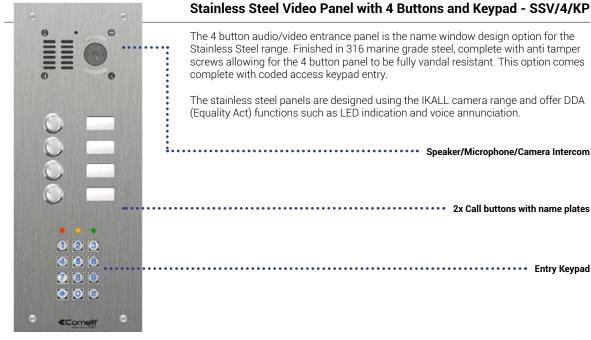
### Stainless Steel Video Panel with 2 Button - SSV/2

Thw 2 button audio/video entrance panel is the standard design for the Stainless Steel range. Finished in '316' marine grade stainless steel, the panel comes complete with anti tamper screws making the panel fully vandal resistant. The stainless steel panels are designed using the IKALL camera range and offer DDA (Equality Act) functions such as LED indication and voice announciation. Comelit are able to incorporate a keypad for coded access of a 40x40mm cut-out for a SimpleKey or third party access control reader. The entrance panels are available in both blush and surface mounted versions.

Speaker/Microphone/Camera Intercom

2x Call buttons with name plates





### Stainless Steel Video Panel with 4 Buttons and Keypad - SSV/4/KP

The 4 button audio/video entrance panel is the name window design option for the Stainless Steel range. Finished in 316 marine grade steel, complete with anti tamper screws allowing for the 4 button panel to be fully vandal resistant. This option comes complete with coded access keypad entry.

The stainless steel panels are designed using the IKALL camera range and offer DDA (Equality Act) functions such as LED indication and voice annunciation.

Speaker/Microphone/Camera Intercom

2x Call buttons with name plates

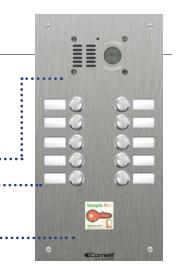
### Stainless Steel Video Panel with 10 buttons and Access Control cut out - SSV/10/CO

Speaker/Microphone/Camera Intercom

10x Call buttons with name plates

The 10 button audio/video entrance panel is the name window design option for the Stainless Steel range. Finished in 316 marine grade steel, complete with anti tamper screws allows for the 10 button panel to be fully vandal resistant. This option comes complete with 40x40mm access control cut-out. The Stainless Steel panels are designed using the IKALL camera range and offer DDA (Equality Act) functions such as LED indication and voice annuciation.

Access Control cut out



### **iKALL ENTRANCE PANELS**

iKALL entrance panel design featuring versatile technology. With their clean, attractive lines, the modular elements guarantee optimal results by offering simple configuration, style and reliability. Details make all the difference and iKALL by Comelit with their fashionable colours, offer a new type of style. A innovative and simple way of communication. iKALL is available in both digital and analogue versions. The interchangable frames and faceplates adapt to all types of décor.

### **iKALL Entrance Panel Features**

### Large nameplates

Maximising clarity and simplifying the search process. Double length nameplates can also be used; these occupy the entire horizontal area.

### White and blue backlighting

Elegant white and blue colour options enhance visibility; backlighting may also be disabled if required.

### Rapid removal nameplates

Quick and easy extraction of nameplates from the front without removing the modular holder

### LED backlighting

Energy consumption is minimised and names are displayed cleary. LEDs make it easier to locate call buttons

Wide angle camera The wide angle iKALL camera offers perfect coverage of 90° field of view

### Two programmable outputs

Two outputs are available and can be programmed for separate gate and entrance activation without the application of additional devices

Large display

Large LCD display (62x44mm) with backlighting ensures visual signals are easy to read

- Sensitive touch alphanumeric keypad Sensitive touch technology is an ergonomic touch screen keypad
- **OSD pictograms** The OSD (on screen display) systems make it possible to view messages on the entrance panel
- USB port uploading The USB connection makes it easy to upload names directly via a PC or laptop
- Alphanumeric keypad All functions offer simple and intuitive operation
- Increased system distances
   The potential distances between the entrance
   panel and it's power supply unit have been
   increased
- **Power supply** Requires a 1595 power supply



### VANDALCOM

Vandalcom is the anti vandal stainless steel entrance designed to withstand even the most violent acts of vandalism. The frame is available in two colours (steel grey and dark grey), for analogue and digital versions. Boxes are made using 1.5mm thick galvanised aluminium, impact proof modules created using two thick stainless steel plates, stainless steel short stroke button - not recessed but flush with the plate - and special armoured screws: every detail have been specifically designed to withstand vandalism.

### VandalCom Panel Features

- · Audio and audio/video external unit
- Modules made using double 2.5mm stainless steel
   plates
- Flush and surface mounted installation
- Available for SBTOP 2 wire and digital ViP system
- Stainless steel micro stroke buttons
- Analogue or digital version
- IK10 rating
- Requires 1595 power supply









VANDALCOM

















### 1441B - Gateway PSU

Should you be using your own network switches, they will be unable to provide enough power on PoE to support any of the gatways below.

If this is the case, a 1441B must be used to power each gateway.

### 1456 - Master Gateway

In a Comelit app only entry solution, a master device is required somewhere within the system. The 1456 gateway is required in this scenario. Powerd by the 1441B, or PoE from a 1440 switch, the master gateway allows access for a maximum of 15 devices such as smartphones and tablets to receive a call from the entry panel on local LAN, 3/4G or over the internet.

The 1465 has 5x RJ45 Ethernet ports; 1 WAN and 4 LAN with settable PoE for use with Comelit internal monitors.

### 1456S - Slave Gateway

Where there is a master device/gateway present within the system, the 1456S is required to give external access to the Comelit app via internet or 3/4G connection. This will forward a call to the Comelit app should you be away from home. Powered by the 1441B, or PoE from a 1440 switch, the Slave gateway allows access for a maximum of 15 smartphones/tablet devices to receive calls over the internet from the entry panels but also calls between the devices themselves.

The 1456S have 5x RJ45 Ethernet ports; 1 WAN and 4 LAN with settable PoE for use with Comelit internal monitors.

### 1456G - SIP Gateway

1456G is a SIP interface for use with control system integration like RTI and Crestron but can also be used with 3rd party SIP phone systems. There must be a master device or gateway in the system whether it be a Comelit monitor or the 1456 master gateway for this device to work. The 1456G converts a Comelit ViP call into a SIP call for 3rd party devices to access both the audio and video stream. Door release is then done using DTMF tones to activate a relay.

This may be the relay incorperated into the entrance panel or a remote relay via the 1443 network relay module.

### 1456B - Multi User Gateway

The 1456B is a Multi-user Gateway for apartment blocks. An innovative solution using the Comelit ViP digital system for apartment blocks. Used to answer calls from an external unit via a ViP door entry monitor, Smartphone/ Tablet via the Comelit ViP APP or GSM telephone or land line.

- MASTER where no Comelit monitors are present
- SLAVE adds remote connection if at least 1 Comelit monitor is present
- PHONE ONLY to integrate with a standard phone



### 1441 - Riser Power Supply

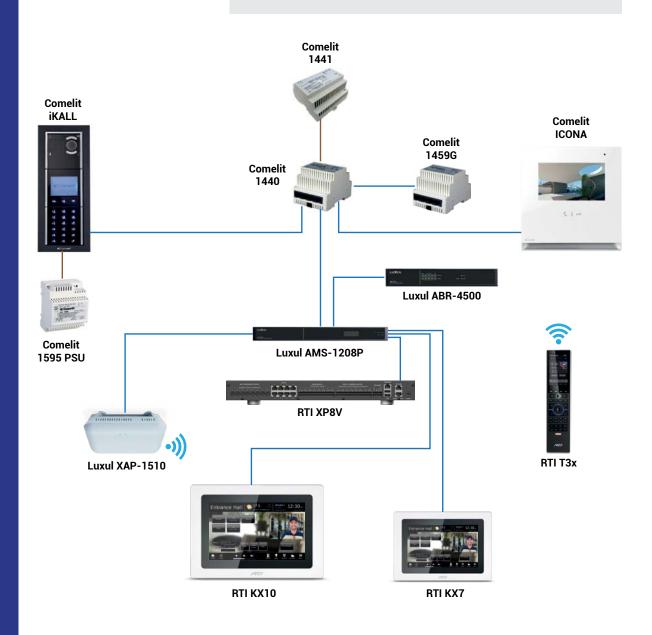
The 1441 power supply is used to provide power to the 1440 network switch. This power supply can power up to 6 of the 1440 switches.

Should more network switches be required, add another 1441 and cascade switches by Cat5/6 cable to create a larger network.

### 1440 - Network Switch

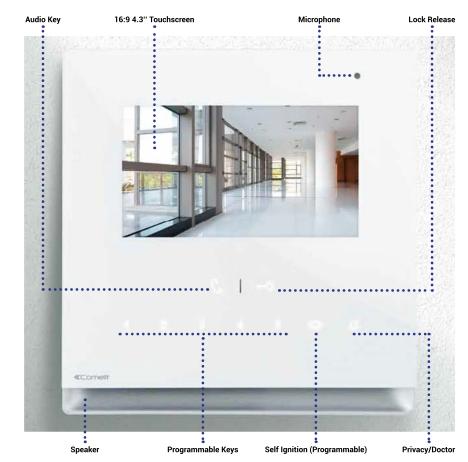
The 1440 is a 6 port network switch poriving PoE for connecting to Comelit monitors and gateways. Please note that standard PoE devices must not be connected to this switch as may cause damage to high PoE outputs. 2 ports provide 10/100Mb connection speed and are ideally used for uplink to and from other 1440 switches.

A further 4 ports provide PoE and 10Mb connection speed for connection Comelit monitors.



### **ICONA INTERNAL INTERCOM**

Inspired by the masters of minimalism, Icona takes away everything superfluous and add innvative control functions. Total linearity and minimalist styling make it the perfect match for any architectural or interior design context. Icona features a clean and simple design, without any superfluous details. Gloss surface in transparent, scratch resistant polycarbonate and edges with a brushed, mattge metal finish. Formal minimalism down to the last millimeter, housing complex technology inside. Icona is available in flush mounted, surface mounted and desk based versions.



### **Icona Features**

**ONA INTERNAL INTERCOM** 

- · Built in temperature sensor
- Concealed side micro SD Customisable melodies, video memory, messages and consumption archive
- Connection via LAN network
   For live viewing of cameras in anti-intrusion and door entry monitor system
- Three programmable inputs
- Function for sending emails
   About door entry monitor, home automation and
   anti-intrusion system events

- **Device counter** A display of number of items in operation for each room
- Four favourite tabs Can be selected from the options given on the homepage
- Custom melodies
- Video memory
- Messages/alerts
- Door open alert
- PoE powered

### **Icona Back Box Options**

### 6612 Desk Mount



### 6620 Surface Mount



### 6617 Fush Mount



### 6118 Plasterboard Mount

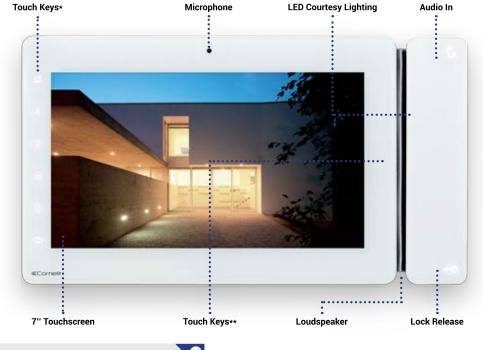


### MAXI INTERNAL INTERCOM

Maxi is the new benchmark for high level door entry monitors. It's shape is the result of Comelit's search for innovative design. A commitment which has seen the company earn top level international plaudits and recognition such as the Red Dot Award, Design Plus, Design Index ADI and Good Design awards.

Maxi combines a stylsh, minimal design with the utmost simplicity in terms, though functions activated via sensitive touch technology and a touch-screen monitor featuring capacitive technology (ViP version)

- 7" touch screen
- 16:9 screen ratio
- Transparent screatch resistant polycarbonate
- Edges with matte brushed metal finish
- 12mm thick
- Semi flush, surface mounted and desk base version
- PoE powered via 1440 switch



•Touch Keys: Sensitive touch keys (swipe function), privacy key, 4 programmable keys, self-ignition

**1AXI INTERNAL INTERCOM** 

\*\*Touch Keys: Audio volume, ringtone volume, adjustment keys, colour/brightness adjustments

### Maxi Features

- Custom melodies
- View household consumption figures
- Three programmable inputs
- Function for sending emails
   About door entry monitor, home automation and antiintrusion system events
- Video memory
- Messages/alerts

### Multiroom music function

- Manage the system by selecting the album, track or radio stream for each zone, adjust the volume and select random/ repeat play modes

- Sync multiple audio zones for playing the same course throughout the house
- Create a scenario by enabling each audio zone with a different source and volume
- Import, manage and listen to Spotify playlists
- (only with a Spotify Premium subscription)

### **Icona Back Box Options**

### 6820 Surface Mount

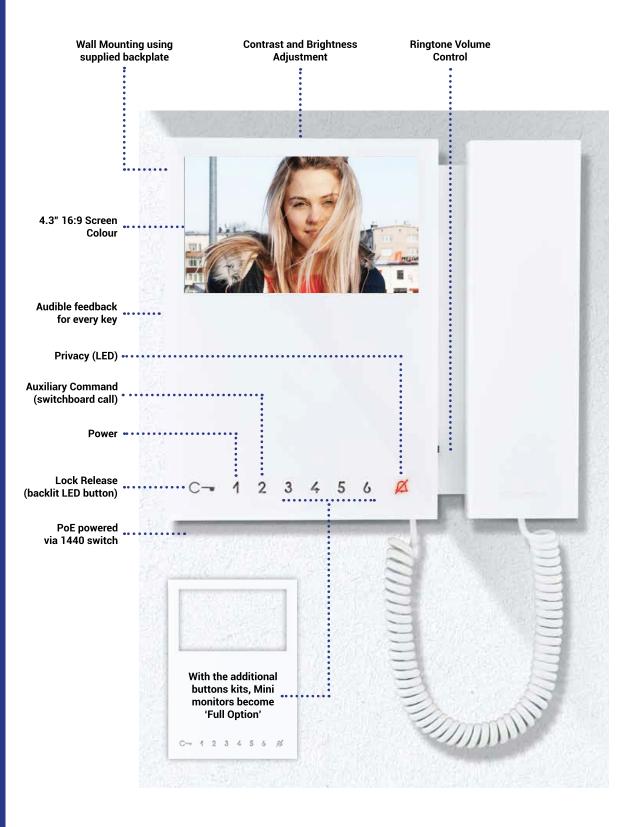




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### MINI INTERNAL INTERCOM

The colour Mini adds colour to the practical functions of the basic model with it's 16:9 colour screen. Practical and efficient, it offers brightness, contrast and ringtone volume adjustment, in addition to melody customisation. it has 4 touch sensitive buttons for controlling the lock release, self ignition, auxillary command (switchboard call) and privacy functions; it also manages floor foor calls.



Wall-mounted hands-free monitor with full-duplex audio and 4.3" / 16:9 colour screen. It is equipped with a Wi-Fi port to allows calls forwarding to mobile devices. Allows brightness control, plus adjustment of the ringtone volume, which can be customised by choosing one of several different melodies. Equipped as standard with 8 sensitive touch back-lit controls for audio activation, door-opening, self-ignition, switchboard call, privacy service and LED signalling for the door status. Manages floor door calls as standard. Complete with 2 x 8-position dip-switch for user code programming and button programming. The wall-mounting backplate and riser distribution terminal art. 1214/2C are included. The monitor can only be used in 2-wire system Simplebus Top. Dimensions: 4.53"x6.3"x0.87".



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«Comelil

TRATA PROPERTY.E

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### CONCENTRATED PACKAGE OF PURE DESIGN

Comelit products stand out due to their unique and original style, incorporating the most hi-tech materials, simple lines, clean shapes and cutting-edge colours

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### EQUIPPED WITH USER-FRIENDLY TECHNOLOGY

2

3

Compact dimensions frame a 4.3" colour screen with 16/9 - 480x272 pixel display featuring brightness adjustment. The keypad, with 8 soft-touch buttons, allows you to answer calls or control door opening (with or without LED indication), disable the bell sound and activate the graphical menu, which can be navigated using 4 programmable multifunctional buttons by selecting the various icons and accessing the messages menu quickly

# STO AUDIO/VIDEO DOORBEL

Visto is more than just a video doorbell. It is a device that becomes part of your life. It is for convenience, so you can enjoy your garden without having to answer the door. It is a security device that allows you to always know who is at your door. It can give you motion notifications so you know when your kids arrive home from school or when a customer walks by your shop entrance. Overall it is something that you have been missing in your life and you didn't even know it!





### ENHANCED SECURITY

- **HD** Camera High Quality video resolution
- **Motion Detection** Sends alerts to your smartphone when motion is detected
- Two-way audio Talk and listen to anyone in your home
- **Night Vision** Up to 5M with infrared LEDs
- Wi-Fi Connected Stream live images to your smartphone
- **Cloud Recording** Live recording to cloud service with subscription

### SPOT EVERY DETAIL

The visto external cam allows you to see alternative views of the exterior of your house, workplace, and yard. It allows for an extra layer of security and monitoring in areas like walkways, garages, entrances and alleys

### MORE THAN A DOORBELL

Visto is more than just a video doorbell. It is a device that becomes part of your life. It is for convenience, so you can enjoy your garden without having to answer the door. It is a security device that allows you to always know who is at your door. It can give you motion notifications so you know when your kids arrive home from school or when a customer walks by your shop entrance. Overall it is something that you have been missing in your life and you didn't even know it!

### **ALWAYS WITH YOU**

The Visto App is the main interface which allows users to easily interact with their Visto Doorbell and Cameras. It allows full two-way communication in HD video and crystal clear audio while you can view all of your doorbell cameras and accessory cameras which might be on your system with the ability to view all recorded pictures and videos which are stored on your device or in the cloud.



**Comelit Visto APP** Available for download on the App Store and Google Play







JD TechSmart®

# ABOUT GJD



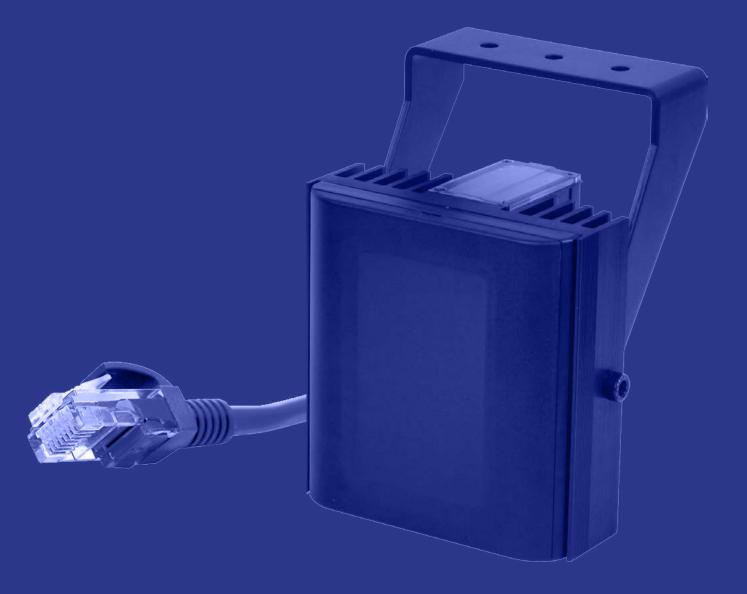


### WHAT GJD OFFER...

GJD is an industry leader in UK manufacturing, design and supply of electronic perimeter detection and high performance LED illumination equipment. Ranging from CCTV and lighting controllers to their Clarius® range of White-Light and Infrared LED illuminators utilised in all industry sectors across the world.

GJD's strong and continuous growth pattern results from an ardent philosophy of producing consistently reliable equipment coupled with a dedication to after-sales support. By listening to, and working closely with their customer base, they are able to continuously refine and evolve their products and quality systems. GJD take great pride in developing new designs; utilising the latest technology and implementing state-of-the-art manufacturing techniques that ensure their respecteed position within the industry.

Based in Heywood, Greater Manchester, GJD has extensive knowledge and expertise, with over 35 years of experience in the security industry.



### **PIR DETECTION**

### **IP Enabled Detectors**

TechSmart's perimeter motion sensors additionally include integrated LUX and temperature transmitters to provide environmental data to create actions and alerts based on programmed automation rules.

- Trigger lights and other smart devices when movement is detected
- Send users an intruder notification
- Control CCTV, providing alarms and camera movement
- Setup LUX level events to operate blinds and curtains
- Environmental temperature monitoing to help manage internal air conditioning and heating
- Available in White, Silver, Black and Black/Burgundy



### **TS30 Features**

- Up to 30m programmable detection range
- Output test mode with LED indication
- 10° 70° detection angle (max. 30m x 30m)
- Pan and tilt adjustments
- 3m optimum mounting height
- 1x Blue LED alarm indicator
- 2 N/C volt free relay contacts (web interface set up required)
- PoE (48v DC)
- Web browser interface (no software or installation required)
- Dimensions: H:145mm x W: 120mm x D: 115mm
- Integration with RTI, Control4 and Crestron, Lutron, Rako and LILIN

### TS30DT Features

- Up to 30m programmable detection range
- Output test mode with LED indication
- 10° 70° detection angle (max. 25m x 30m)
- · Pan and tilt adjustments
- 3m optimum mounting height
- 3x LED indicators for alarm, PIR and microwave detection
- 2 N/C volt free relay contacts (web interface set up required)
- PoE (48v DC)
- Web browser interface (no software or installation required)
- X band microwave freqency (country specific)
- Dimensions: H:145mm x W: 120mm x D: 115mm
- Integration with RTI, Control4 and Crestron, Lutron, Rako and LILIN

### **DETECTOR APPLICATIONS**

GJD's TechSmart outdoor range of PIR and Dual-Tech intruder detectors combine advanced signal processing and unique optical systems to give reliable early warning alerts of potential perimeter breaches.

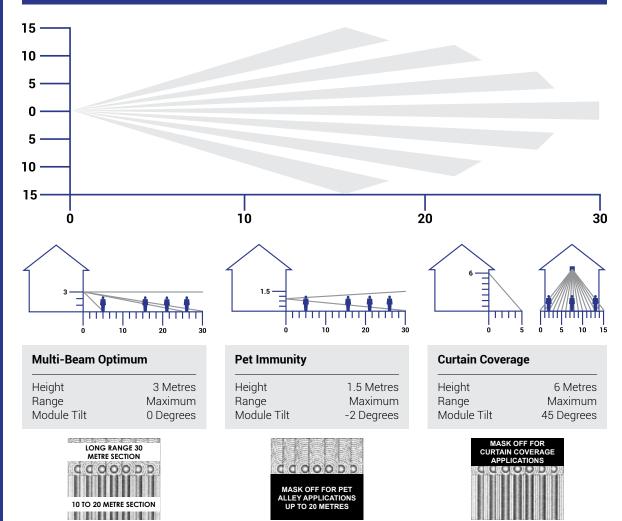
By utilising the latest IP technology, GJD's TechSmart range provides enhanced technology integration options for the custom integrator. TechSmart is easily interfaced with existing home automation and building management systems. TechSmart products can also be installed as standalone intelligent IP devices, allowing residential property owners to create smart customised actions to suit specific requirements.

### **Applications:**

- Provide early warning of someone on the property
- To start CCTV recording or provide a marker on system log
- Move a PTZ camera to preset position
- Signal to a monitoring station or communication device
- Internal or external sounders
- External lighting
- Internal lighting when intruder alarm fully set
- Trigger camera lighting
- Ambient temperature output could close blinds, curtains, etc.



### **Beam Patterns**



### LED ILLUMINATION

### **IP Enabled Illuminators**

- Infra-Red and White-Light options available
- PoE+
- Embedded software

26 Watt LED

•

- 6 angles from 5 diffusers
- IR available in 850nm and 940nm



Infra-Red Illuminator

### White Light Illuminator

### **TSIRM8, TSIRM9/TSWLM**

### **TSIRM8/9 Features**

- Robust high quality aluminium extrusion
- Adjustable photocell (20-70 LUX)
- Adjustable illumination (10-100%)
- -50 to 50°C operating temperature (-58 to 122°F)
- PoE (IEEE802.3at)
- IP66 rating
- High power Dual Core LED<sup>™</sup> technology
- Web browser interface (no software or installation needed)
- Dimensions: H:114mm x W:110mm x D:78mm
- Integration with RTI, Contol4, Crestron, Lutron, Rako and Lilin

### TSWLM Features

- Robust high quality aluminium extrusion
- Adjustable photocell (20-70 LUX)
- Adjustable illumination (10-100%)
- -50 to 50°C operating temperature (-58 to 122°F)
- PoE (IEEE802.3at)
- IP66 rating
- 2,400 lm output
- 5,700K colour tempurature
- High power Dual Core LED™ technology
- Web browser in terface (no software or installation needed)
- Dimensions: H:114mm x W:110mm x
  D:78mm
- Integration with RTI, Contol4, Crestron, Lutron, Rako and Lilin

### **ILLUMINATION APPLICATIONS**

GJD's TechSmart outdoor illumnator range includes IP connected infrared and white light LED illuminators. The products incorporate the latest surface mount LED's, combined with enchanced optical output and outstanding reliability to provide the homeowner with smart lighting solutions for a wide range of applications.

TechSmart lighting includes an interchangeable lens pack to deliver a variety of angles out of the box; this provides the end user with the flexibility to create different elliptical beam profiles to suit specific lifestyle requirements.

### **Applications:**

- White/Visible Lights: TSWLM
  - To provide true colour camera images at night
  - Deterrent/ security lighting
  - Courtesy lighting

### IR lights: TSIRM

- Covert lighting at night for CCTV systems
- Provide a daytime black & white image at night
- Longer range coverage than most integral IR



### **IR Examples**



# Using Camera IR





Full, true colour image if White Light Illuminator is used

### LASER DETECTION

### 25m Laser Detection

The TechSmart Laser is an extremely reliable security device designed to create virtual (invisible) curtains, walls and surveillance security zones. The laser is programmable to within 10cm and operates with the highest levels of precision for accurate and reliable intrustion detection.

- Create virtual walls or curtains
- Window, door and roof protection
- Perimeter protection and intrusion detection
- Securing open sites
- Monitoring pedestrial and vehicle access point



### TSLZR25

### **TSLZR25** Features

- 25m x 25m detection range
- Extremely precise detection
- Can be configured to within 10cm
- Object size 5, 10, 20 or 40cm

- 2 detection zones
- 2 configurable volt free relays
- Dimensions: W: 93mm x H: 70mm x D: 125mm
- IP65 housing for internal or external applications

### TSIPA

### **TSIPA Features**

By using the TechSmart Laser with the TSIPA Module, homeowners can make sure their smart surveillance solution reached it's full potential. The TSIPA is used as an I/O converter between the surveillance networks.

- Convert signals from IP to analogue or analogue to IP
- 4x digital inputs
- PoE

- IP66 rating
- Dimensions: W: 100mm x H: 190mm x D: 30mm
- Intuitive and powerful based user interface

### LASER DETECTION APPLICATIONS

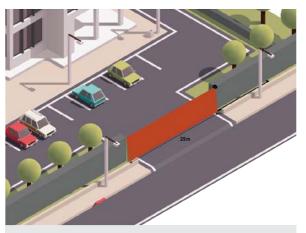
### **Virtual Barriers**

## The TSLZR25 can be placed vertically to implement a 'Virtual Wall' in various applications:

- Can be mounted 25m high and look along 25m
- Inside and above fence lines
- Open sites i.e. car dealerships
- Can be used to box in a property
- Window and door protection

- Automatic gates safety and security
- Speed roller shutters
- Protection for heritage sites, exhibition halls, art galleries and other similar areas where there is a high risk of theft and vandalism

## Like the above, the TSLZR25 can be placed to implement a 'Virtual Ceiling' to protect your roofing (external or internal) and to work as a vehicle height trigger.



Virtual Wall

Virtual Ceiling

### **Benefits of GJD**

### Why GJD?

- GJD can integrate with home automation, lighting and CCTV systems
- GJD can provide flexible, adaptable products to help future proof systems
- TechSmart brand "not on the high street"
- ✓ GJD have decades of excperience with detection and lighting systems
- GJD's partnerships with LILIN, Janus Technology and Invision provide tremendous knowledge and support for you and your clients
- 📀 Full integration with Control4, Crestron, RTI, Lutron, Rako and LILIN



CRESTRON

RTI

9LILINI



### INTEGRATION WITH THIRD PARTY APPLICATIONS

### **Control Systems**

By utilising the latest IP technology, GJD's TechSmart® detector range provides enhanced technology integration options for the Custom Integrator.

TechSmart® is easily interfaced with existing home automation and building management systems. TechSmart® products can also be installed as stand-alone intelligent IP devices, allowing residential property owners to create smart customised actions to suit specific requirements.

GJD's TechSmart® enabled sesnors seamlessly integrate with home automation software including:







LILIN Integration



GJD and LILIN developed a technology partnership in 2017 to reduce false alarms common in standard motion detection sensors that occur while monitoring and illuminating large areas for intruders. The partnership also provides custom integrators and end customers with convenient, cost-effective compatibility with LILIN VMS and many leading Home Automation Systems including RTI, Control4 and Crestron.

This integration partnership is unique for the smart home industry. GJD and LILIN have created a flexible and scalable security solution for custom integrators and end users. The integration offers reliable detection, real time remote monitoring and significantly reduced false alarms

GJD's smart home range consists of IP enabled precision perimeter motion detectors and LED illuminators. The cutting edge technology is designed to connect the outside world to your home. The combination of integrated lux and ambient temperature transmitters, provide early intruder warning and environmental data to create actions and alerts based on programmed automation rules.

### See pages 66 and 67 for more information.

### Lighting Integration

GJD TechSmart devices now support direct integration with Lutron and Rako. Every event that the TechSmart range generates (e.g. Motion Detected, Low light level etc.) can now simply trigger an event in Rako and Lutron.

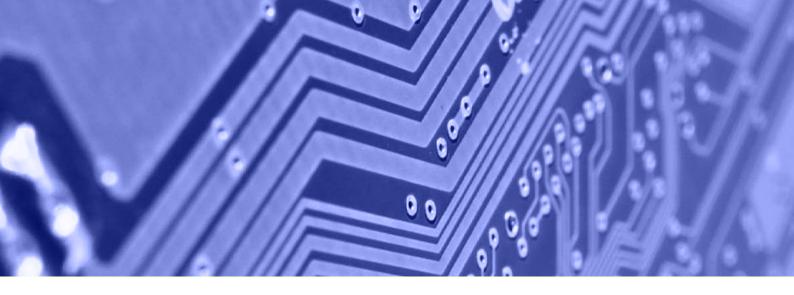
This new functionality is embedded in the GJD firmware and very simply configured from its web interface. For Lutron, just enter the Lutron Phantom Keypad ID and Button number.

For Rako, just enter Room number and command to recall. And then in the lighting system, you can programme whatever effects you want - single light, complete scene or a complex sequence - all in response to a TechSmart event.



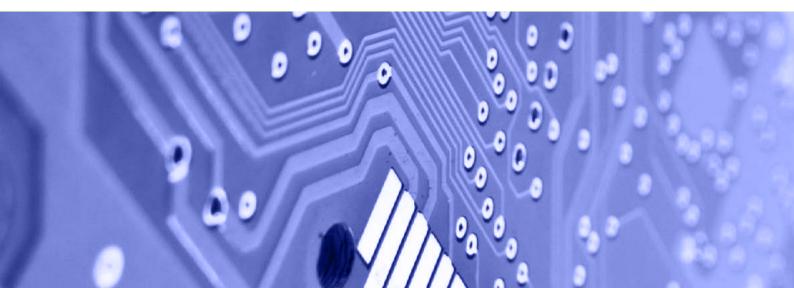
For more information on GJD integration with third party applications, call our technical sales specialist, Karl Brett, on 01359 270280.











### **REMOTE ALARM DETECTION CONFIGURATION**

# Configuring a GJD IP PIR detector with a LILIN ZHR IP camera for remote alarm detection

This guide assumes that you have already configured your LILIN IP camera and GJD IP detector.

Log in to the GJD detector and select **'Event'** from the menu bar. Ensure the **'Events Enabled'** radial box is selected. You will then see an **'Add Event'** box towards the right-hand side of the screen, click this.

Events Sensor settings Unit configuration Import and export settings	Firmware update Logou	ıt	
Events enabled:      Events disabled:			
A popup window will now open. In this popup window, enter the trigger condition values that you would like to associate with this rule. This guide will use basic setting; however, these can be adjusted to meet your requirements. Once your event has been successfully added you will be returned to the 'Event' screen. You will now see an	Add event Name: Input: Delay (s): Timeout (s): Event activation: Light limit (lug):	LILIN IP Cameral PIR detection 0 5 5 5	•
D-TECT IP		el.	-
	Firmware updatè Logol	n	
Events Sensor settings Unit configuration Import and export settings	Firmware update Logou	ıt	
Events       Sensor settings       Unit configuration       Import and export settings         Events enabled: <ul> <li>Events disabled: O</li> <li>LILIN IP Camera (PIR detection)</li> <li>Add action</li> </ul> <ul> <li>Add action</li> <li>Import and export settings</li> </ul> <ul> <li>Import and export settings</li> </ul>		ıt	
Events     Sensor settings     Unit configuration     Import and export settings       Events enabled: •     Events disabled: •     •       LILIN IP Camera (PIR detection)	Add action		
Events       Sensor settings       Unit configuration       Import and export settings         Events enabled: •       Events disabled: •       •         LILIN IP Camera (PIR detection)       Add action         Add action       •		Connect to URL Output 1 Output 2 	
Events       Sensor settings       Unit configuration       Import and export settings         Events enabled: •       Events disabled: •       •         LILIN IP Camera (PIR detection)       •       •         Add action       •       •         An add action window will now be displayed. Under 'Action Type' select 'Connect to URL'.       •         In the next popup window, Enter the 'Event start' and 'Event stop' URL's in the relevant boxes and click 'Add	Add action Action type: Event start URL:	Connect to URL Output 1 Output 2 	*
Events       Sensor settings       Unit configuration       Import and export settings         Events enabled:          Events disabled: O            LILIN IP Camera (PIR detection)         Add action           Add action          An add action window will now be displayed. Under         'Action Type' select 'Connect to URL'.          In the next popup window, Enter the 'Event start' and         'Event stop' URL's in the relevant boxes and click 'Add         action'.          Ensure that you use the correct username, password	Add action Action type: Event start URL: Enter URL Event stop URL:	Connect to URL Output 1 Output 2  Connect to URL  Bosch IP Illuminator	
Events       Sensor settings       Unit configuration       Import and export settings         Events enabled:       Events disabled:       Import and export settings         LILIN IP Camera (PIR detection)       Import and export settings         Add action       Add action         An add action window will now be displayed. Under 'Action Type' select 'Connect to URL'.         In the next popup window, Enter the 'Event start' and 'Event stop' URL's in the relevant boxes and click 'Add action'.         Ensure that you use the correct username, password and IP address for your IP camera.	Add action Action type: Event start URL: Enter URL Event stop URL: Enter URL	Connect to URL Output 1 Output 2  Connect to URL  Bosch IP Illuminator Clarius IP Illuminator Clarius IP Illuminator 	•

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	<password>@<ipaddre< th=""><th>SS&gt;/mdmotion?&amp;ALARM_FLAG=1&amp;ALARM_FLAG_NO=1</th></ipaddre<></password>	SS>/mdmotion?&ALARM_FLAG=1&ALARM_FLAG_NO=1
Event start URL: http://admin:pase@192.168.67.219/r Event stop URL:	nmact to URL   mdmotion ?&ALARM_FLAG=1&ALARM_FLAG_NO=0  mdmotion ?&ALARM_FLAG=1&ALARM_FLAG_NO=1  Basic	The next step is to log in to your LILIN IP camera ar navigate to the following:
<b>ØLILIN.</b> System Vid	eo / Audio 🚶 🔹 Network	Live   Basic Mode   Advance Mode   Language   Log
Event IVS Motion Detection Tamper Detection Audio Detection Alarm Detection Network Detection Push Service Setting	Advance >> Event >> A Alarm Notification Alarm Input Mode	Alarm Detection    Enable  Disable  NO  NC  Submit
	tion is set to <b>'Enable'</b> and t detector and click the <b>'Tes</b>	he alarm input type is set to <b>'NO'.</b> <b>t'</b> button.
D-TECT IP	configuration import and export set	tings Firmware update Logout
		tings Firmware update Logout Add event



# ABOUT SATEL





### WHAT SATEL OFFERS...

Satel designs and manufactures an extensive range of integrated security products – including intruder alarm control panels, sirens, detectors and monitoring stations – at their state-of-the-art production facility in Central Europe. Control system integration includes Control4 and RTI drivers, as well as a KNX bridge for two-way communication.

Both hardware and firmware is based on innovative technological solutions, entirely developed by SATEL's expert engineering staff of the in-house Research and Development department. Constant investment in new technologies paved the way to the company's leading market position.

SATEL products have won international acclaim among distributors, installers, surveillance organisations and end users.

### INTEGRATION

By utilising the latest IP technology, SATEL's intelligent alarm systems provide enhanced technology integration options for the Custom Integrator.

SATEL is easily interfaced with existing home automation and building management systems. SATEL products can also be installed as stand-alone intelligent IP devices, allowing residential property owners to create smart customised actions to suit specific requirements.

SATEL seamlessly integrates with home automation software including:



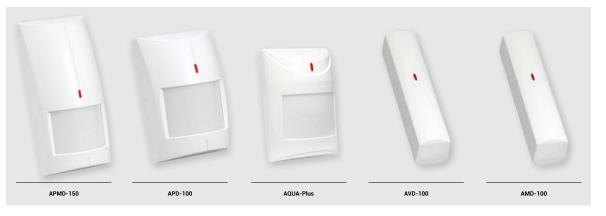
CRESTRON.





### DETECTORS

Detectors are one of the most important elements impacting the quality and reliability of alarm systems. To help choose the right detector SATEL divides them into simple groups based on their features.



### **Perimeter Protection Detectors**



The purpose of perimeter protection is to secure the premises and elements of landscape architecture located on it. It is made up of devices designed to work in harsh environmental conditions, maintaining reliable detection capability and functionality unchanged for many years.

### AQUA-Plus

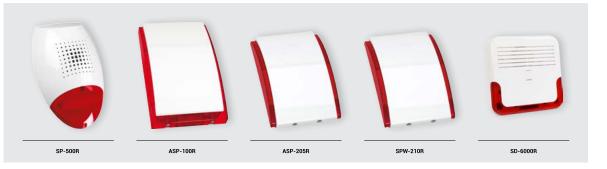


AQUA Plus is a digital passive infrared detector provided with a dual element PIR sensor and digital motion detection algorithm. Owing to the two-track analysis of the signal from the PIR sensor (valuable and quantitative) and the temperature compensation feature, the device is characterized by high sensitivity and interference immunity. Interchangeable Fresnel lens and three-step sensitivity control make it possible to adjust the device performance to the user requirements. The detector has a built-in pre-alarm feature and tamper switch to protect it against opening the enclosure. In addition, the device PCB is provided with EOL resistors for easy installation and connection to the alarm system. AQUA Plus meets the EN-50131 requirements for Grade 2.

- Fully digital algorithm
- Replaceable Fresnel lens with sealed optics
- Pre-alarm feature
- Adjustable mounting bracket included
- EN-50131 Graded

#### SIRENS

An intruder alarm is designed to detect unauthorised entry into a specific area and respond to that event with warnings. Additionally, such a system may warn premises owners about, e.g. the presence of smoke or water leaks. Using alarm sirens is one of the basic methods to achieve this goal.



#### **Indoor and Outdoor Sirens**

Alarm sirens come in two types, indoor sirens and outdoor sirens. This division mostly results from their installation locations, features provided and design. The shape and colour can be selected individually. In this case, the available extensive range of such devices facilitates selection of products harmoniously adjusted to the architecture of the building on whose facade it will be mounted. Each of these groups provides different combinations of signalling forms (sound and/or light) which are to inform the surroundings of an event.





#### **Indoor Sirens**

Indoor sirens play a different role. Their main task it to "stun" an intruder by means of high-intensity sounds. Indoor siren enclosures are smaller and the electronic systems used do not require protection against environmental conditions.

#### **Outdoor Sirens**

An important role played by outdoor sirens mounted outside a protected area is to scare off potential intruders. Statistics clearly show that purchasing an alarm system is one of the most effective methods to deter unwelcome intruders. The presence of a siren informs a potential burglar about the fact that a given facility is protected by an alarm system, which makes a potential burglary more risky.

#### ASP-100R



The ASP-100 wireless outdoor siren is designed for operation as part of the ABAX twoway wireless system. It is compatible with the ACU-120 and ACU-270 controllers. The modern SPIRIT1 radio system with optimised power management is used in the siren to make possible long-lasting operation of the device even in harsh working environment. Trouble-free functioning of the ASP-100 is also possible due to the BAT-ER-3,6 high-performance battery, which is used in specialised applications, including military and medical ones.

- Independent wireless triggering
- Optical signalling: Ultra bright LEDs
- Acoustic signalling: Piezoelectric transducer
- Advanced radio system for optimised low

power communication

- Remote configurationTamper protection against enclosure
- Partiple protection against enclosure opening
   EN-50131 Graded

#### TOUCH SCREENS AND KEYPADS

INTEGRA keypads are modern and advanced devices enabling construction of state-of-the-art security solutions, but also access control and smart building systems. Their design is based on experience gathered by SATEL in more than 20 years of designing renowned and reliable electronic alarm equipment.



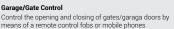
#### Safety, comfort and cost-effectiveness within reach

- Combination of alarm systems and home automation
- Visualisation of the alarm system on KNX displays
- Remote visualisation of the KNX system status in the GUARDX program
- Enhancing the quality of life by means of smart technologies
- Convenient remote control via smartphones



Lighting Control Program lighting zones, even brightness and timings







Heating Control Program household heating and air conditioning systems to suit your needs and save energy



Plant Watering Control Take control of plant watering devices like lawn sprinklers



Shutters and Curtain Control

Single-command selection of light scenes on a

Energy efficiency thanks to smart management

Possibility to implement both in new and existing installations

Lighting, ventilation and heating control

touch screen keypad

Programmable blinds/shutters allow you to control the mount of light entering any room



Simulation of household members presence During prolonged absences the system can simulate a household presence to deter potential burglars.

#### INT-TSI-WSW

The INT-TSI keypad is a real command centre for a smart alarm system. As its interface can be customised to individual user's needs, it provides a perfect solution both for people expecting ease of operation and for advanced users who make use of the extended functionality needs. It provides a perfect solution both for people expecting ease of operation and for advanced users who make use of the extended system functionality



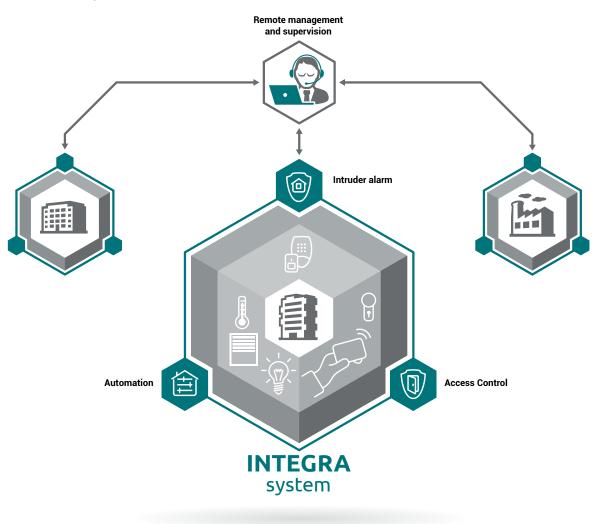
- Capacitive 7" touchscreen to facilitate system operation Graphic intuitive operating interface, customisable to
- individual user's needs
- MACRO functionality to implement a sequence of actions using a single command
- Capability of viewing images from IP cameras
- MASTER/SLAVE operating mode available
- Wide range of dedicated widgets for various functions, including weather widget
- Capability to present the system state in screensaver mode Capability of saving the user interface configuration directly from the TSI Builder program to keypad over Ethernet
- Integration with CCTV RTSP/HTTP streams to link detectors and CCTV cameras.
  - EN-50131 Graded

#### **INTEGRA RANGE OF INTRUDER CONTROL PANELS**

Advanced devices such as control panels INTEGRA and INTEGRA Plus family, beyond their basic functionality, i.e. detection and notification of intruder's trespassing, can provide protection in a much broader sense in residential buildings, and guarantee comfort for everyday life through conducting basic home automation.



Security is also a crucial element in business. Professional applications call for special solutions: the superior goal in this case is to provide maximum safety - no compromises. INTEGRA and INTEGRA Plus control panels set high standards in this scope. A number of solutions, both in terms of hardware and software, makes them suitable for installations which require the highest class of security. This gives them a place among top advanced alarm panels in the world



#### **GPRS/SMS COMMUNICATION MODULE**

The GPRS-T1, owing to its function of converting event codes into the GPRS technology transmit table form into the SMS message format, enables designing the alarm systems without taking the telephone line availability into account. Using the GPRS technology makes it possible to reduce the costs related to monitoring. Additionally, the device offers the capability of SMS notification or CLIP service about occurrence of selected events.

#### **GPRS-T1 Features**

- Simulation of the telephone monitoring statsion
  - Receiving the monitoring codes sent in DTMF telephone format (Ademco Express or Contact ID)
  - Converting and resending the event codes to two monitoring stations by using:
  - GPRS transmission
  - SMS messages
- Automatic feature of SMS message substitution for GPRS transmission in case of any problems with the transmission
  - Acknowledge of receiving the event code:
- on sending an SMS message
  - after kiss-off signal from the monitoring station
  - immediately on receiving the event code
- Coded transmission of events sent by using the GPRS technology
- Notification by means of SMS messages about 32 selected events

- Periodical test transmissions to check the converter availability: - to selected telephone numbers - to monitoring stations
- Capability of triggering additional test transmissions: - after identification of the calling party telephone number
  - after receivinga command from the GRRS-Soft program
- Pre-paid balance and time limit query function
- Level indicator of signal received by the GMS telephone and indicator of problems related to GSM network login
- OC type output for signalling a problem with GSM network login
- Converter configuration:
  - locally: through RS-232 port (TTL)
  - remotely: via GSM network
  - Automatic module restart
  - Supply voltage 12 V DC (±15%)



#### **GPRS-T1: Converter Specifications**

Supported monitoring formats	Ademco Express, Contact ID, SIA
Event code formats	GPRS Transmission, SMS Message
Acknowledgement of event from control panel	Yes
Number of telephone numbers notified	4
Number of SMS messages to be sent	32
Periodical test transmissions	Yes
Option to trigger additional tests	Yes
Number of low current OC outputs	1
Supply voltage	12 V DC (±15%)
Current consumption (stand by)	50 mA
Current consumption (maximum)	180 mA
Current-carrying capacity (FT output)	50 mA
Environment class	1
Working temperature range	-10°C to +55°C
Electronics board dimensions	80mm x 57mm
Weight	184g

#### CONFX CONFIGURATOR

#### SATEL presents you a tool that makes it easier to design alarm systems based on their products.



After installation onto your computer, familiarise yourself with the brief user guide (which can be found under the 'help' icon on the home screen). This information will enable you to take full advantage of the capabilities included in the application. Depending on your needs, you can save or print your created configuration.

#### 1. Creating and editing alarm system designs

- Design an alarm system based on the floorplans in JPEG, BMP and PNG format
- Add and edit the building floors
- Arrange your specific alarm devices on the plan as required Design an alarm based on the specific control panels (INTEGRA)

#### 2. Calculating the energy balance for devices

- Choose the criteria for calculating power consumption
- Calculate the total capacity of batteries needed to power the alarm system
- Inform the user that the power supply output current has been exceeded

#### 3. Estimate the alarm system costs

connected to your system)

Save the project and edit at any time

the partitions

- . Edit net prices of devices available in the Configurator Add your own items to the quotation, such as cabling, installation costs and first time service costs
- Give proper names, number of items, units of measure, net prices to own components

View devices available for the control panel selected (your

choice of INTEGRA panels determines which devices can be

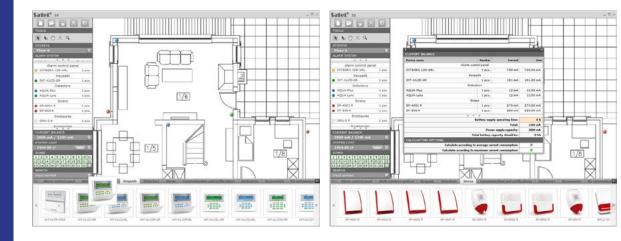
Present system functionality based on deviced assigned to

Set margins, discount and VAT rates for individual items

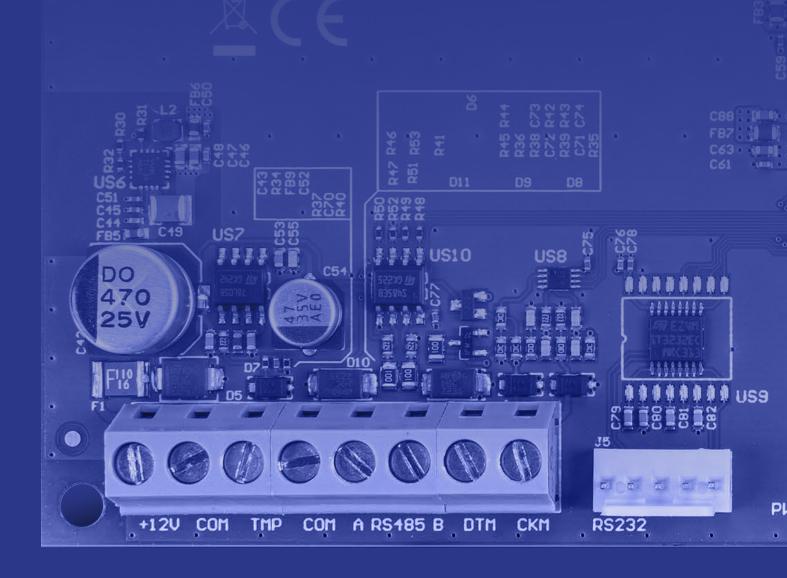
#### 4. Generate quotations for alarm system projects

- Plan the premises and device layout
- Description and technical device data in the system
- System energy balance

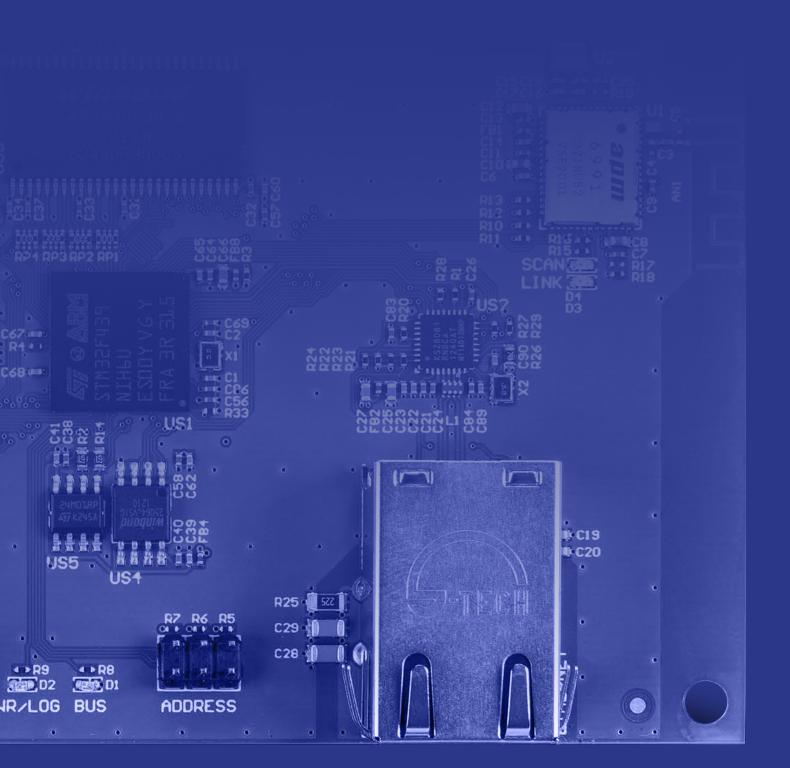
- Prices of selected devices
- Final quotation for the end user •
  - Ability to save quotations and edit at any time



# TECHNICAL DETAILS









#### CAMERAS

#### **INTERNAL MINI DOME CAMERAS**

							Descr	iption					
M	odel	Type	Resolution	FPS @ Max Res.	Lens (mm)	Max IR Distance	PoE	Voltage	Fux	Audio	SVI	Compression	Other
MD2222E4	* (), * 	1080p CMOS	1920 x 1080	30	3.6	Colour	Y	12 VDC	0.15	Mic	Y	H.246 / JPEG	BIM, MSD
MD2242E4	* (), * 	4MP CMOS	2688 x 1512	20	3.6	Colour	Y	12 VDC	0.15	Mic	Y	H.246 / JPEG	BIM, MSD
SD2222E4	* ((),*	1080p CMOS	1920 x 1080	60	4.3	Colour	Y	12 VDC	0.1	Input	ADV	H.246 / JPEG	BIM, MSD, DP
MR312		1080p CMOS	1920 x 1080	30	2.9	30M	Y	-	0.05	-	-	H.246 / JPEG	MSD, DP
MR3022A		1080p CMOS	1920 x 1080	30	4	30M	Y	12 VDC	0.05	2 way	Y	H.246 / JPEG	MSD, DI/O, DP
MR3042A		4MP CMOS	2688 x 1512	20	4	30M	Y	12 VDC	0.08	2 way	Y	H.246 / JPEG	MSD, DI/DO, DP
MR2922AX		1080p CMOS	1920 x 1080	30	2.8 -12	30M	Y	12 VDC	0.02	2 way	Y	H.246 / JPEG	MSD, DI/O, DP
MR2942AX		4MP CMOS	2622 x 1512	20	2.8 -12	30M	Y	12 VDC	0.08	2 way	Y	H.246 / JPEG	MSD, DI/O, DP
SR2922AX Available Q3		1080p CMOS	1920 x 1080	60	2.8 -12	30M	Y	12 VDC	0.02	2 way	ADV	H.46 / JPEG	MDS, DI/O. DP



#### **EXTERNAL MINI DOME CAMERAS**

					ſ	Descriptior	ו			
Мо	odel	Туре	Resolution	FPS @ Max Res.	Lens	Max IR Distance	Lux	Audio	IP Rating	IVS
IPD6222ES4.3	•	1080p CMOS	1920 x 1080	30	4.3mm	-	0.2	Mic	IP67	Y
MR632		1080p CMOS	1920 x 1080	30	4mm	30m	0.05	2 way	IP66 / IK10	-
MR6322A		1080p CMOS	1920 x 1080	30	4mm	30m	0.05	2 way	IP66 / IK10	Y
MR6432A		4MP CMOS	2688 x 1512	20	4mm	30m	0.08	2 way	IP66 / IK10	Y
MR6422AX		1080p CMOS	1920 x 1080	30	2.8-12mm	30m	0.02	2 way	IP66 / IK10	Y
MR6442AX		4MP CMOS	2688 x 1512	20	2.8-12mm	30m	0.08	2 way	IP66 / IK10	Y
IPR320ESX	0	1080p CMOS	1920 x 1080	30	3.3-12mm	25m	0.02	-	IP66 / IK7	Y
MR652	••	1080p CMOS	1920 x 1080	30	4mm	30m	0.05	-	IP66	-
ZMR6522X		1080p CMOS	1920 x 1080	30	2.8-12mm	30m	0.05	-	IP66	Y
ZMR6542X Available Q3	••	4MP CMOS	2688 x 1512	20	2.8-12mm	30m	0.05	-	IP66	Y
ZMR6422AX-P		1080p CMOS	1920 x 1080	30	2.8-12mm	30m	0.02	2 way	IP66 / IK10	Y
ZMR6442AX-P		4MP CMOS	2688 x 1512	20	2.8-12mm	30m	0.08	2 way	IP66 / IK10	Y
PZD6442X3 Available Q3		1080p CMOS	1920 x 1080	30	3.35-10.5mm	-	0.1		IP66 / IK10	-



#### EXTERNAL WHITE BULLET CAMERAS

					[	Descriptior	ı			
Mo	del	Туре	Resolution	FPS @ Max Res.	Lens	Max IR Distance	Lux	Audio	IP Rating	IVS
MR832		1080P CMOS	1920 x 1080	30	4mm	30M	0.05	-	IP66	
MR8322E4		1080P CMOS	1920 x 1080	30	4mm	30M	0.05	-	IP66	Y
MR8342E4		4MP CMOS	2688 x 1512	20	4mm	30M	0.05	-	IP66	Y
SR8222E4	- 0	1080P CMOS	1920 x 1080	60	4mm	35M	0.03	2-way	IP66	Adv
MR8422X	-0	1080P CMOS	1920 x 1080	30	2.8-12mm	30M	0.05	-	IP66	Y
MR8442X	-0	4MP CMOS	2688 x 1512	20	2.8-12mm	30M	0.05	-	IP66	Y
ZSR8122EX3		1080P CMOS	1920 x 1080	60	2.8-12mm	35m	0.1	2-way	IP66	Y
ZR8022EX10		1080P CMOS	1920 x 1080	30	5-50mm	60m	0.02	2-way	IP66	Y
ZR8022EX20	0	1080P CMOS	1920 x 1080	30	4.7-94mm	60m	0.02	2-way	IP66	Y
ZHR8182EX2		4K CMOS	4072 x 3046	30	4.5-10mm	35m	0.02	2-way	IP66	Y



#### **COVERT MARINE SERIES CAMERAS**

Mo	del	Description												
	Juei	Туре	Resolution	FPS @ Max Res.	Lens	Max IR Distance	Lux	IP Rating	Audio	IVS				
IPC0122P3	- The second	1080P CMOS	1920 x 1080	30	3.7mm	-	1.5	-	2-way	Y				
IPC0122W	( second	1080P CMOS	1920 x 1080	30	3.7mm	-	1.5	-	2-way	Y				
IPC0422E4		1080P CMOS	1920 x 1080	30	4mm	16m	0.08	IP67	2-way	Y				

#### **INTERNAL PANORAMIC 360 CAMERAS**

		Description											
Mod	el	Туре	Resolution	FPS @ Max Res.	Lens	Max IR Distance	Lux	Sense Up	IP Rating	Audio			
FR33C2		12M	4000 x 30000	30	1.65mm	5M	0.1	Plus	IP66/ IK10	2 way			
F3362		6MP	3072 x 2048	30	1.6mm	5M	0.4	Plus	IP66, IK10	2 way			

#### **HIGH SPEED DOME CAMERAS**

Madal				I	Descriptior	)			
Model	Туре	Resolution	Optical Zoom	IR Distance	Voltage	Lux	IP rating	Tours	Presets
PSD4624EX20	1080p CMOS	1920 x 1080	20 x	D/N	PoE+/24V	0.1	IP66	5	256
PSD4624EX30	10801p CMOS	1920 x 1080	30 x	D/N	PoE+/24V	0.1	IP66	5	256
PSR5024EX20	1080p CMOS	1920 x 1080	20 x	150m	PoE+/ 24V	0.2	IP66/ IK10	60	256
PSR5024EX30	1080p CMOS	1920 x 1080	30 x	150m	PoE+/ 24V	0.2	IP66/ IK10	60	256
PZD6422X3	1080p CMOS	1920 x 1080	3 x	-	PoE+/12V	0.1	IP66/ IK10	30	256



#### **EXTERNAL AHD SERIES CAMERAS**

							Descr	iption					
Mode	I	Res.	CCD	Lens (mm)	D/N Max IR Distance	Lux	UTC Tech.	3 way Gimbal	IP Rating	Privacy Zones	3D NR	Snese Up	WDR
AHD652AX2.8	•••	1080p	1/2.9" CMOS	2.8-8	25m	0.02	Y	Y	IP66	4	Y	Y	Y
AHD654A3.6	••	4Mp	1/2.9" CMOS	3.6	20m	0.02	Y	Y	IP66	4	Y	Y	Y
AHD832A3.6	0-2	1080p	1/2.9" CMOS	3.6	20m	0.03	Y	-	IP66	4	Y	Y	Y
AHD834A3.6	0-7	4Mp	1/2.9" CMOS	3.6	20m	0.03	Y	-	IP66	4	Y	Y	Y

#### INTERNAL AHD SERIES CAMERAS

							Descr	iption					
Model		Res.	CCD	Lens (mm)	D/N Max IR Distance	Lux	UTC Tech.	3 way Gimbal	IP Rating	Privacy Zones	3D NR	Snese Up	WDR
AHD752A3.6	Ō	1080p	1/2.9" CMOS	3.6	16M	0.02	Y	Y	-	4	Y	Y	Y
AHD754A6	Ō	4MP	1/2.9" CMOS	6	16M	0.02	Y	Y	-	4	Y	Y	Y



#### **CAMERA BRACKETS**

#### **IP DOME CAMERA BRACKETS**

Model	Description
BTD01W	Pendant bracket for Mini Dome Cameras: IPD6122, IPR6122, IPD6132, IPR6132, ZD6122, LR6022, IPR320, MR632, MR632, MR6322, MR6342, MR6422, MR6442
PIH-Z6W	30cm extension pole for BTD01W in white
PIH-76WM	Silver wall bracket for internal speed dome and Vandal resistant dome series: IPD6122, IPR6122, IPD6132, ZD6122, ZR6122, LR6022, IPR320
PIH76WM/W	White wall bracket for internal speed dome and Vandal resistant dome series: IPD6122, IPR6122, IPD6132, ZD6122, ZR6122, LR6022, IPR320
BTS02S	Silver corner mount/pole bracket for PIH-76WM/W
BTD04W	White Wall Bracket for new 2", 3" vandal resistant domes, MR632, MR6322A, MR6342A, MR652, MR6422AX, MR6422AX









#### **SPEED DOME BRACKETS**

Model	Description
BTS03W	White external wall bracket for external series domes
PIH-CPM	Corner/pole mount adaptor for PIH-520L
PIH-520LB	External wall bracket and box for external series domes
PIH-520HB	External pendant bracket for external series speed domes
PIH-520G	Swan neck bracket for external series speed domes

#### **AHD CAMERA BRACKETS**

Model	Description
BTD02W	Cable management bracket for: AHD832 and AHD842AX series
BTD04W	White Wall Bracket for AHD652 Series

## <u> 9LILIN</u>

#### NETWORK/DIGITAL VIDEO RECORDERS (NVR, DVR)

#### **NVR 3 SERIES**

Model	HDD	Description		
NVR3816-2TB	2TB	This NVR is the 4th generation NVR in LILIN's successful touch series.		
NVR3816-4TB	4TB	• 16-channel		
NVR3816-8TB	8TB	<ul> <li>Internal storage capacity of up to 8 Hard Drives providing up to 48TB storage</li> <li>Recording 480fps</li> <li>Throughput of 144Mbps (increased from 48Mbps on previous models)</li> </ul>		
NVR3816-12TB	12TB	<ul> <li>Recording resolutions of 480P, 1080P, 3MP and 5MP</li> <li>ONVIF Compliant</li> </ul>		
NVR3816-18TB	18TB	<ul><li>Finished in high gloss black with no front panel controls</li><li>Well suited to the CI marketd</li></ul>		
NVR3816-24TB	24TB	Records 4mp cameras		
NVR3816-36TB	36TB			
NVR3816-48TB	48TB			
NVR3416R-2TB	2TB	This NVR is the 4th generation NVR in LILIN's successful touch series.		
NVR3416R-4TB	4TB	• 16-channel		
NVR3416R-8TB	8TB	<ul> <li>Internal storage capacity of up to 4 Hard Drives providing up to 32TB storage</li> <li>Recording 480 fps</li> <li>Throughput of 144Mbps (increased from 48Mbps on previous models)</li> </ul>		
NVR3416R-12TB	12TB	<ul> <li>Recording resolutions of 480P, 1080P, 3MP and 5MP</li> <li>ONVIF Compliant</li> </ul>		
NVR3416R-16TB	16TB	<ul><li>Finished in high gloss black with no front panel controls</li><li>Well suited to the CI market</li></ul>		
NVR3416R-24TB	24TB	<ul> <li>Records 4mp cameras</li> <li>1U 19" Rack mount</li> </ul>		
NVR3416R-32TB	32TB			





#### **NVR 3 SERIES**

Model	HDD	Description
NVR3416-2TB	2TB	
NVR3416-4TB	4TB	This NVR is the 4th generation NVR in LILIN's successful touch series.
NVR3416-8TB	8TB	<ul> <li>16-channel</li> <li>Internal storage capacity of up to 4 Hard Drives providing up to 24TB storage</li> <li>Recording 480fps</li> </ul>
NVR3416-12TB	12TB	<ul> <li>Throughput of 96Mbps (increased from 48Mbps on previous models)</li> <li>Recording resolutions of 480P, 1080P, 3MP and 5MP</li> </ul>
NVR3416-16TB	16TB	<ul> <li>ONVIF Compliant</li> <li>Finished in high gloss black with no front panel controls</li> </ul>
NVR3416-24TB	24TB	Well suited to the CI market
NVR3216-1TB	1TB	
NVR3216-2TB	2TB	This NVR is the 4th generation NVR in LILIN's successful touch series.
NVR3216-4TB	4TB	<ul> <li>16-channel</li> <li>Internal storage capacity of up to 4 Hard Drives providing up to 16TB storage</li> <li>Recording 480fps</li> </ul>
NVR3216-8TB	8TB	<ul> <li>Throughput of 96Mbps (increased from 48Mbps on previous models)</li> <li>Recording resolutions of 480P, 1080P, 3MP and 5MP</li> </ul>
NVR3216-12TB	12TB	<ul> <li>ONVIF Compliant</li> <li>Finished in high gloss black with no front panel controls</li> </ul>
NVR3216-16TB	16TB	Well suited to the CI market
BTE07K	19" 2U Rad	ck Mount Fasica for NVR3416/ NVR3216
39-0092	Remote Co	ontrol for NVR Series
39-0121	PSU for N	VR3416/ NVR3416R/ NVR3216/ NVR100/ 200/ 400L/ NVR104/ NVR109
39-0114	PSU for N	VR5832/NVR5832S/NVR2400/NVR3816/NVR116

## *9LILIN*

#### **4K NVR SERIES**

Model	HDD	Description
NVR5832-1TB	1TB	This NVR is the 5th generation NVR in LILIN's successful NVR series.
NVR5832-4TB	4TB	<ul> <li>32-channel</li> <li>Internal storage capacity of up to 8 Hard Drives providing up to 64TB storage</li> </ul>
NVR5832-8TB	8TB	<ul> <li>Recording 960fps</li> <li>Throughput of 300Mbps (increased from 96Mbps from previous models)</li> <li>Recording resolutions of 480P, 1080P, 3MP, 4MP, 5MP and 4K</li> </ul>
NVR5832-12TB	12TB	<ul> <li>ONVIF Compliant</li> <li>Finished in high glass black with no front panel controls</li> <li>Well suited to the CI market</li> <li>2U 19" Back mount</li> </ul>
NVR5832-16TB	16TB	
NVR5832-24TB	24TB	
NVR5832-32TB	32TB	
NVR5832-48TB	48TB	
NVR5832-64TB	64TB	
39-0114	PSU for N	/R5832/NVR5832S/NVR2400/NVR3816/NVR116

Model	Description
NVR5823S	<b>NVR5823S</b> is 32 channel offering 960fps and a throughput of 300Mbps. Recording resolutions of 480P, 1080P,3MP, 4MP, 5MP and 4K. Capable of recording a single 1080P channel up to 120fps. With a 4K HDMI output for ultra HD resolution display (1080P VGA). With an internal HDD capacity of up to 8 drives up to 8TB in size the NVR has a maximum internal storage of 64TB. Finished in high gloss black with no front panel controls, this product is 2U 19" rackable.



#### **ENTERPRISE RECORDING**

						Des	scription			
Model	Channels	HDD Bays	Max. Monitors	PSU	TV Wall	RAID	Audio	Other		
NAV3025	25	4 Bays	1	250W	-	Software	Υ	Pre-built 25-channel navigator in a Cube PC chassis		
NAV2036	36	6 Int	1	250W	-	Software	Υ	Pre-built 2U 36-channel navigator in a NVR style chassis		
NAV1036	36	8 Bays / 2U	2	560W	-	Software	Y	Features include: Multi-channel playback and backup, Video		
NAV1072	72	16 Bays / 3U	2	920W Redundant	2x2	Hard- ware	Y	Tagging, eMap, Multi monitor/video wall display, Advance alarms features, Epos connectivity, Smart search, Failover facility, archiving, built-in quick support.		
NAV1108	108	24 Bays / 4U	6	920W Redundant	2x2	Hardware	Υ	Use NAV Enterprise HDD, Warranty not supported with use of other HDD		
NAVENT	4							e to upgrade from lite to Enterprise you must do ck all the features listed above in the pre-built		
NAVONVIF	4		npatibility is	not guarante	eed					
EDR1TB	1000GB \$	SATA Enter	orise Hard	Drive for N	avigator se	ervers				
EDR2TB	2000GB \$	SATA Enter	orise Hard	Drive for N	avigator se	ervers				
EDR3TB	3000GB \$	SATA Enter	orise Hard	Drive for N	avigator se	ervers				
EDR4TB	4000GB \$	4000GB SATA Enterprise Hard Drive for Navigator servers								
ANPRFL	An addition facility. **	onal modul As you add	e to work v I ANPR cha	vith Naviga annels you	ator Enterp must redu	rise, offerin ce NAV cha	g up to 8-channels of AN annels**	PR detection, with text overlay and search		

#### VIDEO DECODER AND KEYBOARD

Model	Description
VD022	Display 16x HD stream on a single monitor using the 1080p HDMI output, with Touch Screen, IR remote or web based control for easy setup
PIH-931D	Controller with Twist Zoom and LCD Display for Decoder, NVR, CMX/Navigator, Domes and Matrices



#### AHD DIGITAL VIDEO RECORDERS

		Description												
Model	Res.	Channels	Record- ing Resolu- tion	UTC Tech.	HDD Bays	AHD FPS	Analogue FPS	Ext. PSU	Motion Record	Web Address	Audio	Monitor Output	Back up	Other
DHD304A-1TB	1080p	4	AHD 1920 X 1080	Y	1	50	100	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD304A-4TB	1080p	4	AHD 1920 X 1080	Y	1	50	100	Y	Y	L, P, B, M	1 In/ 10ut	HDMI/ VGA/BNC	USB/ Network	SPS
DHD308A-2TB	1080p	8	AHD 1920 X 1080	Y	1	100	200	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD308A-4TB	1080p	8	AHD 1920 X 1080	Y	1	100	200	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD316A-4TB	1080p	16	AHD 1920 X 1080	Y	2	200	400	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD316A-8TB	1080p	16	AHD 1920 X 1080	Y	2	200	400	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS

#### **HYBRID VIDEO RECORDERS**

(AHD/CVI/TVI, ANALOGUE AND IP CAMERAS)

						~	Desci	ription						
Model	Res.	Channels	Recording Resolution	UTC Tech.	HDD Bays	4MP FPS	1080P FPS	Ext. PSU	Motion Record	Web Address	Audio	Monitor Output	Back up	Other
DHD504A-1TB	4MP	4	up to 4MP	Y	1	25	50	Y	Y	L, P, B, M	1 In/ 10ut	HDMI/ VGA/BNC	USB/ Network	SPS
DHD504A-2TB	4MP	4	up to 4MP	Y	1	25	50	Y	Y	L, P, B, M	1 ln/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD504A-4TB	4MP	4	up to 4MP	Y	1	25	50	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD508A-1TB	4MP	8	up to 4MP	Y	1	50	100	Y	Y	L, P, B, M	1 In/ 10ut	HDMI/ VGA/BNC	USB/ Network	SPS
DHD508A-2TB	4MP	8	up to 4MP	Y	1	50	100	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD508A-4TB	4MP	8	up to 4MP	Y	1	50	100	Y	Y	L, P, B, M	1 ln/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD516A-1TB	4MP	16	up to 4MP	Y	2	100	200	Y	Y	L, P, B, M	1 In/ 10ut	HDMI/ VGA/BNC	USB/ Network	SPS
DHD516A-4TB	4MP	16	up to 4MP	Y	2	100	200	Y	Y	L, P, B, M	1 ln/ 10ut	HDMI/ VGA/BNC	USB/ Network	SPS
DHD516A-8TB	4MP	16	up to 4MP	Y	2	100	200	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS
DHD516A-16TB	4MP	16	up to 4MP	Y	2	100	200	Y	Y	L, P, B, M	1 In/ 1Out	HDMI/ VGA/BNC	USB/ Network	SPS

## **9LILIN**

#### **MOBILE/IP PRODUCTS**

#### **MOBILE/ TRANSPORT PRODUCTS**

						De	escriptio	on					
Model	Туре	Res.	FPS @ Max Res	Lens	PoE	Vibration Tested	Lux	Sense Up	IP Rating	Audio	ONVIF	Compression	Other
IPD6220ES4.3	1080p CMOS	1920 x 1080	30	3.6mm	Y	Υ	0.6	Plus	IP67	Input	Y	H.264 / AVC motion JPEG	Quadruple Streaming
NVR404C												rd or IR remot	
NVR404C-160GB		asy to navigate menus, supporting 1 solid state hard drive, motion detection, weighted and scheduled recording. Audio recording and playback. WS discovery for easy etwork discovery. USB or Network backup. HDMI output. Full CMX support, web based remote viewing and iPhone, BlackBerry and Android support.											
NVR408M	As above	a choice but an ENEQUEE vibration partified product ideal for mabile transport											
NVR408M-160GB	AS above	s but di i El	100100 11		nuneu pro	uuci, lüeal	As above but an EN50155 vibration certified product, ideal for mobile transport.						

#### **POWER SUPPLIES/ACCESSORIES**

#### **POWER OVER ETHERNET (PoE)**

Model	Description
PMH-POEIJ802-3	PoE+, injector 803.3at, 12-14Vdc, 48Vdc
IJ5056D	PoE+ injector at 56V/50W for use with SL402A/SL412D only. Plugging directly into a PoE camera will damage the camera
SL4012D	PoE+ splitter 802.3at, 12Vdc 2Amp output use with IJ5056D
SL4024A	PoE+ splitter at 24Vac 1.7Amp/4oW max output - use with IJ5056D - ideal to use with the IPR7334ESX5
IJ1748D	PoE injector 48V/17W, 802.3af, for use with SL1212D
SL1212D1	PoE splitter 802.3af, 12V output for use with IJ1748D or PoE switches
PI6018	60W high powered injector that can be plugged into the PSD4624EX to provide PoE with heaters functional

#### **POWER OVER ETHERNET (PoE)**

Model	Description						
POC104	Channel Power over Coax unit - 4 BNC in/Outputs - 0.48Amps per channel						
POC108	8 Channel Power over Coax unit - 8 BNC in/Outputs - 0.48Amps per channel						



#### **POWER SUPPLIES**

Model	Description
T3712ST	12Vdc lead in/out PSU 1Amp
T3717ST	12Vdc lead in/out PSU_3Amp
T4614AD	12Vdc Boxed PSU with 4 fused outputs 4Amp
T4652AD	12Vdc Weatherproof Boxed PSU 4amp
T3868SA	24Vac lead in/out PSU 3Amp
T4637AD	24Vac Boxed PSU with 4 fused outputs 4Amp
T4511AD	24Vac Boxed PSU with 8 fused outputs 8Amp
T3756AD	24Vac Weatherproof Boxed PSU 3amp

#### ACCESSORIES

Model		Description
	MIC02	Omnidirectional Condenser microphone: 3.5mm connector for IP cameras with LIne input, -40dB high sensitivity for clear sound, 5m shielded cable to reduce signal interference.

#### **CUSTOM PAINT FINISHES**

Model	Description
SO-CPC	Custom finished chassis, available in your choice of RAL solid colour. Only available on the range of mini domes including - Classic Mini Dome, Low profile domes, Vandal resistant domes. Please allow up to 6 weeks for delivery.

## **«Comelit**<sup>®</sup>

#### ENTRANCE PANELS

#### **iKALL EXTERNAL ENTRANCE PANELS**

	Model	Description
1682		iKALL ViP Audio only speaker: Audio-video unit for ViP system including terminal block complete with front-adjustable mini lens colour camera, LED camera lighting. Complete with terminal block and digital audio management system with Echo cancelling, watertight loudspeaker and microphone, loudspeaker volume adjustable from the front. For fitting in modules use: 33410, 33411 and 33412. Dimensions: 102mm x 55mm x 38mm
4682HC		Colour Audio/Video unit for iKALL ViP System: Audio-video unit for ViP system including terminal block complete with front-adjustable mini lens colour camera, LED camera lighting. Complete with terminal block and digital audio management system with Echo cancelling, watertight loudspeaker and microphone, loudspeaker volume adjustable from the front. For fitting use modules 33410, 33411 and 33412. Dimensions: 102mm x 55mm x 38mm
33434M		iKALL SB2 4-button module: iKALL entrance panel 4-button module for Simplebus and ViP systems, with stainless steel finish. Nameplate lighting options: blue/white/off. Dimensions: 112mm x 89.5mm x 40mm
33436M		iKALL SB2 6-button module: iKALL entrance panel 6-button module for Simplebus and ViP systems, with stainless steel finish. Nameplate lighting options: blue/white/off. Dimensions: 112mm x 89.5mm x 40mm
3348M		iKALL Coded access module: Digital electronic key module with LED keypad backlighting. Blue, white and off lighting options; stainless steel finish. When a number with 1 and 8 digits is entered on the keypad, two relays (10A) are activated, allowing electric door locks or other devices to be operated. 12V ac/dc power supply. Dimensions 112mm x 89.5mm x 40mm
3349M		iKALL Simplekey cut-out: Module set-up for use with Simplekey reader - SK9000I. Stainless steel finish. Dimensions 112mm x 89.5mm x 22mm
33411		iKALL Video module 1-button: Module designed for audio/video speaker unit, with black screen-printed faceplate. Nameplates with LED lighting (options: blue, white or off). To be fitted with a suitable video entry speaker unit depending on the cabling system used. Dimensions 112mm x 89.5mm x 32mm
33436		iKALL Simplebus 6-button module: 6-button iKALL entrance panel module for Simplebus system. Nameplate lighting options: blue/ white/off. Dimensions: 112mm x 89.5mm x 40mm
3348		iKALL coded access module: Access control keypad with LED backlighting. Options: blue, white and off. When a number with between 1 and 8 digits is entered on the keypad, two relays (10A) are activated, allowing electric door locks or other devices to be operated. 12V ac/dc power supply. Dimensions: 112mm x 89.5mm x 40mm
3110		iKALL Module flush mount backbox: 3110/1 - 1 module backbox - 118mm x 118mm x 45mm 3110/2 - 2 module back box - 118mm x 207mm x 45mm 3110/3 - 3 module back box - 118mm x 297mm x 45mm 3110/4 - 4 module back box - 118mm x 387mm x 45mm
3311		iKALL Module-holder frame complete with finishing cornice: 3311/1 1 module holder frame - 125mm x 125mm x 37.5mm 3311/2 2 module holder frame - 125mm x 215mm x 37.5mm 3311/3 3 module holder frame - 125mm x 305mm x 37.5mm 3311/4 4 module holder frame - 125mm x 395mm x 37.5mm _ denotes colour of frame, W= White, A= Anthracite, S= Silver

#### **3one6 ENTRANCE PANELS**

Model	Description		
3201XVS		<b>1-button flush 316 analogue AV panel VIP.</b> Dimensions: H 247mm x W 182mm x D 3mm	
3452S		<b>316 Sense video VIP panel Digital panel:</b> Flush-mounted entrance panel (fitted level with the wall) and 3 mm thick stainless steel plate. IK08 certified. Complete with 128x64 dot LCD graphic display and 15 buttons integrated into the plate, with no mechanical movement. Also works as electronic key code.	
3454H		<b>316 Touch ViP digital panel (H264) Touch screen complete unit audio, video and touchscreen:</b> Stainless steel flush-mounted entrance panel (fitted level with the wall) with 8' capacitive touch screen featuring high visibility and impact-proof glass. Certified as IK08. Operation with configurable graphics (list of names with search, virtual static buttons up to 10 users, alphabetised directory, number code up to 8 digits). Allows customisation of the virtual buttons and viewing of general apartment block messages. Fully configurable via ViP Manager.	
3459		Sense/Touch rainhood with LEDs (For illuminating buttons as no backlights on buttons)	
3460/2	4	316 range flush box 1 & 2 button panel	
3458		316 Access Control Accessory Module for 3rd party access control add to 316	

#### INTERNAL PANELS

#### **ICONA INTERNAL PANELS**

Model 6602W		Description
		Icona 4.3" touch screen wall montior handsfree full duplex audio: Colour monitor with 4.3" 16/9 touch screen and handsfree full duplex audio. Allows adjustment of backlighting intensity, contrast, audio volume and ringtone volume. Equipped as standard with sen- sitive touch controls for lock release, audio activation, self-ignition, privacy service and 3 other con- trols for programmable functions, and door open and new message indicator LEDs. Standard floor door call and call repetition management, with alarm and panic inputs and micro SD Card slot. You can customise the ringtone and video memory function with an absent message. Can also be used on standard POE systems. Dimensions 142.5x147x23mm. Compatible with H.264 video format.
6117	d o	Icona Flush mount backbox: Flush mount back box for Icona monitors. Dimensions 132mm x 132mm x 50mm
6612		Desk mount for Icona monitor. Adjustable tilt desk base converts the Icona monitor into a desktop version. Complete with 1 x 2 m labelled RJ45 cable for connecting the monitor terminals to the clasp or to a residential series jack. Dimensions: 145x190x120 mm.
6620		Icona Surface mount back box: • Wall bracket for Icona monitor. Colour. White. Dimensions: 137X142X12.5 mm.
6118		Install clips for plasterboard walls: Installation kit for Icona monitor for plasterboard walls.



#### **MAXI INTERNAL PANELS**

N	1odel	Description		
6802W		Maxi Series 7" Monitor ViP system: 7" 16:9 touch monitor with full-duplex hands-free audio. Management of Audio distribution and Energy consumption as standard. Audio, ringtone, colour and contrast adjustment. Equipped with a slot to house the micro SD Card. Ringtone can be customised. Equipped with video memory function and internal directory for the management of intercom calls. Management of external floor door call and call repetition as standard. Panic and alarm input. "Sensitive touch" commands with LED backlighting. The audio and door opening command is always visible, whilst the others appear after touch or swipe contact. Also has button for self-ignition, selectable privacy or doctor button (with active red privacy indicator), and 2 controls for different uses. "Door Open" and "New Message" indicator lights. Flush or wall- mounted or desk base versions. 223x124x25mm. Compatible with H264 video format.		
6817		Maxi Flush mount backbox: Flush-mounted box in black ABS. Dimensions: 212x115x50mm		
6820		Maxi Surface mount backbox: Wall support for Maxi monitor. White. Dimensions: 216x117x16 mm.		

#### **INTERNAL MONITORS**

#### **MINI INTERNAL MONITORS**

Ν	lodel	Description	
6701W		Mini Colour Monitor with Handset: Wall-mounted colour monitor with 4.3" 16/9 screen and handset. Allows brightness and contrast control, plus adjustment of the volume of the ringtone, which can be customised with a choice of different melodies. Equipped as standard with 4 soft touch buttons for door opening, self ignition, switchboard call and privacy service functions and with door status indicator LEDs. Manages floor door calls as standard. Option of adding 4 additional buttons with accessory Art. 6733W. Complete with 2 x 8 position DIP switches for user code programming and button programming. Includes wall-mounting or residential series box backplate and riser distribution terminal Art. 1214/2C. The monitor can only be used in 2 wire SimplebusTop Colour systems. Dimensions: 175x160x22mm.	
6741W		Mini Handsfree WiFi Monitor: Wall-mounted hands-free monitor with full-duplex audio and 4.3" / 16:9 colour screen. It is equipped with a Wi-Fi port to allows calls forwarding to mobile devices. Allows brightness control, plus adjustment of the ringtone volume, which can be customised by choosing one of several different melodies. Equipped as standard with 8 sensitive touch back-lit controls for audio activation, door-opening, self-ignition, switchboard call, privacy service and LED signalling for the door status. Manages floor door calls as standard. Complete with 2 x 8-position dip-switch for user code programming and button programming. The wall-mounting backplate and riser distribution terminal art. 1214/2C are included. The monitor can only be used in 2-wire system Simplebus Top. Dimensions: 4.53"x6.3"x0.87".	

#### AUDIO/VIDEO DOORBELL

#### VISTO

Model	Description	
VISTO	<b>Audio and video doorbell:</b> HD camera, two-way audio with built in speaker and microphone, night vision, motion detection, cloud and local recording, compatible with iOS and Android operating systems. App available for download on the App Store and Google Play.	

### **«Comelit**

#### **GATEWAYS AND SWITCHES**

Mode	el	Description		
1440		4-port Network switch: PoE Ethernet switch with 2-ports (10/100Mb) and 4-ports (10Mb. Dimensions 66mm x 85mm x 35mm 3mm		
1441	mmm	Riser power supply ViP 120W: 230Vac/110Vac 100W power supply unit - 55Vdc with DIN bar (6modules). Dimensions 99mm x 93mm x 53mm		
1456		Master Apartment Gateway: Enables App only intercom with the Comelit App on Apple or Android tablets / smartphones on local LAN and remotely via Internet. Max 15 devices, max 4 simultaneous audio/video streams. Supports intercom between all 15 devices. Requires PoE power from Comelit 1440 switch or 48V from a 1441B PSU. Includes 5 port router: 1 WAN in port (Landlord Network) 4 ports for the home network - 1 PoE port to power a monitor, 2 switchable PoE ports (PoE only available on these ports when powered with a 1441B). 1 non-PoE port. Dimensions: 70x90x62 mm (4 DIN modules).		
1456B		Multi apartment gateway for ViP system: Used for larger projects, one gateway is required per site / project, the license will be emailed or can be supplied on USB on request. When deployed each client has an app which operates over the internet whether they are in their property (on their own wi fi) as well as when they are remote and connected to the internet on 3G/4G or another WiFi network. There are 3 license levels: • Master enables app only intercom (no in wall monitor) • Slave adds remote intercom to a property with at least 1 in wall monitor • Phone only, an intercom call initiates a standard dialled phone call (lowest cost)		
1456G		SiP Gateway for Third Party Home automation Interface: Hardware spec as per 1456. Supports 1 x 3rd party interface, to support up to 5 3rd party interfaces must be installed with a Comelit master gateway or monitor. Requires PoE power from Comelit 144 switch or 48V from a 1441B PSU. Includes 5 port router. 1 WAN in port (Landlord Network) 4 ports the home network - 1 PoE port to power a monitor, 2 switchable PoE ports (PoE only available on the ports when powered with a 1441B). 1 non-PoE port. Dimensions: 70x90x62 mm (4 DIN modules)		
1456S		Slave App Gateway: Enables intercom with the Comelit App on Apple or Android tablets / smartphones remotely via Internet. Max 15 devices, max 4 simultaneous audio/video streams. Supports intercom between all 15 devices. Must be used in conjunction with a Comelit monitor. Not required for the app on the local Lan, this functionality is included with a Comelit monitor as long as it is on the apartment network. If the Comelit monitor is on the landlord network then a master gateway is required. Requires PoE power from Comelit 1440 switch or 48V from a 1441B PSU. Includes 5 port router: 1 WAN in port (Landlord Network) 4 ports for the home network - 1 PoE port to power a monitor, 2 switchable PoE ports (PoE only available on these ports when powered with a 1441B). 1 non-PoE port. Dimensions: 70x90x62 mm (4 DIN modules).		
1595		IKALL / Vandalcom / Bespoke / 316 Power Supply: Din rail power supply for IKALL / Vandalcom / Bespoke / 316 Analogue and sense - will power 1 unit		
1596A		316 Touchscreen Power supply: Power Supply 33VDC 60W INPUT - Only FOR 316 TOUCH		

## **«Comelit**<sup>®</sup>

#### **POWER SUPPLIES**

Model		Description	
1595		IKALL / Vandalcom / Bespoke / 316 Power Supply: Din rail power supply for IKALL / Vandalcom / Bespoke / 316 Analogue and sense - will power 1 unit	
1596A		316 Touchscreen Power supply: Power Supply 33VDC 60W INPUT - Only FOR 316 TOUCH	

#### **COMELIT VIP KITS**

#### **iKALL COMPLETE KIT**

Model Description		Description	
4894HIM			Ikall Metal VIP 1 button video entry kit - camera including flush-mounted box 3110/1, no PSU, requires 1595

#### **iKALL METAL KITS**

Model	Description	
8531		Icona gateway kit with Icona panel and tablet app gateway
8513HIM		Ikall Metal VIP video entry kit + Master Gateway for App only system inc flush- mounted box 3110/1, Icona flush box 6117 and PSU 1595
8521		Ikall Metal VIP video entry kit + Icona monitor 6602W inc flush-mounted box 3110/1, Icona flush box 6117 and PSU 1595
8522		Ikall Metal VIP video entry kit + 2 x Icona monitor 6602W inc flush-mounted box 3110/1, 2 x Icona flush box 6117 and PSU 1595



#### **ELECTRONIC PERIMETER DETECTION**

#### DETECTORS

Мо	odel	Description
TS30		D-TECT 2 IP Enabled Quad PIR 30m Volumetric Motion Detector
TS30DT		D-TECT 3 IP Enabled Dual-Tech M/Wave + Quad PIR 30m Volumetric Motion Detector

#### **ILLUMINATORS**

Model		Description
TSIRM		Medium Range 850nm IR LED Clarius IP Enabled Illuminator
TSWLM		Medium Range White Light LED CLarius IP Enabled Illuminator

#### LASERS

Model		Description
TSIPA		GJD IPA Board (IP Anything/ IP Adaptor)
TSLZR25		25 x 25m Laser

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#### INTELLIGENT SECURITY SOLUTIONS

#### DETECTORS

Model	Description
AMD-100	Wireless Magnetic Contact Detector
AMD-103	Small Wireless Magnetic Contact Detector
APD-100	Wireless PIR Detector
APMD-150	Wireless Dual Technology PIR+ Detector
AQUAPLUS	Digital PIR Motion Detector
AVD-100	Wireless Vibration Detector
GREYPLUS	Compact Dual Technology Vibration Detector
MAGENTA	Acoustic Glass-break Detector
OPALPRO	ProOutdoor (IP54) Dual Technology Motion Detector
S-3	Magnetic Detecors

#### SIRENS

Model	Description									
ASP-100R	Wireless Outdoor Siren									
ASP-205R	Wireless Internal Siren									
SP-500R	utdoor Siren with Optical and Acoustical Signalling									
SD-6000R	utdoor Siren with Optical Signalling									
SPW-210R	ternal Siren with Acoustical Signalling									

#### TRANSMITTERS

Model	Description
ARU-100	ABAX Device Signal Transmitter
GPRS-T1	GPRS/ SMS Reporting Transmitter

#### **TOUCH SCREENS AND KEYPADS**

Model	Description
INT-KLCD-GR	LCD Keypad for INTEGRA Control Panels
INT-KLCDS-GR	LCD Keypad for INTEGRA Control Panels
INT-TSI-WSW	7" Touch Screen for INTEGRA Control Panels



#### **CONTROLLERS AND CONTROL PANELS**

Model	Description
ACU-120	Wireless System Controller
INTEGRA128	Advanced Control Panel with 16x up to 128 Zones - Main Board
INTEGRA64	Advanced Control Panel with 16x up to 64 Zones - Main Board
INTEGRA32	Advanced Control Panel with 8x up to 32 Zones - Main Board
INTEGRA128-WRL	Advanced Control Panel with ABAX Wireless Technology and GSM/ GPRS Communicator - Main Board

#### MODULES

Model	Description								
ETHM-1PLUS	Ethernet Communication Module								
INT-E	one Expansion Module								
INT-IORS	DIN Rail Compatible Zones and Outputs Expansion Module								
INT-KNX-2	KNX System Integration Module								
INT-0	Output Expansion Module								

#### ACCESSORIES

Model	Description
ANT-OBU-Q	Mounted GSM Quad-band Antenna
APS-412	Back-up 3+1A Switching Mode Power Supply
ARF-100	Site Survey Tool for ABAX System
PINK-1	Latching Panic Button
RJ/PIN5	RS-232 Cable for INTEGRA System
OMI-3	Metal Housing Unit for INTEGRA 64
OMI-4	Metal Housing Unit for INTEGRA 64 Plus
OMI-5	Metal Housing Unit
USB-RS	RS Converter tof Programming SATEL Devices
BRACKETC	Set of Wall Brackets for Mounting Outdoor Detectors









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