BX2

16 CAMERA, HIGH PERFORMANCE DIGITAL VIDEO RECORDER

The new generation, high-performance BX2 contains "NetVu Connected" technology and simultaneous MPEG-4 and JPEG transmission and recording to provide advanced networking functionality. On-site operations have been enhanced with features such as DVD archiving and DuoVu, whilst new remote functionality including Remote Alarm Reporting (including dial-out on alarm) and an alternative signaling path mean that you can find out about a situation in time to control it.

In yet another industry first for Dedicated Micros the BX2 can dynamically-switch between camera resolution, record-rate & compression settings using **Multi***Mode* Recording. All of these features come in one easy-to-use box.

The BX2 unit contains 4 hard-drives providing up to 2TB of continuous digital recording.

All recordings are accessible to the user at the touch of one button or via powerful GOTO and event preview facilities. Images can be copied to the internal DVD-R for play back on a PC.

As part of the expanding NetVu Connected family the BX2 provides an ideal platform for digital system integration. Compatibility with other NetVu connected products, such as the DS2, DV-IP Server and NetVu Console gives the user flexible local and remote control. This is further enhanced by integration with NetVu ObserVer 1.6x and its Remote Video Receiving Centre .

FEATURES

- › **Audio recording**
- › **21 tamper proof alarm inputs**
- › **6 internal relay outputs**
- › **Designed for BS-8418 compliance**
- › **Maximum record rate of up to 100pps (PAL), 120pps (NTSC)**
- › **Multiway DuoVu for live and recorded viewing simultaneously**
- › **Immediate access to any time/date via instant GOTO capability**
- › **Pre-alarm recording to capture evidence before alarms are triggered**
- › **Remote Alarm reporting using Ethernet or PPP modem link, email or SMS**
- › **IP connectivity and remote monitoring functionality**
- › **Simultaneous MPEG-4 and JPEG transmission & recording**
- › **Text Support – capture, record and search text data with relevant CCTV footage**
- › **Real-time alarms can be triggered on suspect transactions using keywords**
- › **Built-in internal DVD-R (DVD Writer)**
- › **Dial-out on alarm and alternative signalling path**
- › **Video motion search allows search back through recordings for movement in a specific area of the image**
- › **Web based configuration allows remote system adjustments negating the need for site visits**
- › **Multi***Mode* **Recording - Dynamically-switchable resolution, record-rate & compression (MPEG4/JPEG) per camera**
- › **Simultaneous record, playback, live viewing, archiving and multiple user network viewing with no loss of recording performance**

NetVu CONNECTED

MultiMode   DEDICATED MICROS   TransCoding

BX2

CAMERAS
16 camera models available. Auto detection on power up.
Loop through BNC connectors provided for each camera input.
Alarm on Camera Fail

HIDDEN CAMERAS
Option to view all or selected cameras, without affecting cameras
recording. Hidden cameras can be viewed via the network.

MONITOR VIEWING
Main monitor (S-Video & Composite):
Full screen, programmable sequence & alarm switching.
Programmable multi-screens: picture-in-picture, quad, 5+1, 4+3,
9 way, 8+2, 12+1,16 way x2 electronic zoom, freeze frame.
Spot monitor: (Composite)
Full screen, programmable sequence & alarm switching.

SEARCH AND PLAYBACK
• One button touch
• Frame advance/rewind, fast picture search and pause keys
• Event list, including event list filter with unique quadrant
  preview facility
• GOTO time and date
• Playback in full screen and muliti screen
• Simultaneous live and playback on screen

MULTIWAY DuoVu
BX2 has traditionally provided playback in full screen, picture in
picture and quad display modes. Now you can choose to playback
in any multiway display mode, right up to 16-way. For ultimate
flexibility you can now have any combination of live and recorded
segments on the multiway view, allowing you to review recorded
material, while keeping an eye to ongoing surveillance.

VIDEO MOTION SEARCH FACILITY
Allows the user to search through hard-disk recordings for
movement in a particular area of the image, set up on a 16x16
(PAL) cell grid (16x14 NTSC). The unit is then able to search back
through the hard drive and create a list of activities for the user to
view and archive as required. Searching can also be filtered to limit
the search to user-defined times and dates.

Multi*Mode* RECORDING
Multi*Mode* recording gives you the ability to set different record
rates, resolutions and compression algorithms across scheduled,
normal and alarm modes. Up to 24 **Multi***Mode* Recording profiles
can be set per unit, giving you the flexibility to adjust resolution
(QCIF to 4CIF), record rates and compression settings (MPEG-4/JPEG)
dynamically on individual cameras and across the whole unit.

RECORDING
Playback and record to hard disk simultaneously.
The unit provides the option to continuously archive video and
audio data to a FTP server
A choice of hard disk options are available. Please contact customer
services in your region or check the website at
www.dedicatedmicros.com for further information.
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.
Protected images:
The system can be configured to protect images from being
overwritten permanently or for a fixed period of time, when an
alarm is activated. The end user can also manually configure
sections of recorded images to be protected from overwrite, and
remove protection.

RECORD RATE
The BX2 can record at 100PPS (PAL), 120PPS (NTSC).

EXTERNAL RAID DEVICES
We recommend that only DM approved external RAID devices
should be used with the BX2 range.
Please contact Technical Support in your region for further
information on recommended devices.

FLASH DISK OPERATION
To ensure that surveillance and alarm reporting functions are
unaffected in the unlikely event of HDD failure, the BX2 has a built-
in Flash Disk containing all the essential program and configuration
data.

SCHEDULING
*Choice of day, night or weekend scheduling offers the ability
to automatically:*
• Select the cameras to be recorded
• Switch alarms and activity on/off
• Alter the record rate for standard, alarm and activity recording
Activation is via timer or alarm panel link to Alarm input

TIMED EXPIRY
• Timed expiry option allows images to be held for a selected
  number of days
• Images on the disk which are older than the number of days
  selected are not accessible

EVENT COPYING
Individual images, event sequences, audio and user defined recorded
sequences can be saved to the internal DVD-R drive of the BX2.
The DVD or CD images are digitally signed for authentication
purposes. Playback of images from the DVD or CD is via a standard
DVD-ROM drive (CD-ROM for CD-R media). The DVD/CD playback
software will auto-run and does not require the installation of
software on the users PC.

DIGITAL AUTHENTICATION
The use of a digital authentication process allows the user to detect
whether the image or series of images has been tampered with
since it was written to the storage media.

ALARMS
20 normally open/closed alarm inputs available via on board 25 way
D-type connection (expandable via up to 16 optional remote alarm
modules CIO1).
Up to a total of 8 contacts may be assigned to each camera input.
Multiple alarms can trigger one camera and/or 1 alarm can trigger
multiple cameras
Options:
• Up to 15 minutes of protected pre and post alarm recording per
  event
• Protect Alarm images from overwrite for a configurable period of
  time
• Main monitor display of last alarm camera or all alarmed cameras
  in sequence or multiscreen
• Trigger telemetry preset on alarm
• Capture additional still image at moment of alarm
• Buzzer activated on alarm
• Light duty relay output triggered via alarm zone
• Instant messaging to remote network client on alarm
• Automatic archive of alarm video and audio to FTP server or
  DVD-R/CD-R

PRE-ALARM
Each camera input can continuously capture a configurable number
of images at a user defined pre-alarm capture rate. When an event
occurs, the images captured before the alarm event are recorded to
disk, allowing the viewer to see enhanced evidence leading up to
the event.

VIDEO MOTION DETECTION
Programmable 16x16 (PAL) grid (16x14 NTSC) with 5 levels of
sensitivity for each camera view.
16 advanced VMD trigger zones with individual sensitivity on a
88x64 (PAL) grid (88x60 NTSC) for each camera.
This is based on standard resolution settings of 720x256 (PAL) and
720x240 (NTSC).
Options:
• Up to 15 minutes of protected pre and post activity recording per
  event
• Protect VMD images from overwrite for configurable period of
  time
• Main monitor display of last VMD camera, or all VMD cameras in
  sequence or multiscreen
• Buzzer activated on VMD
• Light duty relay output triggered on VMD activity
• Instant messaging to remote network client on VMD
• Automatic archive of VMD to FTP server or DVD-R/CD-R

FALSE ALARM SUPRESSION

Advanced alarm zones added to BX2 allow you to combine multiple detection sources 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. Added to this, each alarm input can be temporarily disabled by a remote administrator to ensure that faulty detectors do not mask real alarm incidents.

TEXT SUPPORT

Through the inclusion of Text Support, the BX2 can search captured transaction data for specific goods purchased, transaction numbers, credit card references, keywords etc. and jump straight to the associated video sequence. Additional functionality allows alarms to be raised on the use of keywords from POS and other devices. Search and playback is also supported through NetVu ObserVer.

REMOTE ALARM REPORTING

The system can connect to a remote site to provide instant alarm notification.
• Remote alarm reporting over internet connection
• Dial-out on alarm
• Alternative signalling path

E-MAIL & SMS NOTIFICATION

Emails can be sent on alarm or other critical events.
Notifies the following events on a camera by camera basis:
• Alarm
• Activity
• Camera fail
• Power up
Access to mail server via Ethernet or dial-up is required for this feature.
Short Message Service texts (SMS) can also be sent to a specified mobile phone number, via an SMS capable modem.

AUDIO

The user has the option to record and play back audio through the unit in real time. Recorded with images, audio can be played back directly from the unit via powered external speakers.
The system can also receive audio from a remote network viewer and play it directly out of the unit for audio challenge or help point applications.
Recorded audio is automatically copied when video is archived to DVD-R/CD-R or exported across a network.
Connections:
2 x Line in: 47K. input impedance, 1V pk-pk, RCA phono socket
2 x Line out: 1V pk-pk, RCA phono socket

NetVu Connected

BX2 now has NetVu Connected technology built-in to ensure maximum compatibility with future developments in networked security. NetVu Connected technology enables the BX2 to fully interoperate with other NetVu Connected compatible products from DM including the DV-IP Decoder, NetVu ObserVer and PDA Viewers. Providing interoperability between the worlds leading security companies, NetVu Connected uses industry standard networking protocols supported by a wide range of third-party integration products and SDKs to ensure on-going compatibility for the future.

WEB BASED CONFIGURATION

Web based configuration enables system adjustments to be made remotely to a networked unit, such as change the record rate, set up the advanced VMD grids, program presets and more – without the need for a site visit.

NETWORK CAPABILITIES

A standard Ethernet connection allows live and recorded viewing on a networked PC using DM's NetVu ObserVer software or via web pages using a standard Internet browser. Network viewing is independent and does not affect the recording or local operation. The unit includes a network bandwidth limitation option, which allows the bandwidth used by the BX2 to be capped. For low bandwidth remote network links, viewing applications can request that video is sent in MPEG-4 format, while local network viewers can simultaneously view using high quality JPEG images.

NetVu ObserVer software and Web page features include:
• Live full, quad, 6, 9 and 16 way screens, 25 and 36
• Forward and rewind, playback and frame advance/rew
• GOTO time and date

• File export of digitally signed images over the network to the user's PC using NetVu software
• Archived images can be viewed using DM's NetVu ObserVer software, supplied with the product and as a free download from the DM website
• Remote manual control of relay output on the unit
• Telemetry control, including PTZ and telemetry presets
• Multiple user access
• Event log
See the latest NetVu ObserVer datasheet for more information.

COLOUR RESOLUTION

Sampling rate: 13.5 MHz to CCIR 601
Number of pixels: PAL 720h x 512v
NTSC 720h x 448v
16.8 million colours 256 levels of grey, 8-bit luma.

COMPRESSION

Standard JPEG format files with user definable compressed image size for high quality recording.
Simultaneous MPEG-4 network streams for low bandwidth remote viewing or background recording.

LANGUAGES

English, French, German, Spanish, Italian, Russian, Czech, Polish, Dutch, Hungarian, Swedish, Portuguese, Turkish, Croatian, Danish, Finnish, Norwegian, Arabic, Chinese.

DATA

NET - RJ-45 10/100-baseT Ethernet connection.
BUS A - RS-485 telemetry port 1.
485 BUS - 2x MMJ ports for DM 485-BUS accessories.
SERIAL 1 - 9 way (Male) D Type RS 232 serial port.
SERIAL 2 - 9 way (Male) D Type RS 232 serial port.
SERIAL 3 - 9 way (Male) D Type RS 232 serial port/Bus A RS485.
SERIAL 4 - 9 way (Male) D Type RS 232 serial port/Bus B RS485.

ARCHIVE MEDIA

Built-in DVD writer for DVD-R/CD-R Recordable Media.

TEMPERATURE RANGE

Operating temperature 5 – 40ºC (41 – 104ºF).

RELATIVE HUMIDITY

10% - 85% Non-condensing.

DIMENSIONS

BX2:
170mm (H) x 440mm (W) x 517mm (D)
6 3/4" (H) x 17 3/8" (W) x 20 3/8" (D)
"Rack-mount" ears and supports are provided with the BX2.

Keyboard:
61mm (H)* x 410mm (W) x 183(D)mm,
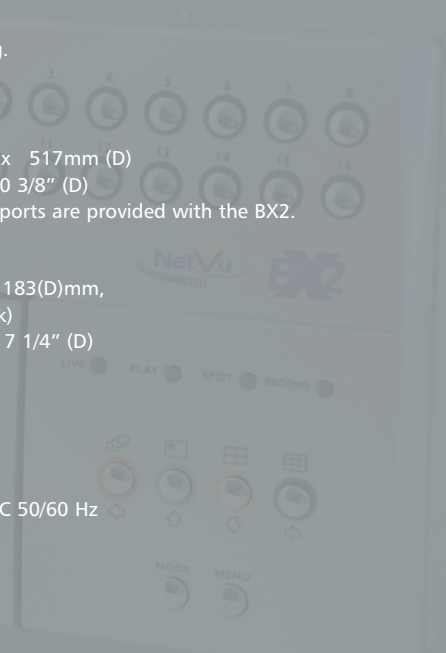(* 100mm including Joystick)
2 1/2" (H)* x 16 1/8" (W) x 7 1/4" (D)

WEIGHT

18.5kg (40.7 lbs)

POWER SUPPLY

Input Voltage: 100-240 V AC 50/60 Hz

TELEMETRY DATA

Built-in RS485/Twisted pair protocols provide direct control of the following domes:
- DM Dennard domes
- JVC TK-C675BE, TK-C676 & TK-C553E
- Ultrak Ultradome™ KD6
- Ademco Orbiter & Jupiter Microspheres™
- Aritech/Kalatel CyberDome™
- BBV RS485 StarCard
- Bosch/Philips G3
- Ernitech
- Mark Mercer
- Panasonic WV-CS850A, WV-CS854, WV-CW860 external
- Sensormatic Speeddome™ IV & V (Using 4-wire RS-422)
- Pelco P Spectra II, Spectra III
- Samsung SCC-641
- Vista Power Dome
- Vantage Juno Dome

COAX TELEMETRY
- BBV RX100 (protocol converter for control of major manufacturer's domes)
- Pelco Spectra II & III (Please note that patrol modes are not available)

REMOTE KEYBOARD OPTION

Keyboard features include:
- Joystick control of telemetry camera with twist zoom facility
- Wash/wipe, focus, iris, lamps, preset, patrol and auto-pan keys
- Up to 16 BX2 units can be controlled from one keyboard – up to 16 keyboards can be connected to the 485 BUS providing a flexible configuration eg: 1 unit can be connected to 16 keyboards
- Onboard LCD identifying connected unit name and number

BUILT-IN DVD WRITER RANGE		
16 CAMERA COLOUR DUPLEX WITH DVD	BX2P DX16D	640GB
16 CAMERA COLOUR DUPLEX WITH DVD	BX2P DX16D	1.2TB
16 CAMERA COLOUR DUPLEX WITH DVD	BX2P DX16D	2TB
OPTIONAL REMOTE KEYBOARD		KBS3A
VIDEO SWITCHER		VS16
IR REMOTE CONTROL		IR REMOTE
A CHOICE OF HARD DISK OPTIONS ARE AVAILABLE INCLUDING THE LATEST 1TB CONTINUOUS ARCHIVE STORAGE OPTION		
PLEASE CONTACT CUSTOMER SERVICES IN YOUR REGION OR CHECK THE WEBSITE AT WWW.DEDICATEDMICROS.COM		
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.		
THE MANUFACTURER RESERVES THE RIGHT TO CHANGE THE SPECIFICATION WITHOUT NOTICE		

PLEASE CHECK THE WEBSITE FOR DETAILS OF COMPATIBLE PRODUCTS AND OTHER LATEST DEVELOPMENTS

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