

Key Features

- ▶ Blu-Ray Quality HD or 4SD Video Over Any IP Network or ASI
- ▶ H.264 High Profile (L4.1) Video Compression, QCIF to 1080p
- ▶ Ubiquitous Video I/O - HDMI/DVI/YUV/RGB/VGA/CVI/ASI
- ▶ Small, Hardened Enclosure, Low Power Consumption
- ▶ 24/7 Reliability with No Moving Parts
- ▶ Gigabit Ethernet, PoE & USB 2.0 Connectivity
- ▶ Optional DVB-ASI I/O, MPEG-TS Encapsulation
- ▶ Built-in Web Server with Advanced WebUI
- ▶ Auto Discovery, Auto Configuration, Distributed C³
- ▶ Designed & Manufactured in California, USA



Professional HD/4SD Video Over IP

Citadel is a professional broadcast network video HD/4SD H.264 encoder and decoder that can encode virtually every video input at any resolution. Citadel accepts a wide variety of input signals including HD formats like 1080p60 HDMI, 3 wire component RGB, or 5 wire component RGB+HV, or up to 4 channels of composite SD video. The built in format converter and scaler ensures you will always have 720p/1080i HDMI to monitor at both the encoder and decoder, regardless of your input type or resolution. Citadel also decodes 1080p or up to 4 channels of SD H.264 or MPEG2 Video. Citadel's 1080p HD video over IP is Blu-ray quality, with extremely low latency and efficient network bandwidth use.

The Hardest Codec for the Harshest Environments

Citadel is extremely rugged and features extremely low power consumption, an embedded operating system, no moving parts, and a small form factor in a hardened milled aircraft grade 6061-T6 enclosure. Citadel excels in applications where size and power consumption must be minimized. Citadel is designed from the ground up to be extremely energy efficient. The hardware compression provides the highest performance at the lowest power consumption available today. It also has both power over ethernet (PoE) and DC power inputs, that can optionally be used together to provide redundant power sources to further increase reliability.

Advanced DVB-ASI Plus Flexible Local Monitoring Options

Citadel can also output MPEG-TS over DVB-ASI instead of ethernet for maximum compatibility with existing professional broadcasting equipment. The HDMI/DVI output allows 1080P local monitoring, while the composite video output provides legacy system support. The built-in scaler and compositing engine allows any output resolution to be displayed on any output.

Built-in Web Server and Feature Rich Web User Interface

Citadel includes gigabit ethernet and an advanced web server that automatically pairs with other Teradek devices independent of network infrastructure simplifying installation and use. Citadel's WebUI is simple yet sophisticated allowing the user to easily configure the unit, name video streams, watch live or recorded video, and much more.

Applications

- Professional Broadcast
- Mobile News Broadcasting
- Sports TV
- Distance Learning
- Religious Broadcasting
- Government Video
- Defense
- Telemedicine
- Mobile Applications
- Digital Signage
- Surveillance
- Law Enforcement
- ...and More

The Citadel Advantage

Citadel's encoder utilizes Level 4.1 H.264, which is an advanced compression algorithm providing a 2:1 reduction in bit rates with equal image quality when compared to MPEG2. Broadcasters who previously would have broadcast using half D1 can specify full D1 or even HD without exceeding their bandwidth allocation.



Technical Specifications

Video Input

- 1 ch HDMI or DVI up to 1080p60/50
- 1 ch HD 5 wire Component in YUV/RGB+HV (75 Ohm BNC)
- 1 ch HD 3 wire Component in YUV/RGB, Sync on Green
- 4 ch SD Composite (75 Ohm BNC)
- 1 ch DVB-ASI MPEG-TS encapsulated MPEG2/H.264 (Optional)

Video Output

- 1ch HDMI/DVI 1080i60/50
- 1ch SD Composite 480i60/50 (75 Ohm BNC)
- 1 ch DVB-ASI MPEG-TS encapsulated H.264 (Optional)

Audio

- **Channels:** Stereo (dual mono)
- **Audio Inputs:** HDMI or 4x Mono Terminal Block
- **Audio Outputs:** HDMI & 3.5mm audio jack

Codec

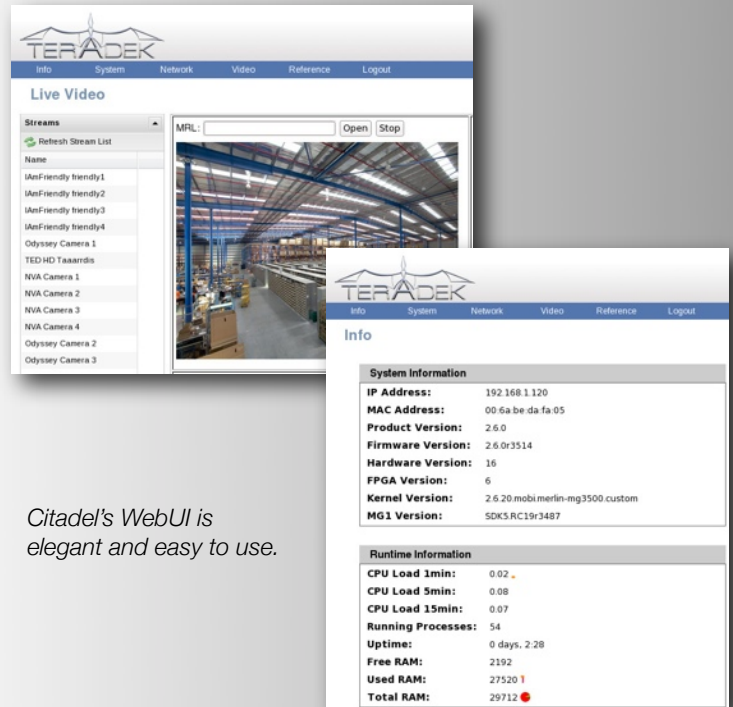
- **Compression Algorithm:** High Profile H.264 (L4.1), MJPEG, MPEG-TS
- **Bit Rate:** 64 Kbps to 20 Mbps
- **Resolution:** HD (1920 x 1080), Full D1, CIF, XVGA, SVGA, VGA
- **Audio Compression:** AAC, MP2
- **Decode Algorithm:** H.264 High Profile (L4.1), MPEG2, MJPEG, MPEG-TS
- **No. Channels Encoded or Decoded:** 1 HD or 4 D1

Network

- **Ethernet:** 10/100/1000 Base-T
- **Ethernet Protocols:** TCP/IP, UDP, HTTP, DHCP, NTP, RTP, RTSP, RTP over HTTP, SSL, MPEG-TS, IGMP, Multicast
- **Advanced built-in web server, with feature-rich WebUI**
- **Point to Point (TCP or UDP), Multiple Unicast (UDP), or Multicast (UDP+IGMP)**

Interfaces

- **USB 2.0:** 2 Powered Ports
- **1x RS485 or RS422, plus 1x RS232**
- **Alarm Inputs:** 4
- **Discreet Outputs:** 2
- **PTZ & POS Integration**
- **Wifi/GPS/GSM Connectivity:** Contact Teradek for list of tested peripherals.



Citadel's WebUI is elegant and easy to use.

Physical Characteristics

- **Dimensions:** 7" W x 5.75" D x 1.6875" H
- **Weight:** Approx. 1 lb.
- **Nominal Power Consumption:** 7.5W
- **PoE:** 802.3af Compliant
- **Auxiliary Power Input:** 9-40V DC
- **EMC Emission:** EN 55022, FCC Ch 15 Subpart B
- **EMC Immunity:** EN 55024

Environmental

- **Temperature:** 0 to +50 C
- **Humidity:** 95% non condensing

Ordering Information

CTD-10	Citadel
CTD-20	Citadel w/ ASI Output
CTD-30	Citadel w/ ASI Input

Specifications preliminary and subject to change. All certifications pending. 5/03/2010

