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# AvediaPlayer Receiver r9220

The AvediaPlayer r9220 combines the delivery of HD video with three additional Ethernet ports that enable organizations to provide additional services, such as voice and data via one device for lower capital and operating costs.

- Receives and decodes IPTV streams
- Four port Ethernet Switch for connecting other network devices
- User options include a built-in user interface, access to fully customizable Artio portals or connection to third party middleware
- Displays up to 1080p resolution for excellent image quality
- Built-in FTP Server allows media provider to upload files to the device
- Steel enclosure makes this receiver solid and robust
- Power over Ethernet (PoE) simplifies installation and saves on the cost of cabling and power points.
- Receiver Development Kit (RDK) is available for customization and tailored applications
- Digital Signage options



## Technical Specifications

### Video Output

HDMI v1.3 (with HDCP): 1080p, 1080i, 720p (50Hz/59.94Hz/60Hz), 576p (50Hz), 480p (59.94Hz/60Hz)

### Audio Output

- HDMI: 2 Channel PCM
- TOS: 2 Channel PCM or Bitstream

### Video Decoding

- MPEG-4 part 10 H.264 (ISO/IEC 14496/10)
- MPEG-2 (ISO/IEC 13818-2)
- Resolutions: up to SD, 720p & 1080i @ 50Hz, 59.94Hz or 60Hz, 1080p @ 24Hz

### Audio Decoding

- MPEG-1 Layer II (ISO/IEC 11172-3)
- AC3/EAC3
- AAC/HE-AAC
- Downmixes multi-channel audio to stereo (on HDMI)

### Streaming

- MPEG 2 Transport Stream (ISO/IEC 13818-1)
- RTP
- UDP
- IP multicast
- IP unicast
- IGMPv2/v3
- Video On-Demand: RTSP, HTTP

### USB Port

- Can be used for external storage, keyboard or mouse
- USB hot plug enables auto-mounting of storage devices
- Supports third party applications such as the Exterity Digital Signage Media Player (powered by Cilutions)

### Channel Management

- Automatic channel discovery from all Exterity head end equipment
- SAP/SDP announcements
- Channel access control
- XML channel lists
- Static channels
- Hidden channels
- Playlists
- Channel redundancy
- Channel failover to playlist, channel or web page

### Infra-red/Control Options

- Built-in IR receiver
- 3.5mm jack for IR extender or tethered remote control
- IR Keyboard and third party remote controls supported
- TV control via Serial RS232 or HDMI CEC
- Remote IR control of Exterity Encoder AV sources

### Built-in user interface

- Channel selection menu
- Volume control
- Audio Language control
- DVB Subtitles (ETSI EN 300 743)
- Closed Captions (CEA-608 captions embedded in CEA-708 data)
- Teletext
- Internationalization support

## Integrated Web Browser

- ANT® Galio for integration with Exterity and third party middleware
- HTML 4.01, XHTML 1.0, HTTP 1.1, CSS 2.1, CSS 3 partial support
- Remote Event Support (HTML 5), JavaScript 1.5, DOM Level 2, XML, AJAX
- Unicode and international languages (Western, Greek, Russian and Arabic)
- JavaScript API for control of device configuration and media playback
- Image formats: png, jpeg, gif and bmp

## Management

- Fully integrated with all Exterity management tools
- Network administration via HTTP web interface, SNMP, Telnet or SSH
- Serial RS232 Admin Port
- Terminal Control Interface (TCI)
- Event logging via Syslog (local and remote)
- Firmware upgrade via TFTP & Multicast TFTP
- Configuration backup/restore via TFTP
- Secure Mode option to lock down receiver access if required

## Additional Features

**Video wall** - fine control of display to allow the creation of video walls using receivers, includes wall position control and TV bezel compensation.

**Unit-to-unit sync** - Multiple receivers showing the same TV channel automatically synchronize video and audio to one video frame.

**Low Latency** - Sub 500ms system latency between Exterity Encoders and Receivers in full multicast IPTV environments.

## Options

AvediaPlayer Receiver variants:

- r9200 - HDMI only
- r9210 - HDMI and analog AV
- r9210-mp - HDMI and analog AV with internal Digital Signage Media Player
- r9220 - HDMI and 4-Port Switch

A wide range of optional accessories are available (see Exterity website for details):

- TV, desk and secure mounting brackets
- IR and wired remote controls and extenders
- Power supplies for non-POE environments
- Digital Signage Media Player
- SecureMedia DRM protected content playback license
- HDCPv2 protected content playback license

## System

- CPU: ST40-300 450MHz
- RAM: 256MB
- Flash: 32MB (for firmware and configuration)
- OS: Linux 2.6.xx

## Network

- Linux IPv4 stack
- DHCP or Static IP addressing
- Integrated Ethernet switch with IEEE 802.1q VLAN support
- Four IEEE 802.3u 10/100Mbps MDIX Ethernet
- IEEE 802.3af PD

## Protocols

IP (RFC791), UDP (RFC768), TCP (RFC793), ARP (RFC826), DNS (RFC1035), DHCP (RFC2131), ICMP (RFC0792), IGMP v3 (RFC 3376), TFTP (RFC1350), Multicast TFTP (RFC2090), HTTP (RFC2616), Telnet (RFC854), Syslog (RFC3164), NTP (RFC1305), SAP (RFC2974), SDP (RFC4566), RTP (RFC3550), RTSP (RFC2362), SNMPv1/v2c (RFC1157/RFC1901)

## Regulatory

- CE, UL, CSA, FCC, C-Tick compliant

EMC:

- EN55022: 2006, 47CFR: 2008 Part 15, Sub Part B (FCC)
- EN55024: 1998 +A1:2001, A2:2003
- EN55013: 2001 + A1,A2

Safety:

- IEC 60950-1:2005 (Ed 2.0)
- EN 60950-1:2006
- CAN/CSA C22.2 No. 60950-1-07
- UL 60950-1, 2nd Edition

## Physical Format

**Steel enclosure**

**Dimensions:** 185mm x D: 95mm x H: 37mm

**Weight:** 0.5 kg

**Environment**

- Operating temperature: 0 ...+40°C / +32 ... +122°F
- Storage temperature: -20 ...+70°C / -4 ... +158°F
- Operating Relative Humidity: 5 – 95% (non-condensing)

## Power

- DC Jack (24V): 7W typical, 9W maximum
- POE IEEE 802.3af PD (48V): 7W typical, 9W maximum

## MTBF

Calculated to MIL-HDBK-217F, notice 2: 119303 hours (13.6 years)

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## Receiver Development Kit (RDK)

The Receiver Development Kit (RDK) enables Exterity partners to integrate their own solutions with third party applications and back end components, such as middleware.

Third party applications can control the Exterity receiver using any or a combination of the following:

- Terminal Control Interface (TCI)
- Simple Network Management Protocol (SNMP) interface
- JavaScript API
- Native application support (DirectFB based development environment)

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Version  
4.0

2014 03 12

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