



## SD Advanced HD Analogue Capable Hybrid DVR

A powerful hybrid DVR/NVR, the enhanced SD Advanced offers top of the line performance with easy of installation. Combining all the benefits of a DVR with the feature set of a high performance embedded NVR, it offers multiple channels of IP, Analogue and now 720p HD Analogue video, HDMI main monitor support and Digital Spot, on-board analytics and EPOS integration.

The enhanced SD Advanced offers flexibility and choice to suit challenging security applications, with its intuitive user interface and self configuring IP capabilities, it's out of the box ready eases demands on installers and operators.



### Features/Benefits

32 inputs in a combination of analogue, IP or HD Analogue

Achieve playback, recording & live viewing simultaneously

Up to 12TB of local storage, expandable using esata ports

Remote Codec capable - Camera encodes the image

Text support - capture, text and embed till, ATM or Analytics data with the video. (EpoS)

**TransCoding** - High quality recording and simultaneous Video transmission using MPEG4 or JPEG for playback

Per camera polymorphic streams change resolution, bit rate and compression mid stream.

Up The Coax (UTC) menu control

#### Low Cost, Simple Installation

HD Analogue is as simple to install as standard analogue CCTV, with no networking or licensing requirements. Existing cabling can be utilised.

#### Longer Transmission

Transmit HD video up to 500m over standard coaxial cable without signal boost and five times the distance of IP systems run on standard network cabling.

#### Transition Friendly

There is a choice of HD Analogue, IP or both. Enhanced SD Advanced supports up to 32 IP cameras and 16 3rd party IP cameras (with additional licences).

#### Cost-Effective

HD Analogue technology is competitively priced vs. less-powerful traditional Analogue, while being a fraction of the cost of a comparable megapixel IP solution.

## Benefits Overview

### **Powerful Hybrid DVR/NVR**

The SD Advanced is a true hybrid DVR/NVR. Offering up to 32 camera connections in a combination of analogue or IP (including 3rd party IP cameras). Models in the series offer 8 or 16 HD Analogue camera connections, with the balance of the 32 camera connections being made up by IP camera streams.

### **MultiMode Recording And Streaming**

Allows an event trigger from VMD, analytics and alarms to effect an instantaneous change in bit rate and resolution. Full HD streams are generated when needed, e.g. for identification purposes, otherwise a standard definition stream saves up to 50% storage capacity.

### **Closed IPTV**

Dual IP camera addressing, ensuring segregation between the users' corporate network and IP cameras, reducing hacking risk. Firewalls automatically created in IP camera and/or server for enhanced network security purposes. Endpoint to endpoint isolation through port to port lock down feature on closed IP switch, preventing one camera being used as a host to attack other cameras to gain entry to network (Closed IP switch sold separately).

### **TransCode Streaming**

TransCode streaming allows multiple remote viewers to playback high quality recorded images at a streaming rate and compression format they require without affecting or degrading the original recording. Also, activity detection can switch the selected camera from normal profile to alarm record profile.

### **Up The Coax (UTC) OSD Menu Control**

Control of camera on screen menu including brightness, contrast, day/night changes and general camera configuration from the unit saving time with camera adjustments at the camera head.

### **IP Streaming & Recording**

The DVR is capable of the seamless recording & display of IP video streams from IP Cameras, IP domes, encoders and other NetVu Connected Video Servers offering the ability to view and record IP Sources, irrespective of the devices' location. Connection of up to 16 3rd party IP cameras will incur a nominal license charge – Licenses for NetVu Connected cameras are free.

### **Analytics Capable**

*Analytics Capable* products can be upgraded to run a range of Dedicated Micros analytics components including; ANPR, Object Left/Removed, Detection Tripwire and Counting Tripwire. Only a software licence upgrade is required to deploy analytics. Please contact our Customer Services team for more information.

### **Remote Configuration Of Cameras**

With complete integration between the Oracle Dome, Infiniti/SmartVu cameras and the unit, users are able to configure the devices directly from the DVR. Removing the need for unnecessary site visits.

### **PowerScript**

Extends the functionality of NetVu connected products by allowing installers, system integrators and users to develop powerful bespoke applications. Using the interpreted C programming language *PowerScript* supports new levels of integration between the DVR or Video Server and building management systems or other security solutions.

### **Desktop or Rack mountable**

The units can operate as standalone DVR/NVR as a desktop unit or can be rack mounted using a dedicated fixing kit available with every unit



## Hybrid HD Analogue & IP DVR/NVR Connectivity Technical Specification

### **CAMERAS**

8/16 Analogue or HD Analogue input models. Auto detection on power up.

Alarm on Camera Fail. 32 IP camera streams supported on all models of which 8/16 can be analogue (model dependant) with the remainder being made up of IPstreams\* / \*\*\*.

### **RECORD RATES**

#### **720p Analogue**

High: 720p 1/2RT  
Medium W576p 1/2RT  
Low: W228p 1/2RT  
Very Low: W144 1/4 RT

#### **720p IP**

High: 720p RT  
Medium W576p 1/2RT  
Low: W228p 1/2RT  
Very Low: W144 1/4 RT

#### **1080p IP**

High: 1080p 1/2RT  
Medium W576p 1/2RT  
Low: W228p 1/2RT  
Very Low: W144 1/4 RT

#### **Standard Resolution**

High: 4CIF RT  
Medium 2CIF RT  
Low: CIF RT  
Very Low: QCIF RT

### **ALARMS AND RELAYS**

20 normally open/closed tamper proof alarm inputs. One global keyswitch can be assigned to operate from any of these inputs and is configurable with entry/exit route timers. 2 relay outputs are configurable to trigger in response to events.

### **TELEMETRY**

Built-in RS485/Twisted pair and Coax protocols including but not limited to the following: Dedicated Micros 2040, 2060, Oracle, Pelco P/D/C, Honeywell/VCL Orbiter & Jupiter MicrospheresTM, GE CyberDomeTM, BBV RS485 StarCard, Bosch/Philips G3, American Dynamics, Panasonic. Also supports Point&Go and Absolute Positioning when connected to an Oracle Dome over RS485

### **LOCAL CONTROL**

Front panel keypad, the supplied IR remote, USB mouse or USB QWERTY Keyboard.

### **RECODING**

Demonstrating the power of the NetVu Connected architecture, the SD Advanced includes powerful Recoding capabilities that can decode, in real-time up to 16 supported 3rd party IP camera streams and re-compress to an alternative format/resolution/pps/data rate configuration. This enables functions such as MultiMode, Analytics, Activity Detection, VMD and switching on alarm to be performed on any connected IP stream and introduces the ability to provide multiple streams from the same IP camera via the DVR.

### **REAL TIME OPERATING SYSTEM**

All NetVu connected devices use an embedded Real Time Operating System (RTOS), being more efficient as designed for the purpose of video processing. DM achieves a greater number of video profiles than competitors. It is also more secure, as common attacks and viruses won't affect the RTOS. The RTOS isn't subject to inconvenient "Windows updates" suffered by other windows server based systems.

### **STORAGE**

Up to 12TB of on-board storage, additional storage available via  
2 x eSATA ports

### **MONITOR VIEWING**

Main Monitor: Composite or HDMI Output  
Spot monitor: 1x Composite Output or HDMI

### **REMOTE VIEWER**

Integrated into the configuration web pages, the remote viewing client reflects the local on-screen user interface.

### **REMOTE CAMERA CONFIGURATION**

Configure Oracle Domes, Infiniti cameras, CamVu and SmartVu devices through the units configuration pages

### **VIDEO MOTION DETECTION**

Programmable VMD grid with individually definable zones per camera. User definable sensitivity for each zone and pre and post activity recording, definable by user.

### **COMPRESSION**

JPEG or MPEG-4 format files.

## ALARM ZONES

Alarm zones combine multiple alarm inputs to generate alarm events. This can help to minimise false triggers. e.g. you can set an alarm to be triggered by a combination of a PIR and Camera VMD to remove miss-triggers from either Source.

## AUDIO

Line in: 1 x 1V pk-pk, 3.5mm jack  
Line out: 1 x 1V pk-pk, 3.5mm jack  
Local and network audio record and playback

## EVENT COPYING

External DVD writer via high power USB port.  
Event Copying or Selective Archiving of video.

## ACTIVITY DETECTION

Activity detection will switch the selected camera from normal record profile to alarm record profile on events such as video motion detection.

## TEXT SUPPORT

The unit can search captured transaction data for specific goods purchased, transaction numbers, credit card references, keywords etc. and jump straight to the associated video sequence.

## DATA PORTS

Serial Ports: Two serial ports via 9 way D-Type stacked one Modem port, the other multi-protocol RS232, RS485 and RS422.  
Ethernet: 3x Ethernet RJ-45 10/100/1000 Ethernet connection.  
USB: 3 x USB 2.0 Connector (1 x high power front, 2 x rear)  
eSATA: 2 x eSATA ports  
IR Remote: 1x IR sensor at front of unit, IR Jack at rear

## NETWORK PROTOCOLS

DCCP, DHCP, HTTP, HTTPS, IPv4, SMTP, Bonjour, ICMP, DNS, NTP, TCP, UPP, UDP, ICMP, DHCP, ARP, RTP, Telnet, FTP, AoE, SNMP, ZeroConf.

## WEIGHTS & MEASURES

Dimensions: 89mm (H) x 440mm (W) x 445mm (D)  
Weight: 11.4 kg (25.1 lbs) with built-in PSU

## POWER SUPPLY

250W Internal Power Supply

## TEMPERATURE RANGE

Relative humidity: 10% - 85% Non-condensing

## WARRANTY

1 years warranty plus additional 2 years upon registration

## Ordering Information

Part Number	Description
DM/SDACP08/6T+	SD Advanced HD Analogue Hybrid Closed IP 8Ch 6TB
DM/SDACP16/6T+	SD Advanced HD Analogue Hybrid Closed IP 16Ch 6TB
DM/SDACP16/12T+	SD Advanced HD Analogue Hybrid Closed IP 16Ch 12TB
DM/KBC2/USB	Joystick Keyboard for SD Advanced

## HD Analogue/IP Camera Information

Part Number	Description
<b>SmartVu IP Auto</b>	
DM/SV720SB/FR	SmartVu Small Bullet 720 30m IR AF
DM/SV1080SB/FR	SmartVu Small Bullet 1080 30m IR AF
DM/SV3000SB/FRW	SmartVu Small Bullet 3MP WDR 30m IR AF
DM/SV720MB/FR	SmartVu Medium Bullet 720 50m IR AF
DM/SV1080MB/FR	SmartVu Medium Bullet 1080 50m IR AF
DM/SV3000MB/FRW	SmartVu Medium Bullet 3MP WDR 50m IR AF
DM/SV720LB/FR	SmartVu Large Bullet 720 120m IR AF
DM/SV1080LB/FR	SmartVu Large Bullet 1080 120m IR AF
DM/SV3000LB/FRW	SmartVu Large Bullet 3MP WDR 120m IR AF
DM/SV720VD/FR	SmartVu Vandal Dome 720 25m IR AF
DM/SV1080VD/FR	SmartVu Vandal Dome 1080 25m IR AF
DM/SV3000VD/FRW	SmartVu Vandal Dome 3MP WDR 25m IR AF
DM/SV720BX	SmartVu Box Camera 720, No Lens
DM/SV1080BX	SmartVu Box Camera 1080, No Lens
DM/SV3000BX	SmartVu Box Camera 3MP, No Lens
DM/SV720MVR	SmartVu 720 Mini Vandal Dome (with IR)
DM/SV1080MVR	SmartVu 1080 Mini Vandal Dome (with IR)
DM/SV1080PTZ22	SmartVu 1080 PTZ (IR)
<b>Ice2 HD Analogue</b>	
DM/ICE2720MW/R	Ice2 720 HD Analogue Mini Wedge 10m IR
DM/ICE2720MD/R	Ice2 720 HD Analogue Mini Dome 10m IR
DM/ICE2720SB/R	Ice2 720 HD Analogue Small Bullet 30m IR
DM/ICE2720MB/R	Ice2 HD Analogue Medium Bullet 50m IR
DM/ICE2720BOX	Ice2 720 HD Analogue Box Camera

\* Above the stated 'analogue' camera connections per model (8/16/32). Connected IP cameras must be NetVu Connected utilising Remote Codec.

\*\* See website for full performance parameters. To fully realise the benefits of the SD Advanced please ensure it is operating the latest software release. Available from the Dedicated Micros website.

\*\*\* 8 channel SD Advanced will support up to 32 IP cameras, albeit with a performance limitation with regard to the display of real time images. 16 channel SD Advanced supports 32 IP cameras without a limitation to the display.



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