

## **Eduspot Technical Specifications:**

Eduspot is a software product that enables real time webcast and recording of video and slide presentations over the Internet using off-the-shelf hardware. Our product achieves the following:

- Proven under Indian conditions – reliable functioning sites that are more than 4 years old.
- Absolutely no learning requirement from Instructors/Presenters
- Few minutes of practice required for the camera operators who need not be tech savvy.
- Real-time as well as On-Demand content available immediately on-line over the Internet through Browser.
- **Slides and Video visible simultaneously, synchronized**
- **Slides in JPEG form for excellent clarity**
- **Random access features for recorded content**
- **HTML5 Universal Device support including, Android, iPad etc. for recorded content.**
- Fully software intellectual property with locally available off-the-shelf hardware resources.
- **Capable of being manually controlled by lay personnel via UI for precise control**
- **Multiple Camera Views**
- Capable of accepting video input through Ethernet, USB, or Composite through frame grabber.
- **Composite video can be from camera or DVD or tape player.**
- **Single Person Multiple Camera Control**
- **Full Room Coverage**
- **Ability to pre-compose a shot before selecting a camera view**
- **Full Instructor/ Presenter Mobility**
- Local back-up of content to prevent content loss
- **Ability to zoom with good legibility for On-Line audience on handwriting on White/Black Boards.**
- Coverage of both Instructor/Presenter and On-Site audience
- On-Site audience interaction video and audio capture
- On-Line audience interaction through text messaging
- Video and Audio Latency of about 50 seconds for On-Line audience
- Achieves full 1:N unidirectional video and audio coverage.
- **Video Bit-Rate can be varied from 90 kb/s to 1200 kb/s.**
- Not recommended for heavy instantaneous two way interaction like in a Video-Conference.

- Recommended for occasions where predominant data flow is from point of presentation to On-Line audience – like lectures, presentations and events
- Single Video Stream + Chat Window + Slide visible to On-Line Audience
- **Automatic OCR for slides**
- **Search capability based on Slide Title and Extracted Keywords**
- **Automatic insertion of video frame based slides in recorded content – enables random access of blackboard based lectures.**
- Ability to hand out / view content off-line over removable media
- Video editing with free Windows Media Player
- Audio editing with third party sound editors like Dart Pro 24

Our software enables integration of hardware items that need to be directly purchased by the customer to perform the application function described above.

**The main hardware components are as follows:**

- a) Recorder Computer: The heart of the system is a Windows based PC with Windows 7 Operating System or higher which is used by a designated person to control the cameras; to select a view from a multiplicity of cameras, to compose the shot; to encode sound from an amplified source with the video frames, to locally record the real-time edited video stream and to push the video on to a streaming server for archiving as well as for streaming. Minimum i5 or equivalent processing power , Min 2 GB RAM and 200 GB Hard Disk. .

The video is streamed and saved in Windows Media Format (.wmv).

The choice of frame rate is 30 fps

The bit rate for encoding has stops ranging from 60 kb/s to 1000 kb/s

Source of Video Signals: Our standard unit has 2 nos. of Axis – 214 PTZ or Axis – 5414P or Axis- 5415P Cameras or any video camera with composite output. In case a traditional video camera composite output is used then an Osprey 100 frame grabber needs to be installed as well.

Axis – 214 Specifications:

Pan, tilt, zoom network camera with built-in 26x optical zoom, auto focus lens + 18x digital zoom which operates under all light conditions, indoors as well as outdoors

It provides wide coverage with its ability to pan 340 degrees, tilt 100 degrees and zoom in on specific details.

Encoding: Simultaneous Motion JPEG and MPEG-4 (We use MJPEG)

Resolutions up to 704x576 at up to 25 fps (PAL) or 704x480 at 30 fps (NTSC)

Axis – P5414-E Specifications:

Pan, tilt, zoom network camera with built-in 26x optical zoom, auto focus lens + 18x digital zoom which operates under all light conditions, indoors as well as outdoors

It provides wide coverage with its ability to pan 340 degrees, tilt 100 degrees and zoom in on specific details.

Encoding: Simultaneous Motion JPEG and MPEG-4 (We use MJPEG)

Resolutions up to 720x1280 at up to 25 fps (PAL) or 704x480 at 30 fps (NTSC)

Axis – P5415-E Specifications:

Pan, tilt, zoom network camera with built-in 26x optical zoom, auto focus lens + 18x digital zoom which operates under all light conditions, indoors as well as outdoors

It provides wide coverage with its ability to pan 340 degrees, tilt 100 degrees and zoom in on specific details.

Encoding: Simultaneous Motion JPEG and MPEG-4 (We use MJPEG)

Resolutions up to 1080x1920 at up to 25 fps (PAL) or 704x480 at 30 fps (NTSC)

**b) Presenter Computer:**

The has to be a Windows based computer with Windows 2000 or later version of Windows operating system with .Net framework installed. Min 1 GB RAM Recommended.

The Presenter Computer enables a person performing Instruction or Presentation to set up the Lecture, Presentation or Event as well as to do a presentation from. The Presentation elements can include slides in Power Point format or PDF format or an MSWord document or a web page.

**c) Streaming Server:**

This is a Windows 2003 Server with IIS6 installed. Min, 4GB RAM, 64-Bit Architecture, 500 GB Hard Disk.

This both webcasts the content to On-Line audience as well as Archives the content to make the content available to the audience on an On-Demand basis.

EDUSPOT will assist customers in the choice of hardware.

**Software:**

Our software has components on each of the above hardware items and its main function for the three components to interact with each other to achieve the application functions described.

**d) Browser Support:**

Recorded Content will be fully HTML5 compatible viewable with all major OS and mobile devices.

Live Webcast viewable with Internet Explorer 9 and higher with Active X

installed. Live webcast is viewable only with Windows machines.

e) **No. of Simultaneous On-Line Users**

Available Upload Bandwidth / Bit Rate of Encoding

Unlimited number of simultaneous On-Line Users can be achieved by employing CDN (Content Delivery Network) – however, charges proportional to total data transferred apply in such a case.