

# PRESENTATION RECORDERS

## PR-720-R, PR-720-D



### PRESENTATION RECORDING AND STREAMING

The PR-720-R/D is a content production and distribution system for digital networks. Designed for recording and streaming high-quality presentations, the unit combines high-resolution graphics (RGB/DVI) with video feeds and stereo audio into one multimedia file. The rackmount unit may be configured with a single encoder (-R) or with dual encoders (-D).

Traditionally, authoring sophisticated media presentations usually required an outside production firm or dedicated staff, which are expensive approaches. Several pieces of costly equipment would be needed to capture the various media sources and combine them in a meaningful way into a multimedia file. Furthermore, encoding these files so they can be streamed on the Internet can be cumbersome and time intensive, and still more hardware is needed for streaming. The PR-720-R/D fully automates this process by offering a dedicated hardware solution with a powerful set of features.

The PR-720-R/D allows users to:

- ◆ Capture—several multimedia feeds: graphics, video, and audio,
- ◆ Compose—these feeds with PiP into a single multimedia stream,
- ◆ Encode—the stream into a standard H.264 (MPEG-4) file,
- ◆ Cast—that file on the Internet using realtime streaming protocols,
- ◆ Archive—the stream for on-demand viewing.

The PR-720-R/D introduces support for up to WUXGA (1920x1200) input resolutions with up to WXGA (1280x720) capture resolutions and PiP (Picture In Picture) video and graphics overlay. The unit is a dedicated hardware solution that combines simple operation with a powerful set of features. Enjoy universal interoperability with any RGB/DVI source: laptops, PCs, MACs, document cameras, diagnostic equipment, etc

### APPLICATIONS

The PR-720-D is a unique dual encoder unit which enables four different application solutions:

1. Two independent 720p encoders – With identical inputs, one encoder may be setup to stream and record a high-bandwidth, high-resolution stream and the second encoder provides for a reduced resolution, reduced bandwidth stream.
2. Dual wide-screen delivery – One encoder transmits a 720p hi-def camera stream, and the second transmits a wide-screen presentation. Telepresence at a budget price!
3. Synchronized Encoders – Two 1280x720 wide-screens side by side, giving a 2560x720 panorama, or a 3D left-right image.
4. Fail-Safe System – Each encoder independently transmitting the same material. Should one fail, the receivers can switch to the other.

### FEATURE HIGHLIGHTS

#### • INTEGRATED VIDEO AND GRAPHICS

PR-720 technology integrates high resolution graphics and video sources into a PiP (Picture in Picture) or Picture-by-picture format for H.264 playback

#### • PiP CUSTOMIZATION

Robust control set available for Picture-In-Picture technology, logo insertion and textual description. Graphical and dynamic text overlays add details.

#### • CHANNEL/SESSION TEMPLATES

User-defined preset templates simplify session setup

#### • SCHEDULING

Schedule one or more Recorders using Google Calendar or other iCalendar based tools

#### • ROBUST

Embedded Linux kernel for secure, crash-free operation. Diskless operation for ultra-reliability. Green design, very low power.

#### • SCALABLE

NCast technology allows for maximum scalability with remote users if streamed through multicast.

#### • GRAPHICS RESOLUTION

Supports up to WUXGA (1920x1200) input and WXGA (1280x720) capture and streaming capabilities

#### • GRAPHICS QUALITY

Retain full integrity of original image using motion adaptive de-interlacing

#### • RECORD CAPABILITIES

Archiving feature captures any source to the PR-720-R/D for later download or remote viewing.

#### • AUDIO CAPABILITIES

Audio input is fully synchronized with the video and graphics presentation for flawless playback

#### • PLAYBACK OPTIONS

Recorded archives auto-upload to a VOD server. H.264 encoding is compatible with Flash Media players.

#### • DESKTOP PLAYERS

Anyone connected to the network can view a presentation via a web browser or media player (Flash, Quicktime, Real, etc.)

# PR-720-R, PR-720-D

## TECHNICAL SPECIFICATIONS

### GRAPHIC AND VIDEO INPUTS

DVI-I (Laptops, HD Video)  
 RGB (DB15), Y-Pr-Pb  
 HDMI  
 S-Video (Y/C)  
 Composite Video



### GRAPHICS RESOLUTIONS & PERFORMANCE

WXGA, 1280x720, 30 fps  
 XGA, 1024x768, 30 fps  
 SVGA, 800x600, 30 fps  
 Video, 720x480, 300x240, 720p (HD) - 30 fps

### GRAPHICS OUTPUTS

WXGA(1280x720) / SD(720x480)  
 Y-Pb-Pr only (DB15) 16.7 M colors, wide-screen displays  
 VGA loopback output connector

### GRAPHICAL OVERLAYS

Add .jpg, .png, and .gif images to the final screen composition  
 Dynamic text overlays add real-time titles and text

### GRAPHICS COMPRESSION

H.264 (ISO/IEC 14496-10)

### AUDIO

MPEG-4, AAC (ISO 14496-3), Low Complexity Profile  
 Input Sampling, 16 Bits, 44.1 kHz  
 Input, Stereo, Line-In & Mic-In on 3.5mm Jack (PC Audio type)  
 Output, Stereo, Line Out, 3.5mm Jack (PC Audio type)  
 XLR Audio Input Support – Mono only

### NETWORK INTERFACE

RJ-45 (LAN, DSL, Cable Modem), Ethernet 10/100 Mbps, DHCP

### COMMUNICATION PROTOCOLS

Multicast, Unicast, HTTP, HTTPS, UDP, TCP/IP, RTP, RTCP, RTSP,  
 DHCP, NTP, FTP, SFTP, Telnet, Auto Announce

### EXTERNAL INTERFACES

Serial RS-232 port on DB-9 connector, USB (2), Power Connector

### ENCODING BITRATES

128 Kbps. to 5.0 Mbps.

### PR-720 Series Models

PR-720-P Podium Recorder (Flange mount, any orientation)  
 PR-720-M Mobile Recorder  
 PR-720-R Rackmount Recorder (1U)  
 PR-720-D Rackmount Dual Stream Recorder (1U)

### ENTERPRISE SYSTEM MANAGEMENT

Serial Crestron/AMX compatibility (Serial, Telnet, HTTP)  
 iCalendar support (Google Calendar)  
 Optional Java or Python Systems Manager

### ARCHIVE FEATURES – SOLID STATE DISK

Archive and record options – 32/64 GB storage  
 Archives stored as H.264 files (ISO 14496-14)  
 Audio using MPEG-4 AAC (ISO 14496-3)  
 Metadata index files with title, author, and subject  
 FTP and Secure FTP file push

### SETUP

USB Stick for IP Settings

### USER INTERFACE CONTROLS

Capture size, Resolution and Aspect ratio  
 Graphics overlay positioning (vertical, horizontal)  
 PiP size, location (Overlap or Side-by-side)  
 Brightness, contrast, sharpness, saturation, hue  
 Audio Input Gain, Volume  
 Dynamic text overlays, Closed Caption controls and Chapters  
 User-defined channel preset templates

### STREAMING CAPABILITIES

Multicast, Auto-Announce Unicast to a Streaming Server  
 Flash Player, Quicktime, Real, DivX, VLC, and others supported

### SECURITY - SSL

Embedded Linux OS, HTTPS, SSL Certificate, SSH-FTP

### POWER – GREEN DESIGN

Power Consumption: 40 (R)/80 (D) Watts  
 Power Supply: Internal AC 100-240V 50/60 Hz—80/160 W

### DIMENSIONS - ENVIRONMENTAL

Dimensions: 19.0"(482.6mm) x 1.75"(44.5mm) x 10"(254.0mm),  
 Weight: 10 lbs (4.55 kg) - PR-720-R  
 Dimensions: 19.0"(482.6mm) x 1.75"(44.5mm) x 15"(381.0mm),  
 Weight: 15 lbs (6.8 kg) - PR-720-D  
 Operating Temperature: 10° to 35°C (50° to 95°F)  
 Non-operating Temperature: -40° to 70°C (-40° to 158°F)  
 Operating Relative Humidity: 8% to 90% (non-condensing)  
 Non-operating Relative Humidity: 5 to 95% (non-condensing)

### REGULATORY

FCC Part-15 Class A, RoHS Compliant 2002/95/EC  
 EMC Directive 2004/108/EC  
 EMD Low Voltage Directive 2006/95/EC



**NCAST CORPORATION** 155 Moffett Park Drive, Suite A-103, Sunnyvale, CA 94089 USA

Voice: +1 408-541-9230 Fax: +1 408-541-9231 <http://www.ncast.com>