



P o w e r D o m e

VISTA POWERDOME™

PRODUCT SPECIFICATION PACK



PRODUCT RELEASE PACK

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EXTENDED VISTA POWERDOME™ SERIES

Since its launch in 2003, the Vista PowerDome™ has become an important addition in the high speed dome arena. The continued product development commitment has recently seen the introduction of a series of vandal resistant models which ensure that there is now a PowerDome suitable for most internal and external applications.

As well as boasting unsurpassed optical quality and inherent operational reliability, these comprehensive units are available in a variety of specifications:

Offering 24 dynamic privacy zones (8 displayed on screen at any one time), 16 alarm inputs, 4 preset tours and 3 programmable learn tours, you will also find that the Vista PowerDome™ comes complete with 128 programmable presets and an advanced image stabilisation facility.

However, despite the units' advanced functionality, the entire range is extremely user friendly. The utilisation of a quick release connector to facilitate speedy separation of the camera and yoke assembly means installation and subsequent maintenance time is kept to the bare minimum.

Full demonstrations are available from Norbain and Network Video Centre.

VPD-1 series of Vista PowerDome™

6" Internal colour dome. Available as Ceiling, wall, or pendant mount, the VPD-1 series features an 18:1 optical zoom and is available with a wide range of dome bubble options.

VPD-2 series of Vista PowerDome™

7" external colour/monochrome dome. Available as wall/pendant mount, the VPD-2 series features a 25:1 optical zoom and is available with either a smoked or clear dome bubble with a vandal resistant housing option.

VPD-3 series of Vista PowerDome™

7" external colour/monochrome dome. Available as wall/pendant mount, the VPD-3 series features a 18:1 optical zoom and is available with either a smoked or clear dome bubble with a vandal resistant housing option.



POSITIONING & TARGET MARKETS

The Vista PowerDome™ has been developed with the installer and end user in mind by combining extreme functionality with simplicity of install.

Blending high end performance with ease of install and intuitive operation, the Vista PowerDome™ is ideal for applications such as:

- Hotels
- Government installations
- Hospitals
- Leisure facilities
- Car parks
- Office complexes
- Retail outlets
- Industrial environments
- Schools
- Correctional facilities
- Airports

SUMMARY OF FEATURES

VPD-1 Internal PowerDome

- 18:1 colour option. Focal length 4.1-73.8mm
- Internal flush wall/pendant mount available
- RS485 and FSK coaxial telemetry control
- Embedded Pelco "D" RS485 protocol
- HF lift & gain amplification for extended cable runs
- 400 degree per second P/T movement
- 128 presets with 0.01 degree accuracy
- 4 preset tours
- UTP option via NVT
- 3 x 1 min or 1 x 3 min learn tours
- Easy set up menu
- Home function
- Complete with applicable mounting brackets
- Directional indicator via OSD
- 16 alarm inputs local to the dome via VPD-ALM16
- Clear, Smoked, Gold, Chrome, Tinted Internal dome bubble finishes
- 12:1 digital zoom
- 3 year warranty
- Full range of mounting hardware

VPD-2 External PowerDome

Vandal Resistant Option Available

- 25:1 colour/monochrome option
Focal length 2.4-60mm
- External or vandal resistant housings
- RS485 and FSK coaxial telemetry control
- Embedded Pelco "D" RS485 protocol
- HF lift & gain amplification for extended cable runs
- 24 dynamic privacy zones, 8 simultaneously
- 400 degree per second P/T movement
- 128 presets with 0.01 degree accuracy
- 4 preset tours
- Freeze frame
- UTP option via NVT
- 3 x 1 min or 1 x 3 min learn tours
- Directional indicator via OSD
- 16 alarm inputs local to the dome via VPD-ALM16
- IP65 weatherproofing
- Clear, Smoked dome bubble finishes
- 12:1 digital zoom
- Easy set up menu
- Full titles for presets, areas, tours, learn tours
- Home function
- Frame integration
- Complete with wall bracket
- Image stabilisation
- 3 year warranty
- Full range of mounting hardware

VPD-3 External PowerDome

Vandal Resistant Option Available

- 18:1 colour/monochrome option
Focal length 4.1-73.8mm
- External or vandal resistant housings
- RS485 and FSK coaxial telemetry control
- Embedded Pelco "D" RS485 protocol
- HF lift & Gain amplification for extended cable runs
- 24 dynamic privacy zones, 8 simultaneously
- 400 degree per second P/T movement
- 128 presets with 0.01 degree accuracy
- 4 preset tours
- Freeze frame
- UTP option via NVT
- 3 x 1 min or 1 x 3 min learn tours
- Directional indicator via OSD
- 16 alarm inputs local to the dome via VPD-ALM16
- IP65 weatherproofing
- Clear, Smoked dome bubble finishes
- 12:1 digital zoom
- Easy set up menu
- Full titles for presets, areas, tours, learn tours
- Home function
- Frame integration
- Complete with wall bracket
- 3 year warranty
- Full range of mounting hardware

SPECIFICATION DETAILS

FEATURES	VPD-1 INTERNAL VERSION	VPD-2 EXTERNAL VERSION	VPD-3 EXTERNAL VERSION
Camera Type	Colour	Colour / Monochrome	Colour / Monochrome
Pan Speed	0.5 - 120 Manual 400 Preset	0.5 - 120 Manual 400 Preset	0.5 - 120 Manual 400 Preset
Tilt Speed	0.5 - 120 Manual 400 Preset	0.5 - 120 Manual 400 Preset	0.5 - 120 Manual 400 Preset
Manual Pan Speed	Programmable	Programmable	Programmable
Manual Tilt Speed	Programmable	Programmable	Programmable
Pan Angle	360 cont.	360 cont.	360 cont.
Tilt Angle	0 to -90	0 to -90	0 to -90
Proportional P/T to Zoom	Yes	Yes	Yes
Auto Focus (AF) Override	Yes. Returns to AF on P/T movement	Yes. Returns to AF on P/T movement	Yes. Returns to AF on P/T movement
Auto Iris (AI) override	Yes. Returns to AI on P/T movement	Yes. Returns to AI on P/T movement	Yes. Returns to AI on P/T movement
Auto Flip	Yes	Yes	Yes
Manual Flip	Yes	Yes	Yes
Dynamic Privacy Zones	No	24 Zones, up to 8 displayed simultaneous	24 Zones, up to 8 displayed simultaneous
Still Shot	No	Yes	Yes
Presets	128	128	128
Preset Tours	4x64	4x64	4x64
Preset Accuracy	0.01 degree	0.01 degree	0.01 degree
X/Y Co-ordinate	Yes	Yes	Yes
Patterns (Learning Tours)	3x 1 min or 1 x 3 min	3x 1 min or 1 x 3 min	3x 1 min or 1 x 3 min
Sector Titles	16 x 20 characters	16 x 20 characters	16 x 20 characters
Camera Titles	20 characters	20 characters	20 characters
Preset Titles	20 characters	20 characters	20 characters
Tour & Learn Titles	20 characters	20 characters	20 characters
Home Position	Yes	Yes	Yes
Protocol	RS485 / FSK coaxial / Pelco D	RS485 / FSK coaxial / Pelco D	RS485 / FSK coaxial / Pelco D
Addressing	DIP switch selectable, 0-1024	DIP switch selectable, 0-1024	DIP switch selectable, 0-1024
Video Amplification	HF Lift & Gain	HF Lift & Gain	HF Lift & Gain
NVT (UTP Transmission)	Optional	Optional	Optional
ALARM SPECIFICATION			
Alarm Inputs	16 inputs via VPDALM16, NO or NC	16 inputs via VPDALM16, NO or NC	16 inputs via VPDALM16, NO or NC
Alarm Outputs	Via VPDALM16, NO, single output triggers with any active input	Via VPDALM16, NO, single output triggers with any active input	Via VPDALM16, NO, single output triggers with any active input
POWER SPECIFICATION			
Voltage	24V AC	24V AC	24V AC
Protection	Yes	Yes	Yes
CAMERA SPECIFICATION			
Optical Zoom	18 : 1	25 : 1	18 : 1
Focal Length	4.1mm - 73.8mm f1.4	2.4mm - 60mm f1.6	4.1mm - 73.8mm f1.4
Digital Zoom	12x	12x	12x
Col/Monochrome	No	Yes	Yes
Resolution	460TVL	460TVL colour / 570TVL Monochrome	460TVL colour / 570TVL Monochrome
Sensitivity	3 lux	3 lux colour / 0.2 lux Monochrome	0.7 lux colour / 0.02 lux Monochrome
Frame Integration	No	Yes	Yes
BLC	Yes	Yes	Yes
AGC	Yes	Yes	Yes
Line Lock	Yes	Yes	Yes
PAL / NTSC	Yes	Yes	Yes
DOME HOUSING SPECIFICATION			
Pendant Option	Yes	Yes	Yes
Wall Option	Yes	Yes	Yes
Drop Ceiling Option	Yes	No	No
Vandal Resistant Housing Option	N/A	Yes	Yes
IP Rating	N/A	IP65	IP65
Operating Temperature		HD housing to provide -40 to +50 deg C operation	HD housing to provide -40 to +50 deg C operation
Dome Bubble Colour Options	Clear, Smoked, Gold, Chrome, Tinted	Clear, Smoked	Clear, Smoked
Static / Dummy Option	Yes	No	No
Quick Release	Yes	Yes	Yes

FEATURES & BENEFITS

- F:** 25:1 or 18:1 colour/monochrome or 18:1 colour only camera options
- B:** Three camera modules available for external and internal applications, providing colour/mono switchable or colour only options
- F:** RS485 and FSK coaxial telemetry control as standard
- B:** Providing choice of twisted pair or coax control mediums. FSK enables 1 cable for telemetry and video
- F:** HF lift & Gain amplification
- B:** Providing built in video amplification for extended cable runs
- F:** 24 dynamic privacy zones (colour/mono only)
- B:** Dome can be set so operator cannot view sensitive areas i.e. through windows, etc. Up to eight zones can be displayed at once
- F:** 400 degrees per second pan and tilt movement
- B:** Enables dome to get to presets quicker with quickest route operation, so not missing vital information
- F:** 128 presets with 0.01 degrees accuracy
- B:** Wide range of presets gives installer/operator more set positions i.e front door, back door, etc, all presets can be titled
- F:** 4 preset tours
- B:** 4 preset tours which you can select up to 64 presets i.e. operator can program all exits to preset positions then include presets in tour. Run tour and units will cycle from one exit to another
- F:** UTP option via NVT (VPD-UTP1/UTP2/UTP3)
- B:** One of the benefits of using NVT units is interference rejection. Video signals can reside in a Cat5 cable as multiple video signals, telephones, Ethernet, RS-422, RS-485, etc
- F:** 3 x 1 min or 1 x 3 min learn tours
- B:** The operator can program his own tours very easily. Simply select the learn tour required, press enter and the timer will start counting down. The operator can now control the dome as required. All operation is remembered and can be replayed as required
- F:** Directional indicator via OSD
- B:** Operator can set North at 0 Degrees, providing clear indication of direction of view
- F:** 16 alarm inputs local to the dome via VPD-ALM16
- B:** 16 alarm input module can drive dome to presets/tours or learn tour can be n/o or n/c. Alarm module also has 1 output, which triggers with any active input. The alarm module can be installed local to the dome, simplifying the wiring
- F:** Quick release connector
- B:** The utilisation of a quick release connector to facilitate speedy separation of the camera and yoke assembly means installation and subsequent maintenance time is kept to the bare minimum

- F: Complete range of mounting hardware
- B: Full range provided to allow installation of the dome in virtually any location. All adaptors are supplied with all fixings required for connecting brackets together
- F: Freeze fame
- B: Freeze option provides less fatigue to operators when running preset tours. By freezing the image between presets it appears the unit is switching between static cameras
- F: Easy O.S.D
- B: Simple navigation of menus via keyboard joystick, allows very simple programming
- F: Image stabilisation (25:1)
- B: This option ensures super still images when domes may be susceptible to adverse weather conditions
- F: Area titles
- B: These titles ensure the operator knows exactly where the dome is viewing. This feature is very useful on multi-dome installations
- F: 3 Year Warranty
- B: For peace of mind for the installer and end user alike
- F: All Pendant Domes are supplied with wall bracket
- B: Do not need to order separate bracket
- F: The VPD-O-P-S is a pendant mount dome designed to take the VPD-FCA static adaptor, or the VPD1, VPD2 or VPD-3 yolk assembly
- B: If the VPD-O-P-S was fitted, a Yoke assembly can be added at a later date



FREQUENTLY ASKED QUESTIONS

- Q.** How many PowerDomes can I run on RS485?
- A.** 32 devices can be linked together in daisy chain using BELDEN 8723 RS485 cable for up to 1.2km
- Q.** How is the PowerDome controlled?
- A.** The PowerDome can be controlled by Vista RS485 or by FSK coaxial telemetry protocol. Also it can be controlled by Pelco D
- Q.** What units can control the PowerDome?
- A.** The dome can be controlled from the Vista Columbus, NPX multiplexers, VDC1604 or directly from the NPX/KBD/J3De keyboard
- Q.** Can 3rd party devices control the PowerDome?
- A.** Any unit supporting Pelco D telemetry will control the PowerDome. Further we will be releasing the Vista protocols to 3rd parties in the near future for extended use
- Q.** Are titles available on presets?
- A.** Yes, full titles are available for all 128 presets, tours, learn tours and areas
- Q.** Can the PowerDome be controlled from an existing Columbus installed in the field?
- A.** Yes, however the software in the Columbus will require upgrading. Please contact Vista for details
- Q.** What happens if the PowerDome is left looking in the wrong area?
- A.** The home position can be programmed to return to a preset, tour or learn after a time of no activity
- Q.** Can the PowerDome be fitted to a lamp post/pole?
- A.** Yes, by using the VPD-EPMA pole mount adaptor
- Q.** Are PowerDomes supplied with a PSU?
- A.** No, the PSU needs to be ordered separately (VPD-PSU1 for internal and VPD-PSU2 for external units)
- Q.** What does Dynamic privacy zone mean?
- A.** What this means is the blanking area increases/ decreases in size as the camera zooms in and out, ensuring the sensitive area remains obscured whilst the rest of the image can be seen
- Q.** Do I need a special programming keyboard?
- A.** No, all functions are programmed from the control keyboard (NPX/KBD/J3De)
- Q.** If I have only 1 PowerDome, do I need a Triplex™/VDC1604?
- A.** No, you can control the PowerDome via the NPX/KBD/J3De directly
- Q.** Can I control the PowerDome Via SmartTel/Disc?
- A.** Yes, full control of the PowerDome can be achieved when the dome control module is used
- Q.** Can I mix the PowerDome on a system using KD6?
- A.** Yes, By using the VDC1604 you can drive 2 protocols. One from the VDC1604 and Vista Protocol from the NPX/KBD/J3De
- Q.** Is there a Vandal Option for the PowerDome?
- A.** Yes, available in 25:1 and 18:1 colour/monochrome versions
- Q.** Do I need any support equipment for the false ceiling unit?
- A.** No, the required bracket is with the unit
- Q.** Will Baxall Pyramid control the PowerDome
- A.** Yes. you will need a UDI for each PowerDome.

UNDERSTANDING VISTA POWERDOME™ PART NUMBERS

Vista PowerDome™	Camera Module	Housing	Mount	Lower Finish
VPD	O	DP	P	S
	0 = No Yoke	DP = Dust Proof	C = Ceiling	C = Clear
	1 = Colour 18:1	WP = Weatherproof	P = Pendant/Wall	S = Smoked
	2 = Colour/Mono 25:1	VR = Vandal Resistant		G = Gold
	3 = Colour/mono 18:1			M = Mirrored/Chrome
				T = Tinted/Bronze

VISTA POWERDOME™ PART NUMBER CONFIGURATION TABLE

Part Number	Description
Vista PowerDome - Dummy Version	
VPD-ODP-P-S	7" pendant wall mont, smoked lower, no P/T, for static or dummy dome
Vista PowerDome - Internal Colour High Speed Dome	
VPD-IDP-C-C	6" False ceiling mount, 18X Zoom, Coax & RS485 telem, clear lower 24V AC 16VA
VPD-IDP-C-T	6" False ceiling mount, 18X Zoom, Coax & RS485 telem, tinted lower 24V AC 16VA
VPD-IDP-C-S	6" False ceiling mount, 18X Zoom, Coax & RS485 telem, smoked lower 24V AC 16VA
VPD-IDP-C-G	6" False ceiling mount, 18X Zoom, Coax & RS485 telem, gold lower 24V AC 16VA
VPD-IDP-C-M	6" False ceiling mount, 18X Zoom, Coax & RS485 telem, chrome lower 24V AC 16VA
VPD-IDP-P-C	7" Pendant/Wall mount, 18X zoom, Coax & RS485 telem, clear lower 24V AC 16VA
VPD-IDP-P-T	7" Pendant/Wall mount, 18X zoom, Coax & RS485 telem, tinted lower 24V AC 16VA
VPD-IDP-P-S	7" Pendant/Wall mount, 18X zoom, Coax & RS485 telem, smoked lower 24V AC 16VA
VPD-IDP-P-G	7" Pendant/Wall mount, 18X zoom, Coax & RS485 telem, gold lower 24V AC 16VA
VPD-IDP-P-M	7" Pendant/Wall mount, 18X zoom, Coax & RS485 telem, chrome lower 24V AC 16VA
Vista PowerDome - External Colour/Monochrome High Speed Dome	
VPD-2WP-P-C	7" Pendant, Htr/Fan, Wall Mount, Clear, 25X, Day/Night, Coax & RS485, 56VA PSU
VPD-2WP-P-S	7" Pendant, Htr/Fan, Wall Mount, Smoked, 25X, Day/Night, Coax & RS485, 56VA PSU
VPD-3WP-P-C	7" Pendant, Htr/Fan, Wall Mount, Clear, 18X, Day/Night, Coax & RS485, 56VA PSU
VPD-3WP-P-S	7" Pendant, Htr/Fan, Wall Mount, Smoked, 18X, Day/Night, Coax & RS485, 56VA PSU
Vista PowerDome - Vandal Resistant Colour/Monochrome High Speed Dome	
VPD-2VR-W-C	7" Pendant, Vandal Resistant, Htr/Fan, Wall Mount, Clear, 25X, Day/Night, Coax & RS485, 56VA PSU
VPD-2VR-W-S	7" Pendant, Vandal Resistant, Htr/Fan, Wall Mount, Smoked, 25X, Day/Night, Coax & RS485, 56VA PSU
VPD-3VR-W-C	7" Pendant, Vandal Resistant, Htr/Fan, Wall Mount, Clear, 18X, Day/Night, Coax & RS485, 56VA PSU
VPD-3VR-W-S	7" Pendant, Vandal Resistant, Htr/Fan, Wall Mount, Smoked, 18X, Day/Night, Coax & RS485, 56VA PSU

VPD-1 Internal False Ceiling Mount Versions



VPD-1 Internal Wall/Pendant Mount Versions



VPD-2 and VPD-3 Wall/Pendant Mount Versions



VISTA POWERDOME™ BRACKETS

Part No.	Description
VPD-EWM	EXTERNAL WALL MOUNT
VPD-WM	INTERNAL WALL MOUNT
VPD-CMA	CORNER MOUNT ADAPTER
VPD-ESM	EXTERNAL SWING ARM MOUNT
VPD-ERM	EXTERNAL ROOF MOUNT
VPD-EPMA	EXTERNAL POLE MOUNT
VPD-TM	EXTERNAL TOWER MOUNT
VPD-P2000	INTERNAL 2000mm PENDANT MOUNT EXTENSION
VPD-P1000	INTERNAL 1000mm PENDANT MOUNT EXTENSION
VPD-P500	INTERNAL 500mm PENDANT MOUNT EXTENSION
VPD-P250	INTERNAL 250mm PENDANT MOUNT EXTENSION



VPD-EWM



VPD-WM



VPD-CMA



VPD-ESM



VPD-ERM



VPD-EPMA



VPD-TM

VISTA POWERDOME™ ACCESSORIES

Part No.	Description
VPD-PSU1	PSU DUST PROOF: 230V AC:24V AC
VPD-PSU2	PSU WEATHER PROOF: 230VAC:24VAC.75VA
VPD-ALM16	16X ALARM IP MODULE
VPD-UTP1	UTP ADAPTOR FOR WP PENDANT AND FLUSH MOUNT UNITS
VPD-UTP2	UTP ADAPTOR FOR INDOOR WALL MOUNT UNITS
VPD-UTP3	UTP ADAPTOR FOR VANDAL RESISTANT UNITS
VPD-FCA	FIXED CAMERA ADAPTOR



VPD-PSU1



VPD-PSU2



VPD-ALM16



VPD-UTP1



VPD-UTP2



VPD-UTP3



VPD-FCA

TYPE OF MOUNTING

Internal Vista PowerDome™

	UTP OPTION												
	VPD-1DP-P-C	VPD-1DP-P-S	VPD-1DP-P-T	VPD-1DP-P-G	VPD-1DP-P-M	VPD-1DP-C-C	VPD-1DP-C-S	VPD-1DP-C-T	VPD-1DP-C-G	VPD-1DP-C-M	VPD-1DP-C-2000	VPD-UTP1	VPD-UTP2
Indoor Wall Mount	•	•	•	•	•								•
Indoor Pendant Mount	•	•	•	•	•							•	•
Indoor Inceiling Mount						•	•	•	•	•	•		•

External Vista PowerDome™

	25X ZOOM D/N			18X ZOOM D/N				UTP OPTION							
	VPD-2WP-P-C	VPD-2WP-P-S	VPD-2VR-W-C	VPD-2VR-W-S	VPD-3WP-P-C	VPD-3WP-P-S	VPD-3VR-W-C	VPD-3VR-W-S	VPD-CMA	VPD-TM	VPD-ESM	VPD-EPMA	VPD-ERM	VPD-UTP1	VPD-UTP3
Outdoor Wall Mount	•	•			•	•									•
Outdoor Corner Mount	•	•			•	•			•						•
Outdoor Tower Mount	•	•			•	•				•					•
Outdoor Swing Mount	•	•			•	•					•				•
Outdoor Pole Mount	•	•			•	•							•		•
Outdoor Parapet Mount	•	•			•	•								•	•
Outdoor V/R Wall			•	•			•	•							•

A & E SPECIFICATIONS

Vista PowerDome™ VPD-1DP-P

PowerDome with 18x Colour camera, 7" Pendant/Wall mount housing.

The discreet pan/tilt/zoom (PTZ) dome receiver with a high-resolution, 1/4" integrated colour camera shall be a VPD-1DP-P PowerDome series.

1. **The high-speed pan/tilt drive unit shall meet or exceed the following design and performance specifications:**
 - 1.1. Shall be microprocessor controlled with keypad-programmable non-volatile memory.
 - 1.2. Each pan/tilt drive unit shall operate as an independent unit with exclusive programming and set up data contained on each unit's non-volatile memory.
 - 1.3. Shall feature an integral receiver/driver with DIP switch selectable addressing.
 - 1.4. Shall provide a built-in menu system for on-screen set up of camera functions.
 - 1.5. Shall be capable of 360° continuous pan rotation with a vertical unobstructed tilt of 0 to 90°.
 - 1.6. Shall pan under manual control from a creep speed of 0.5° to 120° per second.
 - 1.7. Shall operate under preset control at a pan speed of up to 400° per second and a tilt speed of 400° per second.
 - 1.8. Shall be capable of up to 128 camera preset positions each with 20 character titles.
 - 1.9. Shall be capable of camera titles up to 20 characters.
 - 1.10. Shall be capable of HF lift & Gain amplification.
 - 1.11. Shall be capable of up to four individual preset tours consisting of 64 programmed presets each.
 - 1.11.1. Shall have three programmable speed settings for tours:
 - 1.11.1.1. Slow.
 - 1.11.1.2. Medium.
 - 1.11.1.3. Fast.
 - 1.12. Shall be capable of three learn tours, one 3 minute or three 1 minute that stores up to three minutes of manual operation by an operator. Shall be a continuous memorised path, panning, tilting and zooming at any speed and pausing at selected targets along the way.
 - 1.13. Shall feature variable-speed, continuous-duty stepper motors capable of full operation from 20 to 28 VAC (24 VAC normal).
 - 1.13.1. Shall contain gold slip rings for trouble-free performance and high-quality connection for power, video and data transmission.
 - 1.13.2. Shall have proportional speed control.
 - 1.13.3. Shall require a maximum of 16 VA.
 - 1.13.4. Drive motors shall have no fewer than 19,200 microsteps per revolution to ensure smooth movement at maximum magnification.
 - 1.14. Pan and tilt accuracy shall be accurate to at least 0.01° on preset.
 - 1.15. Shall provide programmable limit stops for automatic scanning.
 - 1.16. Shall provide a quick-spin feature (may be disabled during programming) that automatically pans the camera 180° when the bottom tilt limit is reached to allow for continuous tracking of a target.

2. **The high-resolution camera shall be an integrated colour camera, available in PAL video signal format, and shall meet or exceed the following design and performance specifications:**
 - 2.1. The camera horizontal scanning frequency shall be:
 - 2.1.1. 15.625 KHz, PAL.
 - 2.2. The camera vertical scanning frequency shall be:
 - 2.2.1. 50 Hz, PAL.
 - 2.3. The camera image sensor shall be a 1/4" solid-state interline CCD imager.
 - 2.4. The image sensor shall have a total pixel array of:
 - 2.4.1. 752(H) x 582(V) PAL/CCIR.
 - 2.5. The camera shall have digital signal processing (DSP/III).
 - 2.6. The camera shall have automatic white balance.
 - 2.6.1. The camera shall also be capable of manual setup for white balance via the menu system.
 - 2.7. The camera shall have automatic iris control and manual override.
 - 2.8. The camera shall provide backlight compensation while in automatic iris control mode.
 - 2.9. The camera shall provide electronic shutter speeds of:
 - 2.9.1. 1/3 to 1/10,000 second, PAL.
 - 2.10. The camera shall have two methods of synchronisation:
 - 2.10.1. Line lock with remote adjustment.
 - 2.10.2. Internal oscillator.
 - 2.11. The camera shall provide a horizontal resolution of:
 - 2.11.1. 460 TV lines, PAL.
 - 2.12. The camera shall provide a signal-to-noise ratio of greater than 50 dB.
 - 2.13. The camera shall have the following sensitivity specifications:
 - 2.13.1. 3 lux colour @ 1.0 Vp-p (AGC on, F1.8, shutter 1/60th).
 - 2.14. The camera shall provide a composite video output of 1.0 Vp-p.
3. **The motorised lens shall meet or exceed the following design and performance specifications:**
 - 3.1. The lens shall feature an additional 12X programmable electronic zoom for a total of at least 216X with minimum digital distortion.
 - 3.2. The lens shall provide horizontal angle of view of 48° at 4.1 mm and 2.7° at 73.8 mm telephoto zoom.
 - 3.3. The lens shall feature an automatic focus with manual override.

4. The camera and pan/tilt unit shall be housed in a 7" inch wall-mount/pendant housing

- 4.1. The wall-mount housing shall meet or exceed the following design and performance specifications:
 - 4.1.1. The housing shall include a wall-mount bracket.
 - 4.1.1.1. The bracket shall have a RAL 7035 finish.
 - 4.1.1.2. The bracket shall be constructed of 0.125" ABS plastic.
 - 4.1.2. The upper housing shall be constructed of 0.125" ABS plastic.
 - 4.1.3. The upper housing shall be designed to thread onto the end of 1.25" NPT pipe for suspension from a ceiling or to attach to mounting accessories for other applications.
 - 4.1.4. The upper housing shall be 9.02" in diameter at its widest point.
 - 4.1.5. The lower dome shall be a maximum of 7.19" in diameter.
 - 4.1.6. The lower dome shall be made of 0.06" acrylic material, optically clear with no distortion in any portion of the dome.
 - 4.1.7. The lower dome shall be available in the following:
 - 4.1.7.1. Clear (no light loss).
 - 4.1.7.2. Bronze (approximately 1 f-stop light loss).
 - 4.1.7.3. Smoked (approximately 1/2 f-stop light loss).
 - 4.1.7.4. Chrome mirror (approximately 2 f-stop light loss).
 - 4.1.7.5. Gold mirror (approximately 2 f-stop light loss).
- 4.2. The lower dome shall attach to the upper housing in a twist-on fashion and feature a safety cable connecting the dome to the housing.

5. The pan/tilt drive unit and camera shall have the following additional specifications:

- 5.1. Electrical.
 - 5.1.1. Input voltage: 24 VAC at 50 Hz for PAL.
 - 5.1.2. Input power: 16 VA.
- 5.2. The control signal input shall be digital RS-485 or FSK.
- 5.3. Connections.
 - 5.3.1. The upper housing shall feature a quick disconnect for the pan/tilt unit.
 - 5.3.2. Power and control connections shall be made through a separate I/O interconnect interface.
 - 5.3.3. Video inputs shall be BNC connector.
 - 5.3.3.1. Input shall be PAL/CCIR compatible.

A & E SPECIFICATIONS

Vista PowerDome™ VPD-2WP-P

PowerDome With 25x Colour/Mono camera, 7" Pendant/Wall mount housing.

PowerDome Day/Night series CCTV pan/tilt/zoom (PTZ) dome receiver with 25X black-and-white and colour camera.

The CCTV pan/tilt/zoom (PTZ) dome receiver shall be a Vista PowerDome™ Day-Night series with a high-resolution, 25X black-and-white and colour camera.

1. **The high-speed pan/tilt drive unit shall meet or exceed the following design and performance specifications:**
 - 1.1. Shall be microprocessor controlled with keypad-programmable non-volatile memory.
 - 1.2. Each pan/tilt drive unit shall operate as an independent unit with exclusive programming and set up data contained on each unit's non-volatile memory.
 - 1.3. Shall feature an integral receiver/driver with DIP switch selectable addressing.
 - 1.4. Shall provide a built-in menu system for on-screen set up of camera functions.
 - 1.5. Shall be capable of 360° continuous pan rotation with a vertical unobstructed tilt of 0 to 90°.
 - 1.6. Shall pan under manual control from a creep speed of 0.5° to 120° per second.
 - 1.7. Shall operate under preset control at a maximum pan speed of up to 400° per second and a tilt speed of 400° per second.
 - 1.8. Shall be capable of Privacy Zones, up to 24 Dynamic zones with up to 8 simultaneously.
 - 1.9. Shall be capable of up to 128 camera preset positions each with 20 character titles.
 - 1.10. Shall be capable of up to four individual preset tours consisting of 64 programmed presets each.
 - 1.10.1. Shall have three programmable speed settings for tours:
 - 1.10.1.1. Slow.
 - 1.10.1.2. Medium.
 - 1.10.1.3. Fast.
 - 1.11. Shall be capable of three learn Tour's, one 3 minute or three 1 minute that stores up to three minutes of manual operation by an operator. Shall be a continuous memorised path, panning, tilting and zooming at any speed and pausing at selected targets along the way.
 - 1.12. Shall feature variable-speed, continuous-duty stepper motors capable of full operation from 20 to 28 VAC (24 VAC normal).
 - 1.12.1. Shall contain gold slip rings for trouble-free performance and high-quality connection for power, video and data transmission.
 - 1.12.2. Shall have proportional speed control.
 - 1.12.3. Shall require a maximum of 56 VA.
 - 1.12.4. Drive motors shall have no fewer than 19,200 micro steps per revolution to ensure smooth movement at maximum magnification.
 - 1.13. Pan and tilt accuracy shall be at least 0.01° on preset.
 - 1.14. Shall provide programmable limit stops for automatic scanning.
 - 1.15. Shall provide a quick-spin feature (may be disabled during programming) that automatically pans the camera 180° when the bottom tilt limit is reached, to allow for continuous tracking of a target.

2. The high-resolution camera shall be an integrated colour and black-and-white camera, available in PAL video signal format and shall meet or exceed the following design and performance specifications:
 - 2.1. The camera horizontal scanning frequency shall be:
 - 2.1.1. 15.625 KHz, PAL.
 - 2.2. The camera vertical scanning frequency shall be:
 - 2.2.1. 50 Hz, PAL.
 - 2.3. The camera image sensor shall be a 1/6 type CCD imager.
 - 2.4. The image sensor shall have a total pixel array of:
 - 2.4.1. 752(H) x 582(V) PAL/CCIR.
 - 2.5. The camera shall have digital signal processing (DSP/III).
 - 2.6. The camera shall have automatic white balance.
 - 2.6.1. The camera shall also be capable of manual setup for white balance via the menu system.
 - 2.7. The camera shall have automatic iris control and manual override.
 - 2.8. The camera shall provide backlight compensation while in automatic iris control mode.
 - 2.9. The camera shall provide electronic shutter speeds of:
 - 2.9.1. 1/3 to 1/10,000 second 20 steps, PAL.
 - 2.10. The camera shall have electronic image stabilisation, that shall compensate for unsteadiness in the camera's movements to project a more stable image.
 - 2.11. The camera shall have two methods of synchronisation:
 - 2.11.1. Line lock with remote adjustment.
 - 2.11.2. Internal oscillator.
 - 2.12. The camera shall provide a horizontal resolution of:
 - 2.12.1. 460 TV lines, PAL.
 - 2.13. The camera shall provide a signal-to-noise ratio of greater than 50 dB.
 - 2.14. The camera shall have the following sensitivity specifications:
 - 2.14.1. 3 lux colour @ 1 Vp-p (AGC on, F1.6, shutter 1/60th).
 - 2.14.2. 0.2 lux black and white @ 1 Vp-p (AGC on, F1.6, shutter 1/60th).
 - 2.15. The camera shall provide selectable manual (via keypad controller) or automatic (via user-defined programmable parameters) switching between colour and black and white.
 - 2.16. The camera shall provide automatic switching between colour and black and white via the light-level sensor or AGC.
 - 2.17. The camera shall provide a light-level sensor with 9 levels that automatically removes the IR cut filter during low-light conditions, based on user-defined programmable parameters.
 - 2.18. The camera Shall be able to remove the IR cut filter Via AGC
 - 2.19. The camera shall provide a composite video output of 1.0 Volt p-p.

3. The motorised lens shall meet or exceed the following design and performance specifications:
 - 3.1. The PAL colour/monochrome lens shall be a 25X optical zoom, 2.4 mm to 60 mm, F1.6 to F2.
 - 3.2. The lens shall feature an additional 12X programmable electronic zoom for a total of at least 300X with minimum digital distortion.
 - 3.3. The lens shall provide horizontal angle of view of 45° at 2.4 mm and 2° at 60 mm telephoto zoom.
 - 3.4. The lens focal length shall be Inf. -0.01 m (wide-angle) and -1.0 m (telephoto).
 - 3.5. The lens shall feature an automatic focus with manual override.
4. The pan/tilt drive unit and camera shall have the following additional specifications:
 - 4.1. Electrical.
 - 4.1.1. Input voltage: 24 VAC at 50 Hz for PAL.
 - 4.1.2. Input power: 16 VA.
 - 4.2. The control signal input shall be digital RS-485 at 9600/19200 baud or FSK.
 - 4.3. Shall be capable of control from the Vista Triplex™, VDC1604 and the NPX/KBD/J3De.
 - 4.4. Connections.
 - 4.4.1. The upper housing shall feature a quick disconnect for the pan/tilt unit.
 - 4.4.2. Power and control connections shall be made through a separate I/O interconnect interface.
 - 4.4.3. Video inputs shall be BNC connector.
 - 4.4.3.1. Input shall be PAL/CCIR compatible.
 - 4.5. Environmental.
 - 4.5.1. Operating temperature range: 0 to 40 °C (32 to 104 °F).
 - 4.5.2. Relative humidity: 90% non-condensing.

A & E SPECIFICATIONS

Vista PowerDome™ VPD-3WP-P

PowerDome With 18x Colour/Mono camera, 7" Pendant/Wall mount Housing.

The discreet pan/tilt/zoom (PTZ) dome receiver with a high-resolution, 1/4" integrated colour/mono camera shall be a VPD-3WP-P PowerDome series.

1. **The high-speed pan/tilt drive unit shall meet or exceed the following design and performance specifications:**
 - 1.1. Shall be microprocessor controlled with keypad-programmable non-volatile memory.
 - 1.2. Each pan/tilt drive unit shall operate as an independent unit with exclusive programming and setup data contained on each unit's non-volatile memory.
 - 1.3. Shall feature an integral receiver/driver with DIP switch selectable addressing.
 - 1.4. Shall provide a built-in menu system for on-screen set-up of camera functions.
 - 1.5. Shall be capable of 360° continuous pan rotation with a vertical unobstructed tilt of 0 to 90°.
 - 1.6. Shall pan under manual control from a creep speed of 0.5° to 120° per second.
 - 1.7. Shall operate under preset control at a pan speed of up to 400° per second and a tilt speed of 400° per second.
 - 1.8. Shall be capable of Privacy Zones, up to 24 Dynamic zones with up to 8 simultaneously.
 - 1.9. Shall be capable of up to 128 camera preset positions.
 - 1.10. Shall be capable of camera titles up to 20 characters.
 - 1.11. Shall be capable of HF lift & Gain amplification.
 - 1.12. Shall be capable of up to four individual preset tours consisting of 64 programmed presets each.
 - 1.12.1. Shall have three programmable speed settings for tours:
 - 1.12.1.1. Slow
 - 1.12.1.2. Medium
 - 1.12.1.3. Fast
 - 1.13. Shall be capable of three learn Tour's, one 3 minute or three 1 minute that stores up to three minutes of manual operation by an operator. Shall be a continuous memorized path, panning, tilting and zooming at any speed and pausing at selected targets along the way.
 - 1.14. Shall feature variable-speed, continuous-duty stepper motors capable of full operation from 20 to 28 VAC (24 VAC normal).
 - 1.14.1. Shall contain gold slip rings for trouble-free performance and high-quality connection for power, video and data transmission.
 - 1.14.2. Shall have proportional speed control.
 - 1.14.3. Shall require a maximum of 56 VA.
 - 1.14.4. Drive motors shall have no fewer than 19,200 micro steps per revolution to ensure smooth movement at maximum magnification.
 - 1.15. Pan and tilt accuracy shall be accurate to at least 0.01° on preset.
 - 1.16. Shall provide programmable limit stops for automatic scanning.
 - 1.17. Shall provide a quick-spin feature (may be disabled during programming) that automatically pans the camera 180° when the bottom tilt limit is reached to allow for continuous tracking of a target.

2. **The high-resolution camera shall be an integrated colour/mono camera, available in PAL video signal format, and shall meet or exceed the following design and performance specifications:**
 - 2.1. The camera horizontal scanning frequency shall be:
 - 2.1.1. 15.625 KHz, PAL
 - 2.2. The camera vertical scanning frequency shall be:
 - 2.2.1. 50 Hz, PAL
 - 2.3. The camera image sensor shall be a 1/4" solid-state interline CCD imager.
 - 2.4. The image sensor shall have a total pixel array of:
 - 2.4.1. 752(H) x 582(V) PAL/CCIR
 - 2.5. The camera shall have digital signal processing (DSP/III).
 - 2.6. The camera shall have automatic white balance.
 - 2.6.1. The camera shall also be capable of manual set-up for white balance via the menu system.
 - 2.7. The camera shall have automatic iris control and manual override.
 - 2.8. The camera shall provide backlight compensation while in automatic iris control mode.
 - 2.9. The camera shall provide electronic shutter speeds of:
 - 2.9.1. 1/3 to 1/10,000 per second, PAL.
 - 2.10. The camera shall have two methods of synchronisation:
 - 2.10.1. Line lock with remote adjustment
 - 2.10.2. Internal oscillator
 - 2.11. The camera shall provide a horizontal resolution of:
 - 2.11.1. 460 TV lines, PAL
 - 2.12. The camera shall provide a signal-to-noise ratio of greater than 50 dB.
 - 2.13. The camera shall have the following sensitivity specifications:
 - 2.13.1. 0.7 lux colour @ 0.02 Vp-p (AGC on, F1.4, shutter 1/60th)
 - 2.14. The camera shall provide selectable manual (via keypad controller) or automatic (via user-defined programmable parameters) switching between colour and black and white.
 - 2.15. The camera shall provide automatic switching between colour and black and white via the light-level sensor or AGC.
 - 2.16. The camera shall provide a light-level sensor with 9 levels that automatically removes the IR cut filter during low-light conditions, based on user-defined programmable parameters.
 - 2.17. The Camera Shall be able to remove the IR cut filter Via AGC.
 - 2.18. The camera shall provide a composite video output of 1.0 Vp-p.
3. **The motorised lens shall meet or exceed the following design and performance specifications:**
 - 3.1. The lens shall feature an additional 12X programmable electronic zoom for a total of at least 216X with minimum digital distortion.
 - 3.2. The lens shall provide horizontal angle of view of 48° at 4.1 mm and 2.7° at 73.8 mm telephoto zoom.
 - 3.3. The lens shall feature an automatic focus with manual override.

4. The camera and pan/tilt unit shall be housed in a 7-inch wall-mount/pendant housing.
 - 4.1. The wall-mount housing shall meet or exceed the following design and performance specifications:
 - 4.1.1. The housing shall include a wall-mount bracket.
 - 4.1.1.1. The bracket shall have a Ral7035 finish.
 - 4.1.2. The upper housing shall be constructed of 0.125" ABS plastic.
 - 4.1.3. The upper housing shall be designed to thread onto the end of 1.25" NPT pipe for suspension from a ceiling or to attach to mounting accessories for other applications.
 - 4.1.4. The upper housing shall be 9.02" in diameter at its widest point.
 - 4.1.5. The lower dome shall be a maximum of 7.19" in diameter.
 - 4.1.6. The lower dome shall be made of 0.06" acrylic material, optically clear with no distortion in any portion of the dome.
 - 4.1.7. The lower dome shall be available in the following:
 - 4.1.7.1. Clear (no light loss)
 - 4.1.7.2. Smoked (approximately 1/2 f-stop light loss)
 - 4.2. The lower dome shall attach to the upper housing with 3 screws and feature a safety cable connecting the dome to the housing.
5. The pan/tilt drive unit and camera shall have the following additional specifications:
 - 5.1. Electrical
 - 5.1.1. Input voltage: 24 VAC at 50 Hz for PAL
 - 5.1.2. Input power: 56 VA
 - 5.2. The control signal input shall be digital RS-485 or FSK
 - 5.3. Connections
 - 5.3.1. The upper housing shall feature a quick disconnect for the pan/tilt unit.
 - 5.3.2. Power and control connections shall be made through a separate I/O interconnect interface.
 - 5.3.3. Video inputs shall be BNC connector.
 - 5.3.3.1. Input shall be PAL/CCIR compatible.

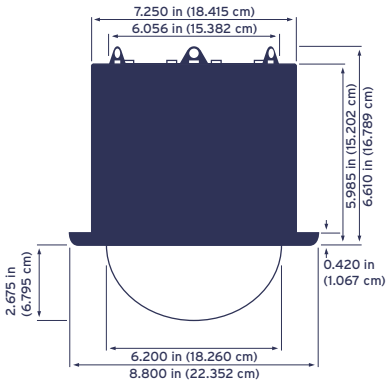
SUGGESTED DEMONSTRATION NOTES

- Show ease of yoke install
- Ease of menu access
- Ease of navigation window
- Take customer through all menu's, showing simplistic programming of:
 - Presets
 - Tours - Different dwells, speeds and freeze
 - Learn tours
 - Privacy - Multiple areas on screen
- Come out of menus and demonstrate all facilities programmed
- Advise on ease of integration with both FSK (coaxial) & RS485 within the PowerDome head
- Full integration with VDC1604 and Triplex™ with NPX/KBD/J3De
- Talk through schematic diagrams

MEASUREMENTS

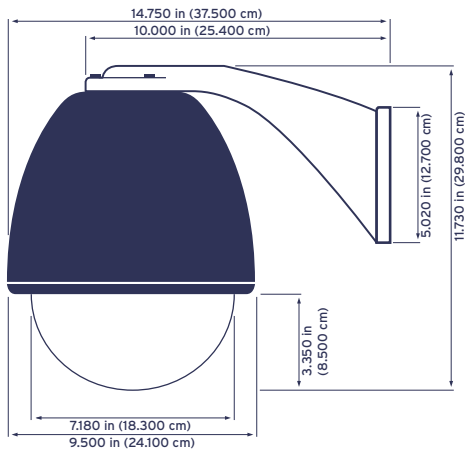
6" Flush Ceiling Mount

Designed for indoor use. Vista 6" inch Flush Mount housing is ideal for situations where space is limited. Its low, 6.2-inch clearance requirements make it easy to install in almost any ceiling.



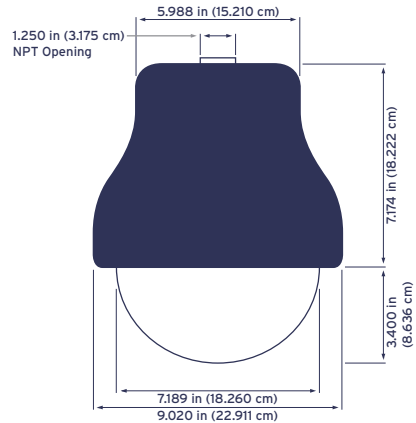
7" Wall Mount Vandal Resistant

Enabling PowerDome to be installed in harsh environments or where the unit may be prone to attack.

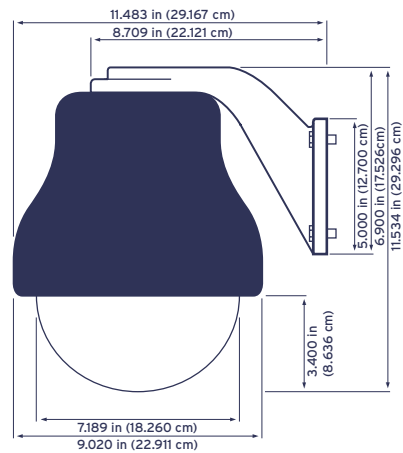


7" Pendant/Wall Mount

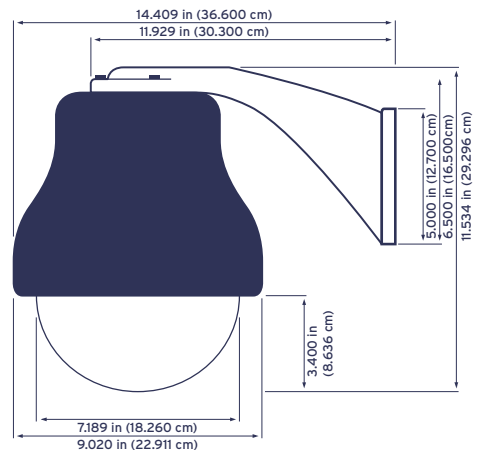
Enabling PowerDome to be mounted from a ceiling or pole the pendant/wall mount version come with internal and external wall mount bracket options.



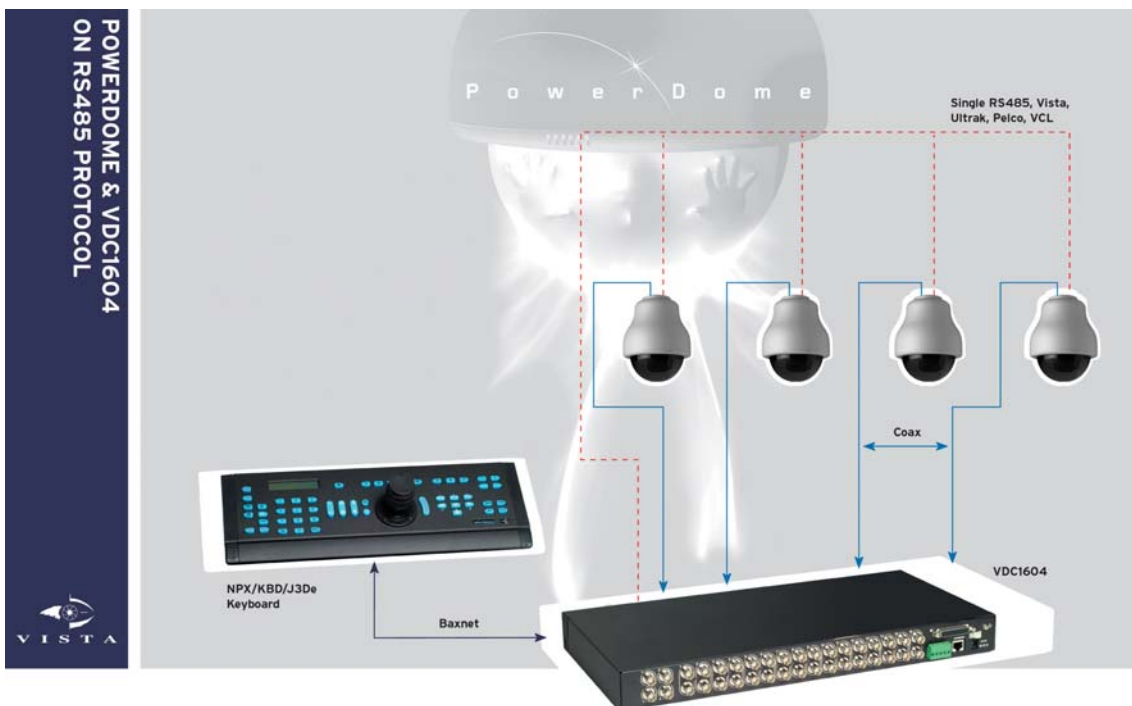
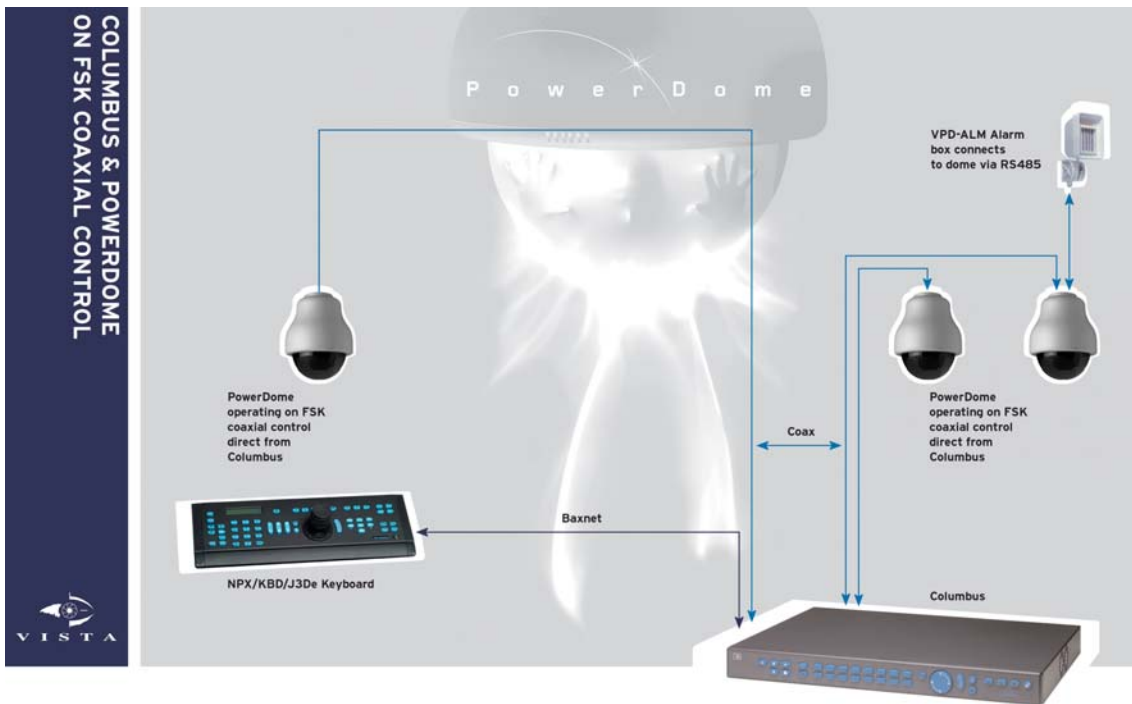
Internal Version



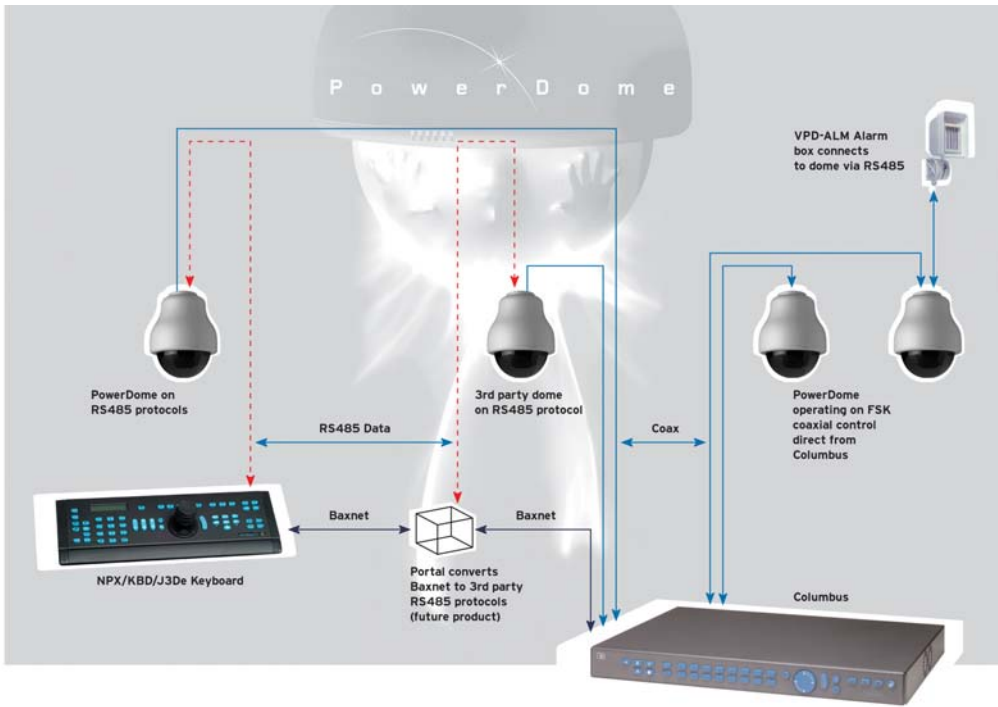
External Version



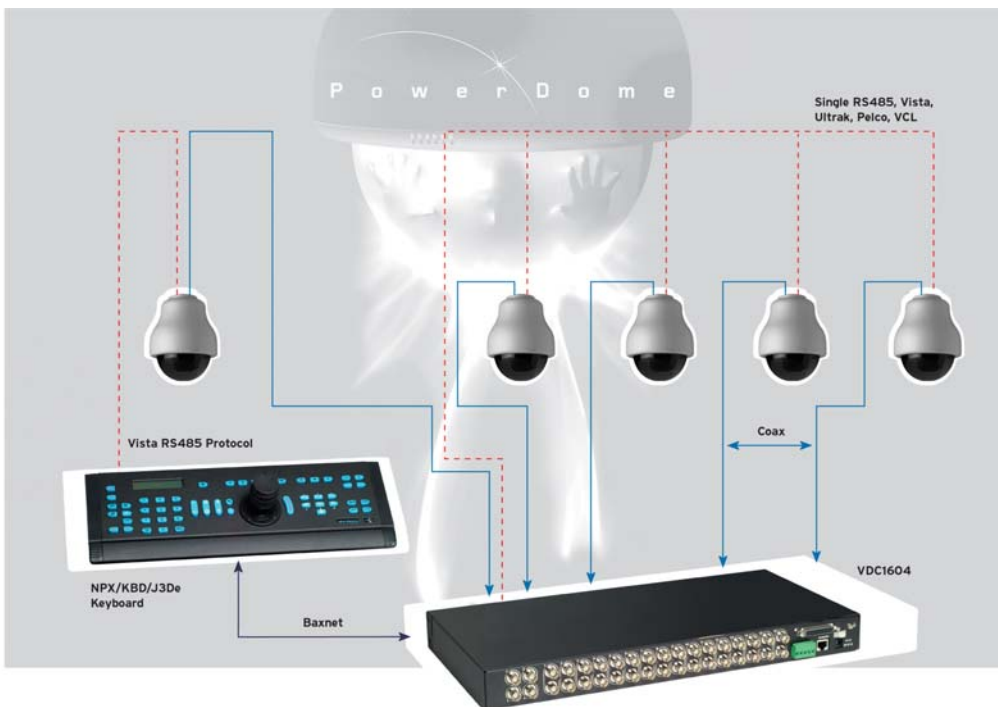
WIRING DIAGRAMS



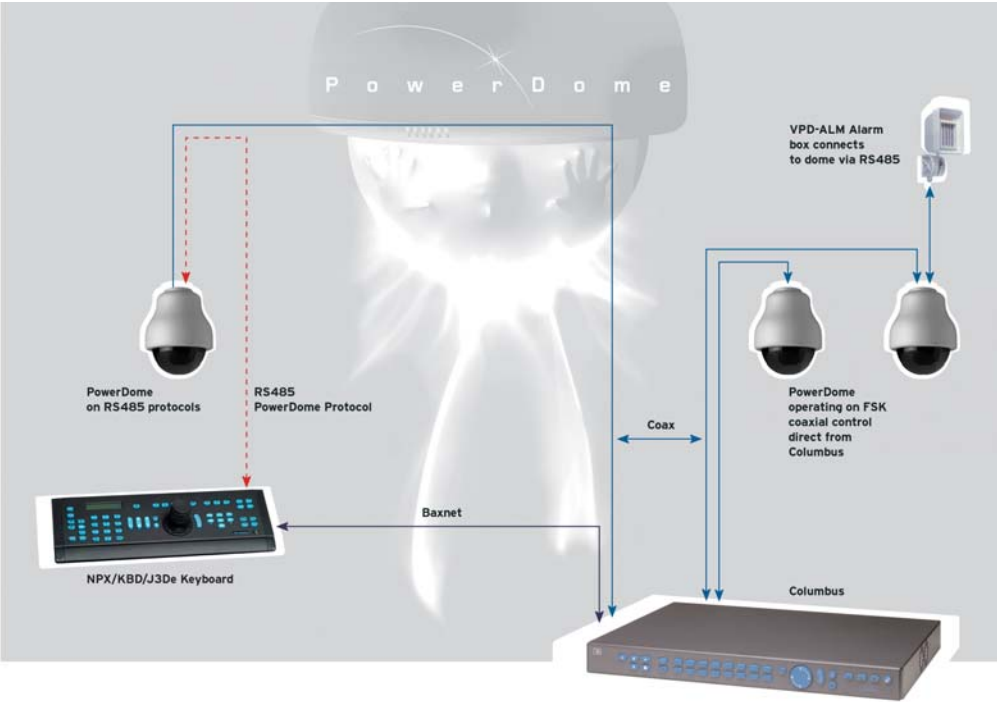
POWERDOME ON RS485 & COAXIAL CONTROL PLUS 3RD PARTY PROTOCOL WITH COLUMBUS



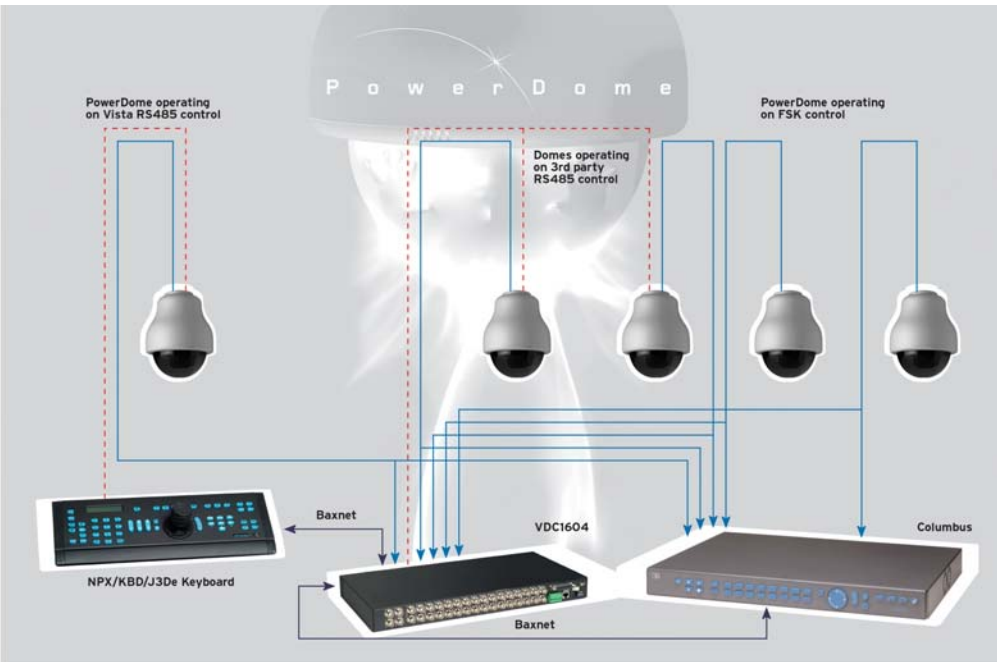
POWERDOME & 3RD PARTY DOME WITH VDC1604 ON RS485 PROTOCOL



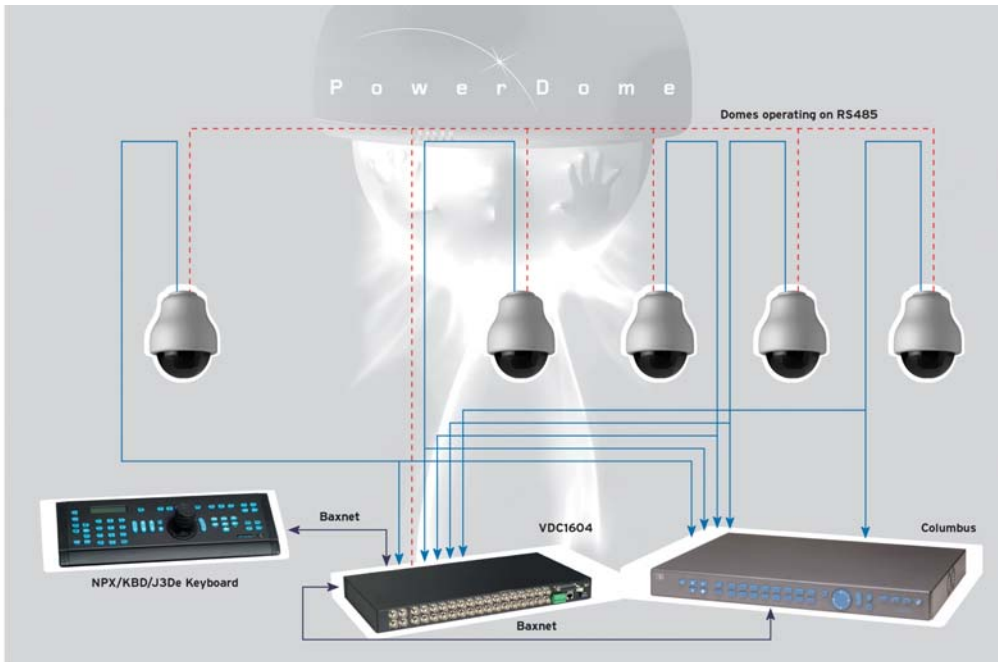
POWERDOME ON FSK COAXIAL & RS485 PROTOCOLS WITH COLUMBUS



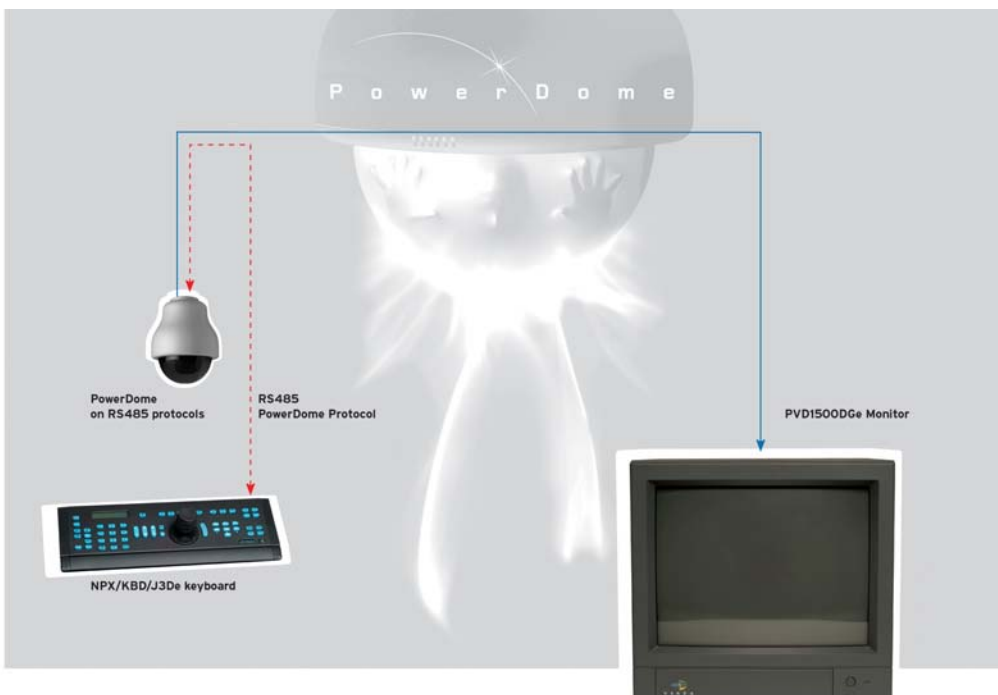
POWERDOME ON RS485 & FSK COAXIAL CONTROL PLUS 3RD PARTY DOMES ON RS485 CONTROL WITH VDC1604 & COLUMBUS



POWERDOME ON RS485 PROTOCOL WITH VDC1604 & COLUMBUS



POWERDOME ON DIRECT CONTROL FROM KEYBOARD



RELEASE THE POWER



V I S T A

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