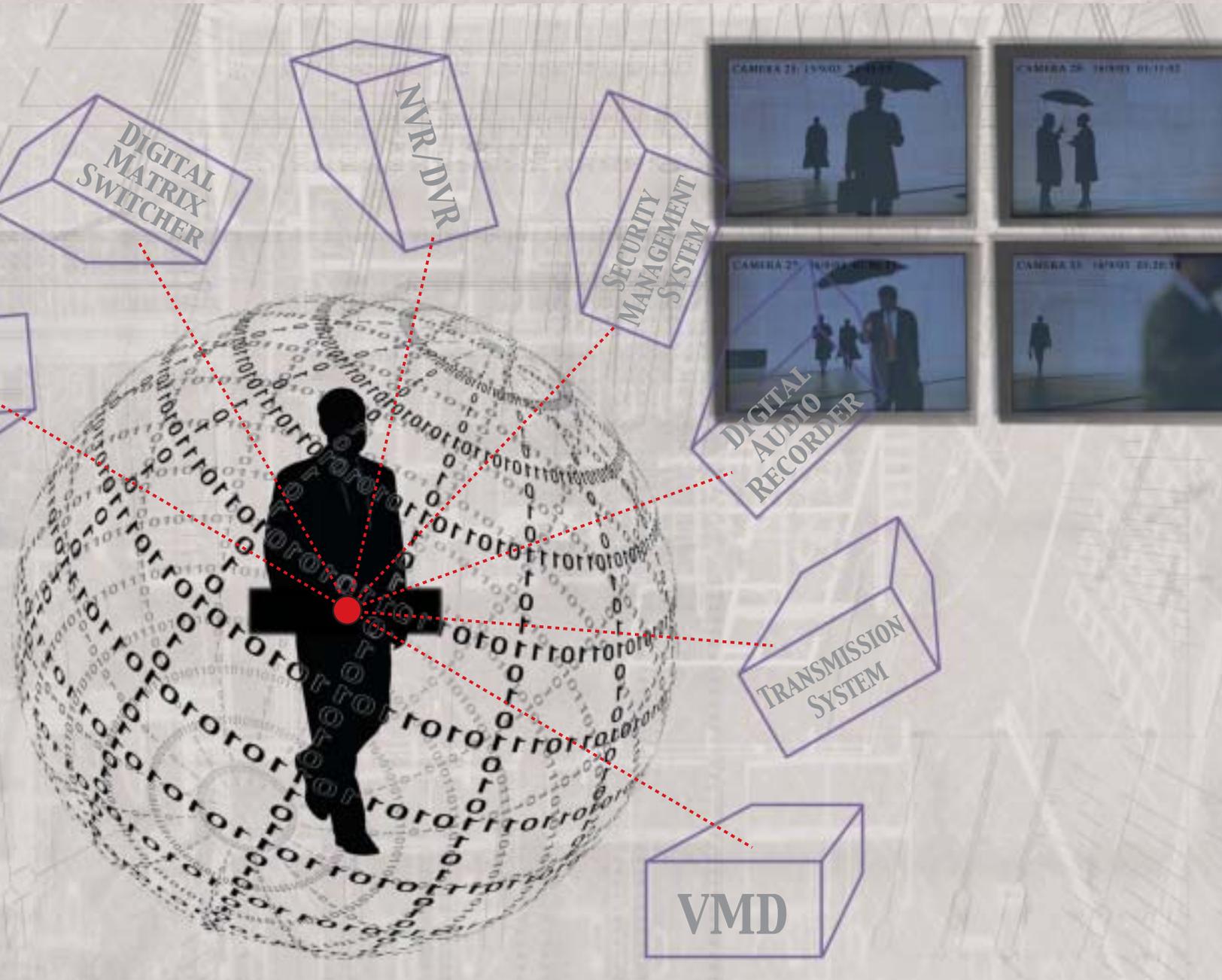


DreamBox

All In One CCTV Solution



All in One CCTV Solution

DreamBox (DB) Short Description

DreamBox (DB) is a real time synergetic multimedia surveillance system for homeland security and general CCTV use.

DreamBox, with its built-in ETX Pentium and 11 DSP's, processes information such as video, audio and data. This allows multiple users to view, analyze in real-time, transmit, respond, record, playback, smart-search, manage, debrief and archive simultaneously in a secured and redundant manner.

Each DB performs a number of independent processes which include video compression, audio/video transmission, digital recording, content analysis algorithms (such as outdoor and indoor video motion detection), digital/analog acquisition, data transfer over multiple network types , synchronized playback of video and audio, digital switching between cameras, videophone and security management software integration to external computerized systems. All these functions are included inside one 2Ux19" box.

DreamBox (DB) Objectives

1. Synergy - Include all the functions and components of CCTV system in one single box
2. Reduce the integration time required for a complete solution
3. Decrease the uncertainty involved in pre-planning
4. Reduce the price of the overall CCTV system, network and infrastructure cost
5. Minimize the installation time and cables/fibers required
6. Enable complete data and network redundancy
7. Allow the sharing of resources between DB's within a distributed topology

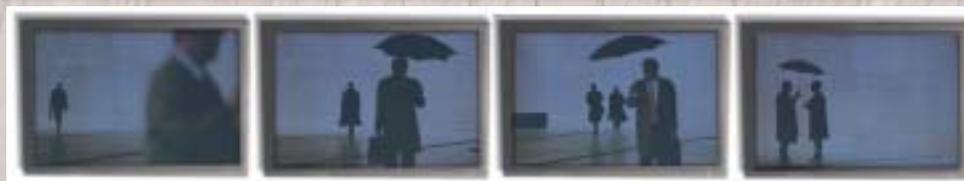
DreamBox Built-In Digital Video Recorder (DVR)

DreamBox, the smart digital video and audio recording solution for security applications, uses MPEG4 or H.263, state of the art video compression technology. Each DreamBox locally or over the network can record up to 30/25 (NTSC/PAL) Frames Per Second (FPS) on each of its 8 video inputs - providing full D1(4 CIF) video resolution while requiring far less storage space.

The DreamBox is designed for high level, real-time recording, and allows for controlling the bit-rate, frame rate and resolution, giving the users a highly customizable solution. The variable frame rate for different zones in the same camera field-of-view results in a cost-effective solution for recording and storage of high frame rate with high resolution. The superior technology of the DB, which includes smart archiving and smart bandwidth reduction algorithms, will substantially reduce storage requirements in high demand applications.

Additional Built-In Recording Features:

- MPEG4 or H.263 video compression technology - full D1 (4 CIF), 30/25 FPS (NTSC/PAL) per input
- Synchronized playback of audio and video
- Localized and/or centralize archiving possibilities
- Connect hundreds of distributed DB units and record thousands of channels simultaneously
- Configurable pre and post alarm per channel
- Storage reduction via variable frame rate for different zones in the same camera field-of-view
- Built-in hard discs (typical 500 GB)
- Removable hard disc
- Built-in RAID 1 redundancy
- Post Search algorithm for fast investigation process



DreamBox Built-In Outdoor Video Motion Detection (VMD)

DreamBox's advanced embedded detection capabilities and high speed video processing are combined to ensure detection under various weather conditions while dramatically reducing the false alarm rate associated with outdoor VMD. With up to 30 frames per second VMD processing per channel (total of 120 FPS per unit), Dream Box excels in the detection of very fast movement. 27,000 detection cells enable the detection of very small objects, and when combined with a programmable 3D topographic map, can easily distinguish between small objects and partially concealed targets.

DreamBox's embedded VMD algorithm is Magal's next generation VMD algorithm. The algorithm was specifically designed for outdoor applications and is capable of simultaneously detecting and tracking several targets per camera. Intruders are displayed and tracked by a color path. The unique **unattended object detection** algorithm is an optional feature which allows for baggage detection, vehicle detection, intrusion detection and other content analysis scenarios.

DreamBox Built-In Digital CCTV Matrix Switcher

DreamBox employs virtual audio and video connection capabilities for unlimited connection combinations. The built-in Matrix Switcher offers PTZ control over the network with limited delays (80-250 ms), programmable tours for switching between cameras and color overlay over analog and VGA displays (full or quad). The DB generates

alarms when there is a video fail or covered camera. The built-in alarm tour enables the simultaneous presentation of alarm pictures and video clips of multiple events.

DreamBox Built-In Security Management System

The security management system is an advanced real time control and display system, which integrates a wide array of security components using distributed SQL databases based on the Linux operating system.

The graphical user interface allows multiple operators with hierarchical multilevel operation in any language.

An active scheduler is included for an automated response to a wide combination of security scenarios.

Each DreamBox can serve as a user workstation. Setting up the system can be done from any DreamBox on the network via authorized personnel with protected passwords.

DreamBox Built-In Transmission System

DreamBox uses MPEG4/H.263 video compression and audio to free up network bandwidth for fast, efficient and cost effective operation. The DB contains all the required elements for a full network path, including Encoding, Switching, Routing, Fiber Optic Transceivers, Decoding and Transforming to Analog and VGA Monitors in the control center or other control rooms.



Additional DreamBox Advantages

Simplified Integration

Cable Reduction

DreamBox's all-in-one security concept ensures that all its components are completely integrated thereby dramatically reducing the amount of cabling required.

Physical Integration

DreamBox user friendly software replaces the physical connections required between cameras, players, recorders, matrices and management systems.

Software Integration

DreamBox software is designed to free users from the challenges typically faced in a security integration process; including the integration of non-standard protocols and the need for compatibility with older versions (not to mention the reduction of the negotiation phase between vendors).

Modular & Simple Maintenance and Service

DreamBox scalable and modular all inclusive design ensures simple and cost effective stock management and reduced maintenance costs.

Redundancy

The backing up of data, such as video footage, is vital to any CCTV installation. With this in mind, the built-in RAID 1 storage unit allows for complete backup redundancy to any DreamBox connected to the network.

No Central Server

DreamBox does not require a central server to operate. The units are connected in a closed loop system, which means there is **no single point of failure**. This further enhances the optimal fail safe features of the system.

The closed loop design allows for the immediate detection of malfunctioning or cut cables, while automatically creating alternative routes. Parallel processing and resource sharing allow DreamBox to complete complex security tasks with ease and share information between other DB's.

Linux Operating System

Linux, which is the DreamBox operating system, enables true multitasking operation which significantly reduces computer downtime.

DreamBox Front and Rear Panel



Smart Algorithms

Smart Bandwidth Reduction Algorithm and Smart Archiving Algorithm allow users to automatically reduce their storage requirements.

Infrastructure Services

DreamBox includes built-in infrastructure components and protocols which eliminate the requirement for dedicated infrastructure components. These services include RS232, TTL (in and out), and analog (in and out).

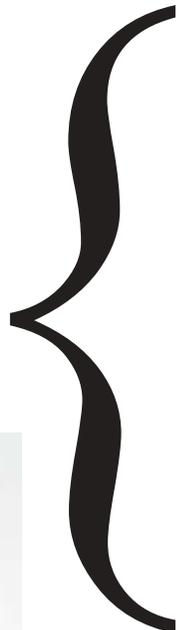
Higher MTBF

Reducing the number of components and combining them all in one box allows for higher MTBF (Mean Time Between Failure), fewer spare parts, less training, less maintenance and less warehouse space, ultimately adding up to a more cost effective solution.

Additional Applications

Other embedded security applications include: intercom, public address, voice evacuation, videophone and alarm help points.

DreamBox =



Workstation

Videophone

Intercom

Audio Recorder

Video Transmission

VMD

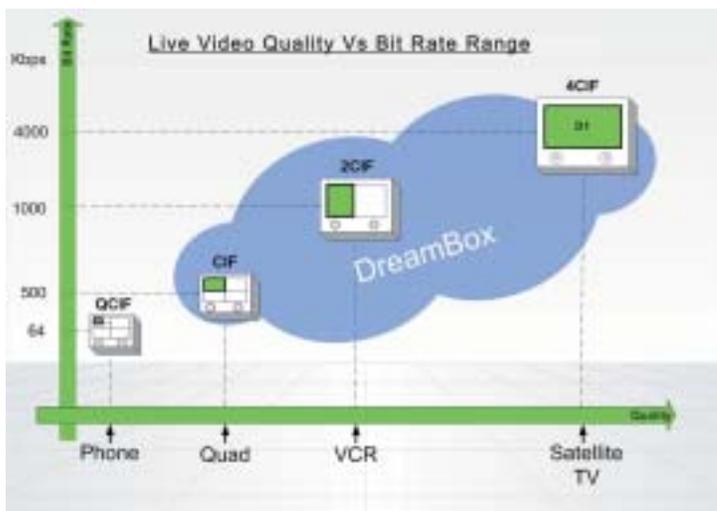
Digital Video Recorder

PTZF Controller

Video Switcher

Quad Splitter

Ethernet Switch



Network Topology

DreamBox units connected via a LAN Network, provide complete site coverage. The ring topology allows for stream flow from point-to-point in two alternative routes, achieving inherent backup. Each DreamBox can serve both as a CCTV field unit and as a user workstation with no need for a dedicated viewing station.

The DB distributed SQL database can initiate parallel database query processing with individual DB's mining their own databases - the combined results immediately being displayed to the user.

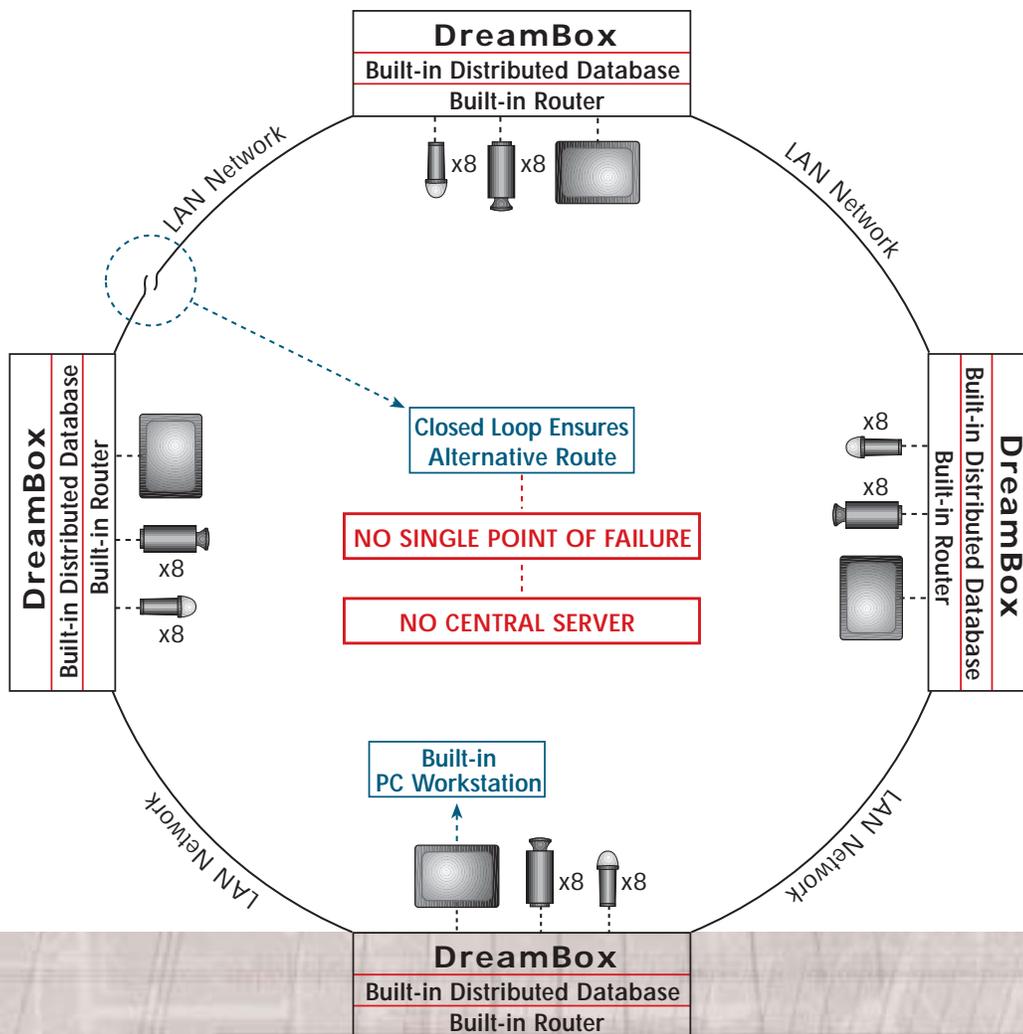
Flexible Transmission

Multicast/Unicast/Broadcast - Multiple video transmission options allow for optimal exploitation of network bandwidth.

Built-In Network Components

Each DreamBox includes a built in ethernet switch, router, fiber optic transceivers and a video server. Traditionally these components come as external add-on to a CCTV system. The built in network components allow for secure and efficient control of data processing.

DreamBox Architecture



About Magal (DreamBox Manufacturer)

With over 30 years of experience, Magal Security Systems, Ltd. has been leading the security industry in the development, manufacturing and marketing of effective, advanced Perimeter Intrusion Detection Systems.

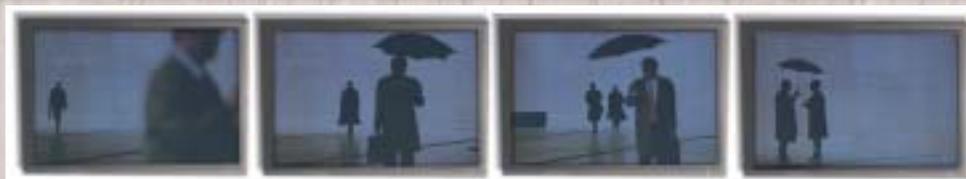
Magal's products are installed and being used around the world in more than 75 countries, in various locations and diverse environments, protecting borders, airports, nuclear power stations, industrial complexes, military bases, correctional facilities and other sensitive installations.

Magal, a global company with subsidiary companies located in Canada, U.S.A, Germany, U.K., Mexico, Romania and an office in China, can provide highly sophisticated innovative solutions for the most complex security problems.

Magal's shares are publicly traded on the NASDAQ National Market since 1993 and in Israel on the Tel-Aviv Stock Exchange (TASE) since July 2001, in both under the symbol MAGS.

Magal is committed to bringing proven experience, personal attention and a fresh approach to every security challenge.

www.magal-ssl.com





SPECIFICATIONS

Processors

8x DSP's, 600Mhz for Video encoding (One per channel)
2x DSP's, 600Mhz for Video decoding (Analog and VGA monitors)
1x DSP's, 600Mhz for 8 channels VMD and 8 channels Audio
1x ETX PentiumIII, 700Mhz, SODIMM 256MB PC-133

Network Hardware

6 ports Ethernet Switch, 100 Mbps Full duplex:
• 2x Fiber Optic Transceivers, Multi/Single mode
• 4x 100Base-T (RJ-45 Connector)
Fast Ethernet 10/100Base-T, Full duplex, RJ-45 Connector
2x Serial ports (COM1, COM2)
External DSL/ADSL modem (option)
1x IrDA
2 x USB-1

Network Services

Support Closed Ring Network topology
Protocols: TCP/IP, UDP, RTP
Unicast, Multicast and Broadcast for Data, Video and Audio streams.
Dedicated Router (Video Server): Multicast/Unicast Conversion, Flow control.
Network Security: Programmable ports, Ethernet Switch Control, Find Cut position, Manual and automatic Mac address control

Built In Host PC (ETX)

PS/2 mouse
PS/2 keyboard
Removable Hard Disc
2X Hard Discs (typical 250 GB each)
VGA adaptor

8 Video Inputs

1 Vp-p, 75 Ohm
No need for camera synchronization
Video Standards: PAL, NTSC, CCIR and RS170
Video Input, 30/25 Fps, D1 resolution
(Support CIF and 2CIF as well)
Analog video output: 30/25 Fps, D1 resolution
(Support CIF and 2CIF as well)
VGA video output: 30/25 Fps, 2CIF resolution
(Support CIF as well)
Full motion Quad display on analog and VGA monitor:
Display of up to 8 video streams simultaneously.
2x Colored Graphic Overlays (255x340x4) on D1 display

Video Stream

MPEG4 D1 240 Fps - D1 30/25 Fps in up to 4 Mbps per channel
H.263 D1 240 Fps - D1 30/25 Fps in up to 4 Mbps per channel

Resolution:

- CIF (352x288 or 320x240) average frame size 2.5KB for 25Fps
- 2CIF (352x576 or 320x480) average frame size 5KB for 25Fps
- D1 (704x576 or 640x480) average frame size 20KB for 25Fps

Frame rate: 1-30Fps
Bit rate: 128Kbps - 4Mbps
Divide camera into sub zones with different frame rate per zone.
Max. Video stream throughput per DreamBox: 48Mbps
Stream Latency over LAN: 80msec - 250msec

Video Connectors

8x NTSC/PAL - Video Inputs (BNC or S-Video)
8x NTSC/PAL - Loop - Back Video Outputs (BNC)
1x NTSC/PAL - Video Output - (BNC AV/S-Video).

8 Audio Inputs

Sample Rate: 8Khz, 8 bps
Input Impedance 15Kohm
Output Impedance 620 Ohm
Bandwidth 30Hz - 4Khz
Microphone Gain 25 db
AC Inputs (Dynamic Microphone)

Audio Connectors

8x PLL Microphone Inputs (Voice over IP)
8x PLL Line Inputs (Voice over IP)
1x PLL PC Microphone (SoundBlaster)
1x PLL Auxiliary Input (SoundBlaster)
1x PLL Speaker Output (Mix between Voice over IP and SoundBlaster)

Peripheral Devices

Fences (DTR, Yael, Barricade, FPS, Intelliflex etc.) - Magal sensors
PTZF cameras
Network storage
IR Remote control

I/O

8x TTL Inputs with built in pull up resistors
8x Dry Contact Outputs (N.O/N.C)
8x ANALOG Inputs (-5V to 5V)
8x ANALOG Outputs (-5V to 5V)

Ambient operating temperature

Operating temperature 5-50° C, 41-122° F
Operating humidity: 20% to 85%

Dimension

Width 480mm (19")
Depth 460mm (18.2")
Height 87mm (2U)
Weight 18 Kg (40 lb)

Power Source

120/220 VAC 50/60Hz

North America Office: DreamBox USA
43180 Osgood Rd., Fremont CA 94539 USA
Tel: 510-440-8380 Fax: 510-440-8384
mailto: info@magaldreambox.com

Magal Security Systems LTD
P.O. Box 70, Yahud, Industrial Zone 56100, Israel
Phone: 972-3-5391444 Fax: 972-3-5366245
mailto: magalssl@trendline.co.il