The new **232-ATSC 4 HDTV Tuner**, our 4th-generation HDTV tuner, adds new capabilities to the industry-standard 232-ATSC series. New features include tuning MPEG-4 programs, up to 1080p output, and more efficient operation. The new tuner is fully compatible with control commands for previous models.

The integrator-friendly HDTV tuner is controllable with 2-way RS-232 and IP Telnet, as well as wireless and wired IR commands. An onboard Web page enables remote Web control. A new menu-driven display simplifies setup, and a front-panel USB port makes firmware updates a snap. The new compact enclosure allows mounting of two tuners in a single rack space.

A universal TV tuner, the 232-ATSC 4 can receive both analog and digital MPEG-2/MPEG-4 channels, in ATSC, NTSC, and clear QAM formats. Using an optional RF switcher, the tuner can switch between antenna and cable feeds.

### Features
- Tunes analog and digital channels in ATSC, NTSC, and clear QAM formats
- Accepts MPEG-4 TV channels, as well as standard MPEG-2
- Scales video output from 480p to 1080p
- Simulcasts from HDMI and composite video ports, as well as stereo, and digital coax and TOSlink optical audio ports
- Switches to RGBHV or Component output from front-panel settings, Web page or control commands
- Dolby® 5.1 or PCM/Variable PCM digital audio formats for digital audio ports and HDMI
- Front-panel text and on-screen menus for tuner setup
- Web pages for remote setup and control
- Supports dual Air/Cable tuning with optional RF switch
- Analog and digital closed captioning
- Internal scaler displays channels at selected resolution
- Rack-mountable two across in 1RU
- Full ASCII 2-way RS-232/USB commands, AMX, Crestron, and RTI modules available, discrete IR commands
- RS-232 can be daisy-chained to control up to 9 tuners from a single RS-232 port, or control any number of tuners via IP
- Front-panel USB port for control firmware and rear USB for HD processor updates via a memory stick
- Meets RoHS and California energy-saving standards
- Includes HD2-RC IR remote and 12 VDC power supply
- Options for single and dual rack mounts, external RF-AB RF switch

### Applications
- Boardrooms
- Classrooms
- Training Centers
- Broadcast Testing
- Command and Control Centers
## Specifications

### Physical
- 8.5” [216mm] wide x 1.75” [44mm] height (1RU) x 8.0” [203mm] deep
- 2.25 lbs [1 kg]
- 1RU Rack mounting for one or two units side-by-side (RK1, RK2)
- RoHS compliant and energy-efficiency meets new California standards

### Tuning
- Cable/RF input, switchable with optional RF-AB RF A-B Switch
  - Type: ATSC, NTSC and Clear QAM (MPEG-2 and MPEG-4)
  - DTV Standards: (1080i/720p/480p/480i), scalable up to 1080p
  - Aspect Ratio: Adjustable, variety of modes for 16:9 and 4:3 broadcasts
  - Captioning: Analog and Digital, set by program for size, font, and attributes
  - Favorites: Favorite channel menu
  - Lock: Parental option for channels and/or rating

### Front Panel
- Power, Menu, Setup and Select buttons
- Up and Down (Channel Up and Down) buttons
- Left and Right (Volume Up and Down) buttons
- Text Display, white text on blue LCD, channel and setup information
- IR Sensor
- Mini USB Port for control and drag-and-drop firmware updates

### Back Panel
- **RF Input**
  - Air/Cable, 'F', female, 75 ohm impedance, -10 to 25 dBmV typical
  - Supports dual Cable and Air tuning with optional RF-AB RF A-B Switch
  - New digital RF tuning for improved sensitivity

- **HD Outputs**
  - HDMI and switchable RGB/Component outputs operate simultaneously
    - Component: RCA Pr, Pb, Y outputs (1080i/720p/480p/480i)
    - RGB: RGBHV DB-15 female (1080p/1080i/720p/480p)
    - HDMI: HDMI receptacle (1080p/1080i/720p/480p), version 1.3
    - Digital Audio: HDMI, Coax and TOSlink optical output, Dolby 5.1, PCM or PCM variable

- **AV Outputs**
  - Simultaneous with HD output
    - Composite Video: RCA female Jack
    - Audio L and R: 2 stereo RCA female jacks, variable level

- **Control**
  - Ethernet, Web page: RJ-45 10/100 Ethernet connector
  - RS-232: DB-9 male, RS-232 data link to control system
  - 300 to 19,200 baud (9600 default), 8 data bits, no parity, 1 stop bit
  - IR: 3.5 mm stereo input for external IR sensor or wired IR, discrete codes available

- **Service**
  - Female USB-A port for memory stick HD processor updates

- **Air/Cable**
  - 3.5 mm output to operate the RF-AB RF A-B Switch

- **Power**
  - 2.1mm coaxial jack (inside center conductor positive)
  - 1.1 A maximum, 11 to 14 VDC, 12 VDC typical

### Includes
- HD2-RC IR Remote
- Switching power supply, 1.5 A 12 VDC, option for 4A supply for up to 3 tuners