DV-IP

Network Video Server

data sheet

features

- 4, 6, 10 OR 16 CAMERA INPUTS
- BUILT-IN WEB SERVER
- TRANSMISSION OVER ETHERNET, DSL, CABLE, ISDN AND PSTN*
- INDEPENDENTLY DEFINABLE RESOLUTION & COMPRESSION - UP TO 768 X 576 PIXELS – FOR BOTH RECORDING AND VIEWING
- HYBRID SYSTEM - WILL NOT STOP RECORDING EVEN IN EVENT OF NETWORK FAILURE
- SIMULTANEOUS RECORD, PLAYBACK, BACKGROUND IMAGE ARCHIVING, MULTIPLE USER NETWORK VIEWING
- CONTROL VIA STANDARD WEB BROWSER OR USING FREE DV-IP VIEWER SOFTWARE
- 16 INTERNAL ALARM INPUTS, 4 INTERNAL RELAY OUTPUTS
- CONNECT ON ALARM OVER PSTN, ISDN, ETHERNET, DSL, CABLE*
- MAXIMUM RECORD RATE OF UP TO 60 PICTURES PER SECOND (NTSC), 50PPS (PAL)
- FULL DUPLEX AUDIO WITH RECORDING
- AUTOMATIC IP ADDRESS DESIGNATION WITH DHCP
- VIDEO MOTION DETECTION WITH UP TO 16 ZONES DEFINABLE PER CAMERA
- BANDWIDTH RESTRICTION FOR ETHERNET/DIAL-UP NETWORKS
- ON-SCREEN TELEMETRY CONTROL
- 24/7 SCHEDULING, 10 HOLIDAY PROFILES

*Via suitable media interface – e.g. DSL router

Network Video Server

The DV-IP range features 4, 6, 10 and 16 input high performance TCP video servers capable of recording up to 60pps NTSC or 50pps PAL. DV-IP is based around an embedded real-time operating system, this provides a reliable and cost-effective way of digitising, recording and distributing high quality video across a network or internet to a viewer's PC.

NETWORK CONTROL

Control of DV-IP is achieved over Ethernet either by proprietary software or via a typical web browser interface. Pre-loaded webpages allow for setup, configuration, image archiving, live viewing, telemetry and playback.

Control of the DV-IP using a standard web browser

For ease of configuration DV-IP will interface with a DHCP (Dynamic Host Configuration Protocol) server to automatically assign an IP address and other relevant IP settings. DV-IP also supports manual IP address assignment. 'Bandwidth Restriction' ensures image transmission only uses allocated bandwidth.

RECORDING

Simultaneous recording and playback from any camera continues uninterrupted whilst other images are being viewed live. The DV-IP also allows for the resolution of viewed images to be dynamically altered maximising live viewing performance over the available bandwidth. The new DuoView™ screen allows live and replay footage to be viewed and compared at the same time without interrupting recording.

CONFIGURATION

The unit can be configured to record either continuously, on event, or on VMD (Video Motion Detection).

Coupled with pre and post alarm capabilities and automatic dial-out on alarm, an incident need never be missed again.

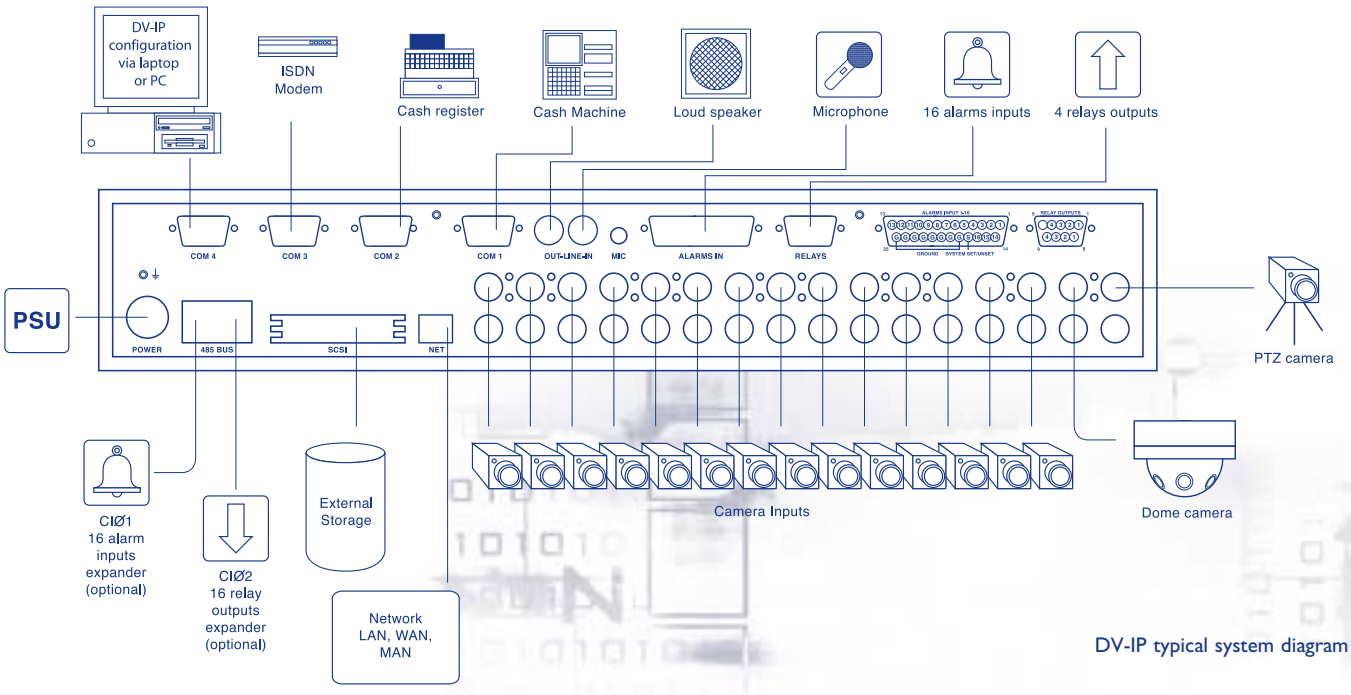
ALARMS

16 alarm inputs allow for the integration of PIR, panic buttons and door contacts etc into the CCTV system. 4 light duty relay outputs are also provided offering further flexibility in executing remote tasks such as remotely switching on lights, opening doors and barriers. Relay outputs can also be configured as part of an alarm response and executed the split second the alarm is tripped. Unlocking DV-IP Viewer provides ARC functionality where notification of alarms can be over Ethernet, PSTN or ISDN. DV-IP supports a total of 32 alarm inputs when using a CIO1 Remote Alarm module and allows a maximum of 36 relay outputs via CIO2 Relay Output Modules.

TELEMETRY

On screen telemetry control is supported over coax offering support for Dennard, BBV, or Pelco cameras and domes.

DV-IP can be configured to emulate a remote keyboard offering control of third party matrix connected telemetry cameras. Supported matrices include Ademco VCL, American Dynamics 168, and BBV TX 1000/1500.



DV-IP typical system diagram

Specification

NETWORK CAPABILITIES

- IP, TCP, UDP, DHCP, FTP, Telnet, ICMP, HTTP, ARP network protocols supported
- Ethernet connection allows control, configuration and image viewing via a networked PC using DV-IP Viewer Software or via web browser
- Multi-user access, simultaneously
- Ethernet based image transmission over LAN, WAN, MAN, DSL, Cable, ISDN and PSTN and other network compatible interfaces
- Simultaneously supports PSTN, ISDN or Ethernet outgoing connections on alarm, and Ethernet, ISDN or PSTN dial-in
- DV-IP allows user definable 'Bandwidth Restriction' ensuring image transmission only uses allocated bandwidth - bandwidth usage definable from 8Kb/s to 8Mb/s
- FTP, Telnet, Console Port & HTTP Password Protection
- Remote network support - system changes can be made remotely without need for a site visit

SCHEDULING

- 7 day schedule
- 10 definable holiday schedules

CAMERAS

- 4, 6, 10 or 16 camera models available
- Loop through BNC connectors provided for each camera input
- 75Ω camera termination provided in software
- Global camera fail relay

TELEMETRY

- On screen joypad control of PTZ cameras and domes
- Push button control of Focus, Zoom, Lights, Washers
- Presets defined and activated on-screen
- Patrol function
- Proportional variable speed telemetry control

VIDEO MOTION DETECTION (VMD)

- 80x64 pixel VMD detection resolution
- Programmable VMD grid with 16 individually definable zones per camera
- 3 different modes: Static, Last Trigger, Normal
- User-definable sensitivity
- Pre and post activity recording, definable by user
- Change camera recording rates on activity
- Notify user of activity over Ethernet, ISDN and PSTN
- Stores all VMD instances in events database
- VMD images can be protected on HDD
- Global VMD relay
- Linkable to alarm zone

ALARMS

- 16 voltage free normally open/closed alarm contacts onboard + 1 global set/unset (key switch)
- Expandable to 32 alarms with CIØ1 Remote Alarm Module
- Each input can be defined as normally open or normally closed
- Alarms can be assigned to individual contacts, or grouped into zones
- Change recording rate on alarm
- Pre and post alarm recording definable by user
- Notify user on alarm over Ethernet, ISDN and PSTN
- Stores all alarm activity in events database
- Alarms can automatically trigger cameras and relays
- IP alarm transmission to a PC over Ethernet, ISDN, PSTN
- Auto archive and transfer of images via FTP (File Transfer Protocol) to a network based server using on board scheduler
- Boolean logic applied to alarm inputs increasing false trigger rejection

RELAYS

- 4 onboard light duty relay output (500mA @ 12V-48V Max)
  Default settings:
  Relay1 – Global alarm
  Relay2 – Global VMD
  Relay3 – Global camera fail
  Relay4 – User definable
- Expandable to 36 relays with CIO2 Relay Output Modules
  Optional:
  – Module 1 controlled by alarms/VMD on the DV-IP
  – Module 2 controlled via a PC using the DV-IP Viewer software

AUDIO

- Full duplex bi-directional audio with recording
- Mic in -3.5mm jack socket (requires an electret/condensor microphone with a sensitivity of –50dBV or better)
- Line in – 47KΩ input impedance 1 x 1v pk-pk RCA phono
- Line out – into 47KΩ at 1v pk-pk via RCA phono
- Record incoming and/or outgoing audio
- Audio Format -8bit ADPCM transmitted using RTP
- Sampled at 8kHz

SEARCH AND PLAYBACK

- Instantly jump to any point in time recorded to hard disk
- Events database for easy location of event footage
- Playback controlled through video-style keys
- Multi-speed rewind and fast forward - from $^1/_4$ of normal speed to 1000 x normal
- Live button returns to live view instantly
- Unique DuoView™ screen allows live and and replay screens to be viewed together and compared together

RECORDING

- Maximum record rate: 50pps PAL or 60pps NTSC
- Playback, and record simultaneously plus live viewing
- Archive of alarmed images to any storage device on the network via FTP
- Timed expiry – allows images to be automatically discarded after a selected number of days
- Loop recording – oldest video will be over written unless protected
- Individually selectable variable record rates per camera
- Globally selectable record rates per camera

Hard disk sizes are rapidly increasing in capacity. Please contact customer services, or check www.dedicatedmicros.com for the latest available disk size configurations.

The table below shows the disk size required for various image qualities, at the equivalent of 24 hour record speeds - 6 pictures per second (across all cameras).

	IMAGE QUALITY*		
	LOW	MEDIUM	HIGH
	14K	18K	25K
RECORD DURATION	DISK SIZE		
1 day	8GB	10GB	13GB
7 days	56GB	70GB	91GB
31 days	248GB	310GB	403GB
46 days	368GB	460GB	598GB

* 6PPS (24hr mode) used for as benchmark for above calculations. Sizes are regardless of cameras connected.

UTILITY SOFTWARE

- Watermark Authenticator
- DV-IP Viewer
- Site Database Editor
- VCR Playback
- Backup and Restore Utility

REMOTE DIAGNOSTICS

For security and diagnostics purposes the DVIP provides a range of remote logs that record all user-accesses onto the DVIP.
Logs include:

- FTP connections
- Network connections
- PPP activity
- Security
- System start up logs

DIGITAL SIGNATURE

- Video partitions can be watermarked via the watermark menu, adding a digital signature so that undetected tampering with a single image, or series of images, is impossible.
- Watermarking certificate details time and date of watermarking, footage watermarked, watermark index and author

COLOUR RESOLUTION

- Sampling rate: 13.5 MHz to CCIR 601
- Number of pixels:
  PAL 640 x 256, 640 x 576, 720 x 256, 768 x 288, 768 x 576
  NTSC 640 x 240, 640 x 480, 720 x 240, 720 x 480
- 16.8 million colours 256 levels of grey, 8-bit luma.

COMPRESSION

- JPEG compression
- User definable image file sizes from 5 to 35KB

DATA

- 4 x RS232 serial ports – modes of operation: PPP, telemetry, ASCII text, debug, console
- 1 x SCSI 2 narrow for RAID storage
- 1x Ethernet 10-baseT, RJ45 twisted pair
- 2 x 485 Bus MMJ connectors for RS485 peripheral devices

TEMPERATURE RANGE

Operating temperature 5 – 45°C (41 - 113°F)

RELATIVE HUMIDITY

5% - 85% non-condensing.

DIMENSIONS

65mm(H) x 440mm(W) x 410mm(D)
2 5/8" (H) x 17 5/16" (W) x 16 1/8" (D)

WEIGHT

6.8kg (15lbs) without PSU
8kg (17.6lbs) with PSU

POWER SUPPLY

Input voltage	100-230V AC 50/60Hz
Output voltage	5, +12, -12 V DC

COLOUR

Silver – Pantone 877

Ordering Information

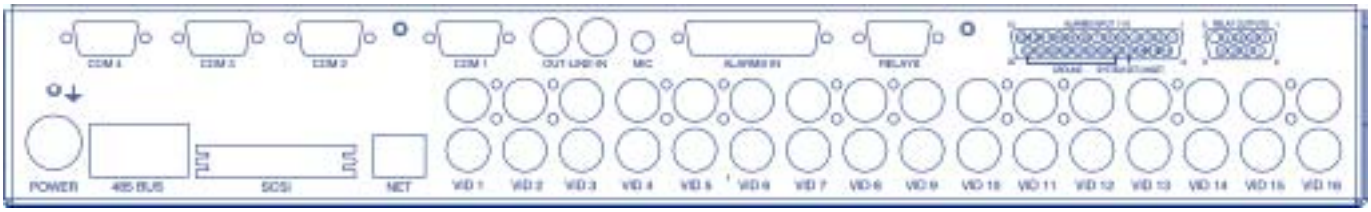
Description	Short code
4 Camera, 25pps	DV-IP4S
4 Camera, 50pps	DV-IP4
6 Camera, 25pps	DV-IP6S
6 Camera, 50pps	DV-IP6
10 Camera, 50pps	DV-IP10
16 Camera, 50pps	DV-IP16
Unlock code for ARC features	DV-IP-ARC

Associated products

Remote Alarm Module	CIO1
Relay Output Module	CIO2

A choice of hard disk options is available, ranging from 40GB to 600GB (at the time of press). Please note drive sizes may vary from time to time which may result in a larger drive capacity than stated being supplied with the unit.

Please contact Customer Services in your region or check the website at www.dedciatedmicros.com



Schematic diagram of the back of a 16 camera model

FOR FURTHER INFORMATION PLEASE CONTACT
www.dedicatedmicros.com

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