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NEW

Orbiter
Gold
and Lite



Colour,
Colour/Mono
and X-Wave
Microspheres



The world's most advanced
range of Microspheres



The art of
technology by design

Orbiter Gold and Lite

All the Orbiter Gold and Lite Microspheres combine industry-leading features with state-of-the-art designs suiting almost all CCTV applications.

With a reputation for innovation, Video Controls Limited has manufactured this leading edge Microsphere range to include unique functionality, practicality, quick and easy "plug-and-play" installation, attractive aesthetics, quality and intrinsic reliability. Not surprisingly, the Microsphere range has become the first choice of specifiers and engineers the world over.

Video Controls Limited has grown into one of Europe's largest CCTV manufacturers and its Microsphere range joins a comprehensive family of market leading CCTV products. Now part of the \$26 billion Honeywell Group, VCL is able to capitalise on this massive buying power and the development

expertise such a group can bring, resulting in products at the forefront of technology and performance but with unbeatable price tags.

The Orbiter Microsphere is THE benchmark fully functional camera system, undoubtedly the leading price performer in the industry.

The Orbiter Lite Microsphere is borne out of customer demand for a leaner specification at the most competitive end of the market.

The Regent mount option is designed to fit into heritage installations having all the functionality of the Orbiter Microsphere in an unobtrusive housing sympathetic to traditional building architecture.



5" ORBITER WALL MOUNT



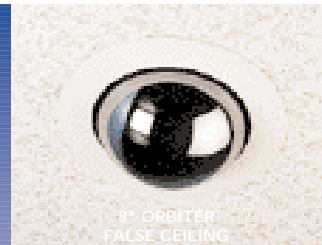
5" ORBITER CEILING MOUNT



5" ORBITER FALSE CEILING



8" ORBITER CEILING MOUNT



8" ORBITER FALSE CEILING

Features

- State-of-the-art design
- Plug and play – like fitting a light bulb
- Range of mounting options – wall, ceiling, false ceiling, pole and corner brackets
- Mono, colour, colour/mono and X-wave options
- Compatibility with all VCL, MaxCom and other leading manufacturers control equipment
- Scaleable Privacy Zones (28 Gold and 1 Lite)
- Sector identification (Gold only)
- Remote reset and home position
- Variable speed up to 400°/second with variable speed zoom lens
- Range of zoom lens options 16, 18, 22 and 23x zoom
- Up to 128 preset positions (64 for Lite)
- Up to four programmable tours (2 for Lite)
- Four mimic tours (1 for Lite)
- Combined "Twisted pair" and "In Coax" telemetry
- Alarm inputs, 8 for Gold, 4 for Lite
- 360° continuous rotation and 180° flip
- Low light capability, 0.4 lux colour and 0.01 lux mono with full frame integration
- Better than 50dB signal-to-noise ratio
- IP65 rated external versions

COLOUR BY DAY

BLACK AND WHITE AT NIGHT



ORBITER COLOUR/MONO CAMERAS ARE IR SENSITIVE

Day/Night Changeover Cameras

The Orbiter colour/mono and colour/mono X-wave changeover cameras offer the best of both worlds. Full colour surveillance during the day down to 0.4 lux, with an automatic changeover to mono at night when the light levels are lower. The night-time operation is fully IR responsive.

High Resolution, very low light cameras

All Microspheres are built around premier quality, high resolution, colour cameras, colour/mono changeover cameras and X-wave, colour/mono changeover cameras. Advanced CCD technology, with better than 50 dB "signal to noise" ratio (an indication of video quality), means low light operation is possible down to 0.1Lux. For still lower light levels "Frame Integration", a process which increases the exposure time of each Microsphere image, enables useable colour images to be produced at 0.4 Lux and mono images at 0.01 Lux.

Scalable Privacy Zones

The Orbiter Gold and Lite range offers the most advanced, scaleable Privacy zone functionality available today. A preset view is used to define the area to be blanked, which then scales to remain the same size on the view as the operator pans past the blanked area or zooms in and out from it. The Gold has 28 privacy zones, so more than one can be joined to make more complex shapes, the Lite has one.

Exwave Technology

Exwave HAD technology allows cameras to reproduce clear, identifiable pictures in adverse or low light conditions. Furthermore, with a high resolution and accurate colour reproduction Orbiter Gold with exwave technology is the ideal choice for many of today's CCTV applications.

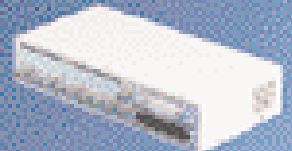
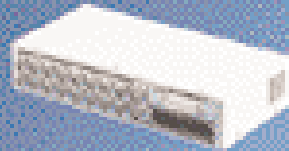
In monitoring and surveillance applications, camera sensitivity is one of the most important factors in obtaining an adequate picture in low light conditions. In addition to this requirement for high sensitivity, low smear levels are necessary, especially for surveillance of transportation and parking areas, where the bright headlights of vehicles can be a problem.



MULTIPLE SCALEABLE PRIVACY ZONES



VCL CONTROL EQUIPMENT



Higher Sensitivity

The conventional camera utilises an OCL (on chip lens) located over every pixel on the CCD. This means the light is concentrated on the photosensor areas of the CCD and overall sensitivity of the camera is improved. However, light is not concentrated on the tiny gaps between the OCLs. The Exwave camera uses a near gap-less structure which eliminates the ineffective areas on a conventional camera and increases sensitivity even more.

Lower Smear

Smear is caused by the leakage of unwanted light on to the vertical shift register. The smear level of the Exwave camera is reduced to 1/28th that of the conventional camera. This leakage is dramatically reduced because the improvement of the unit cell structure minimizes the unnecessary reflection of the light onto the CCD surface.

Sector Identification

The Orbiter Gold divides the full 360° pan coverage in to 16 sectors, each with identification text. The width of the sectors is programmable and each "ident" has 10 characters. This allows views to be clearly labelled so the operator knows exactly what the Microsphere is targeting.

Fast zoom lens with intelligent control

The Orbiter Gold and Lite have 4 optical zoom options. The Lite is available as a colour only with a 16 x zoom (4 to 64mm). The Gold has an 18 x zoom (4.1 to 73.8mm) and a 22 x zoom (4 to 88mm) colour and colour/mono option. A 23 x zoom (3.6 to 82.8mm) is available as an external colour/mono only and an extra sensitive X-wave colour/mono option is also available in 18 x zoom only. The larger zoom magnifications are such that the operator can read a car number plate successfully at great distances. But that's just the optical zoom. Once the lens is fully zoomed in, the Microsphere briefly pauses before entering a digital zoom mode, adding further 8 x magnification. Intelligent zoom control software reduces the pan and tilt speed for the Microspheres as the lens is zoomed in, enabling very fine control when tracking events at a distance.

A range of sizes

For internal use the Orbiter Gold and Lite range is 5" diameter and for external use the range is 8" diameter. A further 8" diameter internal Orbiter, for more overt applications, is also available.

The internal mount options include False Ceiling, a range of "plug-and-play" Ceiling mounts from 80mm to 3m and wall mounts. For external use there are wall, soffit, pole and the 8" Regent, designed to suit traditional building architecture.

In order to suit all building designs and styles, colour variants for the Microsphere uppers and options for the optical acrylic "dome" are available at extra cost.

Auto focus and auto iris

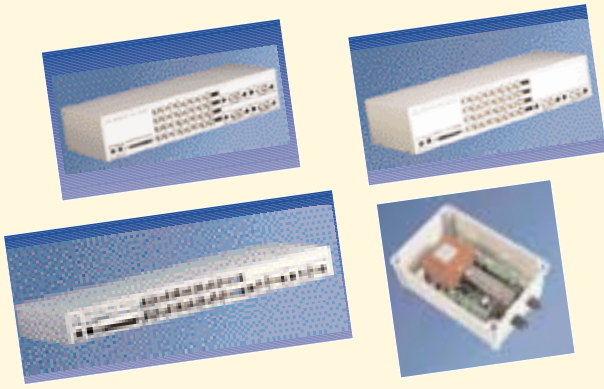
Perfect picture quality is achieved by advanced auto focus control to ensure that, no matter what the zoom position, the picture is in the sharpest possible focus. Auto iris compensates automatically for changing light levels, adjusting picture "exposure" continually.

Complementing all these features, the Microsphere has added technical capabilities such as gain, iris shutter, exposure compensation and brightness, all continuously monitored by a dedicated microprocessor which balances each function to guarantee optimal picture quality no matter what the conditions.

High speed precision control, 180° flip and 360° continuous rotation

All Microspheres have high speed precision control, with electronic braking. High quality motors with precision gearing enable pan speeds of 400°/second between presets, decreasing to 0.1°/second instantaneously for fine control when fully zoomed in.

Slip rings allow for a full 360° continuous rotation ensuring that when tracking or surveying a scene, the panning system does not hit the traditional "end stop". The Microspheres also offer a rapid 180° flip control feature for continued surveillance when a monitored item passes beneath it.



VCL CONTROL EQUIPMENT

"In Coax" and "Twisted Pair" telemetry control

It is no longer necessary to specify "In Coax" or "Twisted Pair" telemetry. All Orbiter Gold and Lite Microspheres can be controlled by either in the same unit. This is simple for ordering and reduces your stock.

Preset positions, alarm control and tours

The Orbiter Gold Microsphere has 128 presets and 4 tours (each with 128 presets per tour) and the Lite has 64 presets with two tours. Presets are easily set up and recalled by the operator from a MaxCom keyboard controller or automatically triggered on alarm activation.

Built in telemetry receiver and full opto-isolation

Advanced telemetry control electronics feature "gain and lift" meaning that cable runs of up to 500m are possible with RG59 grade coax. The isolated power supply reduces the possibility of "earth loops" and full OPTO isolation, built in for the RS485 data communications, facilitates trouble free operation. This concentration on detail design at board level gives trouble free installation and operation during the Microsphere's life.

Complete range of VCL control equipment

VCL Microspheres are used extensively around the world and VCL's open protocol philosophy has ensured that the Microspheres operate with most other manufacturers' control systems. However, VCL's own "MaxCom K" and "MaxCom Pro" range of control systems are designed to complement the Microsphere range ensuring that all of the advanced features of this professional Microsphere range are optimised.

Telephone, fibre optic and wireless transmission

The Microsphere range operates using the industry standard RS485 control signals ensuring compatibility with most CCTV transmission systems.



8" ORBITER EXTERNAL POLE MOUNT



8" ORBITER EXTERNAL WALL MOUNT



8" ORBITER EXTERNAL SOFFIT MOUNT

Colour, Colour/Mono and X-Wave Microspheres



8" REGENT MICROSPHERE

Home position

Set by the MaxCom menu it allows the Orbiter Gold or Lite to return to either a "home" preset or "home" tour after a predefined time period. This is to avoid a situation where a Microsphere is left pointing at and recording useless information. Instead, it returns to a useful preset or tour after a period of time.

Mimic tours

Four Mimic tours are available on the Orbiter Gold and one on the Lite. Here the MaxCom controller can be switched to "Learn" mode where a sequence of pan, tilt, zoom, focus and preset positions can be "memorised" for up to 3 minutes duration.

"Alarms to head"

The Orbiter Gold and Lite Microspheres have "alarms to head" - the Gold having eight alarm inputs with two relay outputs and the Lite having four inputs and one output. This system enables alarms in the vicinity of the Microsphere to be connected directly to the Microsphere with the alarm signal being transmitted through the "Twisted Pair" cable to the matrix or controller. Similarly, equipment may be activated from the Microspheres relay outputs again triggered through the Microspheres existing cabling. The potential cable saving and system simplification is vast.

Plug and Play

Fast and simple installation is at the heart of all VCL products. That's why the Microsphere range is "plug-and-play", fitting like a light bulb to its mount. All Microspheres are pre-built with the exception of the "Top Cover" and "Acrylic" which are quickly and easily fitted on-site. The Orbiter Gold and Lite automatically selects "Twisted Pair" or "In Coax" telemetry, according to what is connected. All leading to fast, simple and easy installation meaning you can do more jobs in the same time. What better way to increase your bottom line profit?

Remote reset

The Orbiter Gold and Lite have a built-in remote power up. Like reset on a PC this can be used as a global command to all Orbiters on a system. Its fact that it can be used as a global command to all Orbiters on a system is a global command to all Orbiters on a system. Its fact that it can be used as a global command to all Orbiters on a system is a global command to all Orbiters on a system.

Dem System

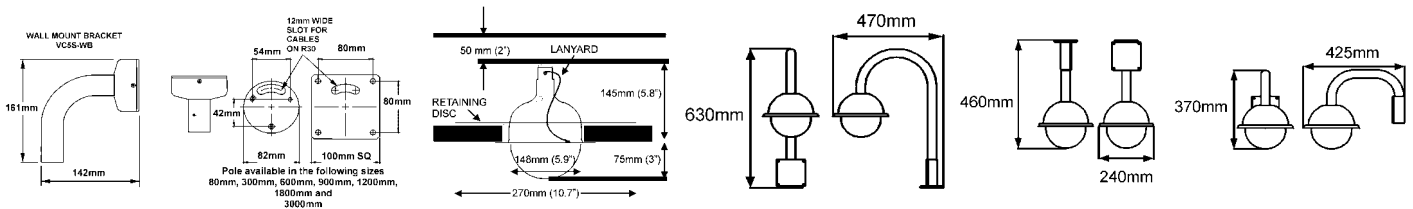
Why not feature feature and Lite with the demom packing robust



ORBITER GOLD AND LITE SPECIFICATION

	INTERNAL				EXTERNAL				
	LITE	GOLD	GOLD	GOLD X	GOLD	GOLD	GOLD	GOLD X	GOLD
Optical Zoom	16x	18x	22x	18x	18x	22x	18x	18x	23x
Digital	8x	8x	8x	8x	8x	8x	8x	8x	8X
Total Zoom	128x	144x	176x	144x	144x	176x	144x	144x	184x
Lens Size mm	4-64	4.1-73.8	4-88	4.1-73.8	4.1-73.8	4-88	4.1-73.8	4.1-73.8	3.6-82.8
Colour/Mono	N	N	N	Y	N	N	Y	Y	Y
Alarm Inputs	4	8	8	8	8	8	8	8	8
Relay Outputs	1	2	2	2	2	2	2	2	2
Presets	64	128	128	128	128	128	128	128	128
Tours (with idents)	2	4	4	4	4	4	4	4	4
Presets per Tour	128	128	128	128	128	128	128	128	128
Mimic Tours	1	4	4	4	4	4	4	4	4
Remote Reset	Y	Y	Y	Y	Y	Y	Y	Y	Y
Home Feature	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dual Purpose Coax/TP	Y	Y	Y	Y	Y	Y	Y	Y	Y
Privacy Zones	1	28	28	28	28	28	28	28	28
Line Lock Facility	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sector Idents	N	Y	Y	Y	Y	Y	Y	Y	Y
Wide Dynamic Range	N	N	N	N	N	N	N	N	Y
X Wave Technology	N	N	N	Y	N	N	N	Y	N
Scanning System NTSC	Y	Y	Y	Y	Y	Y	Y	Y	Y
Scanning System PAL	Y	Y	Y	Y	Y	Y	Y	Y	Y
Line Resolution NTSC	450	470	460	470	470	460	470	470	470
Line Resolution PAL	450	460	460	460	460	460	460	460	470
Pixels NTSC	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	768(H) 494(V)	724(H) 494(V)
Pixels PAL	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	752(H) 582(V)	724(H) 582(V)
Focus/ Iris	Auto / manual								
Telemetry Options/Control Signal	Coax / Twisted Pair								
Video Output	1V p-p								
Min Illumination (lux)	1	1	1	0.1	1	1	0.1	0.1	1
Integration lux colour	n/a	0.4	0.1	0.4	0.4	0.1	0.4	0.4	0.1
Integration lux mono				0.01			0.01	0.01	0.02
S/N ratio dB	>48	>50	>50	>50	>50	>50	>50	>50	>50
Operating Temp °C	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C	-20°C to 50°C	-20°C to 50°C	-20°C to 50°C	-20°C to 50°C	-20°C to 50°C
Variable Pan Speed	0.1° - 400° per second								
Pan Coverage	360° continuous								
Variable Tilt Speed	0.1° - 200° per second								
Tilt Coverage	90°								
Power Supply	24 VAC								
Recommended PSU	VCORB24				VCEXT24PSU				
Mounting Options	Wall, Ceiling, False Ceiling				Wall, Pole, Soffit				

The manufacturer reserves the right to alter the specification of products without prior notice



WALL MOUNT

CEILING MOUNT

FALSE CEILING MOUNT

POLE MOUNT

SOFFIT MOUNT

WALL MOUNT