H.264 RECORDING & STREAMING SOLUTIONS
APPLICATION GUIDE FOR ONLINE LEARNING
The use of recording and streaming technology in education is increasing rapidly for online learning and virtual classroom requirements. Today, attendance is being rapidly replaced by online presence at home. The key to remote learning is the ability for a student to use standard equipment like a laptop or tablet, and work through a browser to access online video content.

Successful remote teaching, requires a solution that can combine a variety of audio and video sources and automate the recording, streaming, and publishing process.

Extron Streaming Media Processors are enabling seamless remote learning options for thousands of schools, universities, and even corporate or government organizations around the world.
## APPLICATIONS

| **Easily enable streaming and recording with mobile device control for PoleVault Systems.** |
| **RECORDING STUDIO WITH LEARNING GLASS** – PAGE 8 |
| A studio for self recording content with a camera capturing video through Learning Glass onto a USB drive. |
| **ONE TOUCH RECORDING AND STREAMING WITH STUDIOSTATION** – PAGE 10 |
| StudioStation is a convenient solution for recording and streaming high quality audio video presentations, using a pre-configured kit. |
| **MEDIUM CLASSROOM WITH INTERACTIVE WHITEBOARD** – PAGE 12 |
| A medium classroom with an interactive whiteboard that can be used for local teaching but also for remote teaching. The teacher can switch between the camera and the output of interactive whiteboard for the remote students. |
| **CLASSROOM LECTURE CAPTURE WITH OVERFLOW** – PAGE 14 |
| A large classroom needs to be upgraded with the capability to record and stream content to remote students and to overflow rooms. In addition, it needs to integrate with a content management platform for structured distribution of learning content to students. |
| **AUDITORIUM WITH LIVE EVENT STREAMING** – PAGE 16 |
| An auditorium needs to be upgraded with the capability to live stream events to remote students. The auditorium has dual projectors and is equipped with front and ceiling speakers for voice reinforcement and program audio. |
| **CLASSROOM UPGRADE FOR SOFT CONFERENCING AND CAPTURE** – PAGE 18 |
| A classroom with professional camera and microphone to be integrated with remote teaching on a software conferencing platform such as Zoom, Microsoft® Teams, or Google Meet. |
Requirements

A simple classroom equipped with video projector and speech reinforcement. The teacher needs to record the lesson while also stream live to remote students at home while teaching the students present in the classroom.

The room size requires an audio system for sound reinforcement with ceiling tile speakers delivering consistent sound levels across the listening area.

Video from the teacher’s laptop and audio from the microphone is combined into one stream to be viewed by the remote students. The stream will also be recorded simultaneously for future off-line playback.

Simple operation of starting and stopping the recording is achieved with the function buttons on the pendant microphone.

Extron Equipment List

- SMP 111 – H.264 Streaming Media Processor
- MPA 152 Plus – Stereo Amplifier 15 W per channel
- IPCP Pro 250 – IP Link Pro Control Processor
- FF 220T – Full-Range Flat Field Speakers with Low Profile Enclosure
- EBP 108 EU – eBUS Button Panel with 8 Buttons
- Flex55 SuperPlate 150 – HDMI and Audio – Black
- VLME 3001 – Single Pendant VoiceLift Pro Mic with eBUS
- Optional vRCP FlexOS App – Virtual Remote Control Panel for SMP Series

Capabilities

- Record and stream simultaneously
- High quality audio with VoiceLift Pro EB pendant mic and function buttons for starting, pausing, and stopping recordings
- Connectivity for HDMI laptop
- Control for AV functions including power, recording, streaming, and volume control
- Extron patented Flat Field Technology delivers consistent sound levels across the listening area
- ENERGY STAR® qualified amplifier with 2 x 15 watts
System Design

**Mounted in ceiling**
- Extron FF 220T Full-Range Flat Field Speaker
- Extron MPA 152 Plus Mini Power Amplifier Mounted at Video Projector
- Video Projector with audio de-embedding

**Mounted in Wall**
- Extron Flex S5 102 with EBP 108 EU FlexS5 SuperPlate 100 Mounted on Wall

**On Desk**
- Laptop
- Extron VLP 302 VoiceLift Pro Pendant Microphone
- Extron VLR 302EB VoiceLift Pro Receiver

**System Cabinet**
- Extron SMP 111 Streaming Media Processor
- Extron IPCP Pro 250 IP Link Pro Control Processor
- eBUS LAN
- RS-232
Requirements

A simple classroom equipped with the PoleVault solution requires the ability for online content creation. The teacher needs to record the lesson while also stream live to remote students at home while teaching the students present in the classroom.

The room size requires an audio system for sound reinforcement with ceiling tile speakers delivering consistent sound levels across the listening area.

Video from the teacher’s laptop and audio from the microphone is combined into one stream to be viewed by the remote students. The stream will also be recorded simultaneously to a USB drive or a network share for future off-line playback.

Simple operation of starting and stopping the recording is achieved with the function buttons on the pendant microphone or from a mobile device with the virtual remote control panel.

Extron Equipment List

- SMP 111 – H.264 Streaming Media Processor
- DA2 HD 4K PLUS – HDMI Distribution Amplifier
- FF 220T – Full-Range Flat Field Speakers with Low Profile Enclosure
- PVS 407D – PoleVault Switcher
- PVT HD RGB – HDMI, RGB & Audio Input Wallplate
- MLC Plus 100 – MediaLink Controller
- VLP 302 – VoiceLift Pro Pendant Microphone
- Optional vRCP FlexOS App – Virtual Remote Control Panel for SMP Series

Capabilities

- Record and stream simultaneously
- High quality audio with VoiceLift Pro EB pendant mic and function buttons for starting, pausing, and stopping recordings
- Connectivity for HDMI laptop, RGB and Audio
- Control for AV functions including power, recording, streaming, and volume control
- ENERGY STAR® qualified switcher
# System Design

## Mounted in ceiling

- **Extron FF 120**
  - Full-Range
  - Flat Field Speaker

## Mounted in Pole Mount Kit

- **Extron PVS 407D**
  - PoleVault Switcher
- **Extron VLR 302**
  - VoiceLift Pro Receiver
- **Extron DA2 HD 4K PLUS**
  - HDMI Distribution Amplifier

## Mounted in Wall

- **Extron PVT HD RGB**
  - HDMI, RGB & Audio Input Wallplate
- **Extron MLC Plus 100**
  - MediaLink Controller

## On Desk

- **Extron VLP 302**
  - VoiceLift Pro Pendant Microphone
- **Extron vRCP**
  - Virtual Remote Control Panel

## System Cabinet

- **Extron SMP 111**
  - Streaming Media Processor

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**Extron**

- Full-Range Flat Field Speaker
- PoleVault Switcher
- VoiceLift Pro Receiver
- HDMI Distribution Amplifier
- HDMI, RGB & Audio Input Wallplate
- Virtual Remote Control Panel
- Streaming Media Processor
Requirements
A studio for self-recording content with a camera and microphone onto a USB drive.

The presenter is filmed through the glass, writing onto the transparent surface with a neon marker, where the text glows and appears as if floating in air.

The SMP 111 horizontal video mirroring feature enables automatic mirroring of the content.

Simple operation of starting and stopping the recording is achieved with a remote control panel.

Extron Equipment List
- SMP 111 – Single Channel H.264 Streaming Media Processor
- LinkLicense – SMP 111 Horizontal Video Mirroring Upgrade
- IPCP Pro PCS1 – IP Link Pro Power and Device Control Processor
- RCP 101 D – Remote Control Panel for SMP series products
- SMB 111 – 1-gang Surface Mount Box
- Optional vRCP FlexOS App – Virtual Remote Control Panel for SMP Series

Capabilities
- Recording with Horizontal Video Mirroring
- Record and stream simultaneously
- Produce MP4 media files that are compatible with virtually any media player
- Confidence display for viewing recorded video
- Control for AV functions including light, recording and inserting chapter marks
- Inserting USB drive will automatically start up the system and switch on lights
Requirements
Extron StudioStation® is a quick, simple, and convenient solution for one-touch recording and streaming of high-quality video and audio presentations eliminating the need and expense of designing and programming a customized system.

To turn the system on, insert a USB drive and press the record button to begin recording and streaming. Systems are customizable to support any installation.

Extron Equipment List
- SMP 111 – H.264 Streaming Media Processor
- IPCP Pro PCS1 xi – IP Link Pro Power and Device Control Processor
- RCP 101 EU – Remote Control Panel for SMP series products
- SMB 211 – Low Profile Surface Mount Box for Flex55 and EU Products
- VLME 3001 – Single Pendant VoiceLift Pro Mic with eBUS
- Optional vRCP FlexOS App – Virtual Remote Control Panel for SMP Series

Capabilities
- Simple one button recording and streaming
- Connectivity for HDMI laptop
- High quality audio with VoiceLift Pro EB pendant mic and function buttons for starting, pausing, and stopping recordings
- Confidence display for viewing recorded or streamed video
- Control for AV functions including light, recording, and inserting chapter marks
System Design

Mounted in Room

- Camera
- Studio Light

Placed on Desk

- Extron VLP 302 VoiceLift Pro Pendant Microphone
- Confidence Display
- Extron vRCP Virtual Remote Control Panel
- USB Flash Drive for local storage

Mounted under Desk

- Extron SMP 111 Streaming Media Processor
- Extron IPCP Pro PCS1 xi Control Processor
- Extron VLR 302EB VoiceLift Pro Receiver
Requirements

The teacher needs an interactive whiteboard that can be used for local teaching but also for recording and streaming for remote teaching. The teacher can switch between the camera and the output of interactive whiteboard for the remote students.

The system supports a professional grade camera and microphone.

The class can be recorded on a local USB drive or network attached storage.

Optionally there can be a confidence display for viewing the live video stream.

Extron Equipment List

- SMP 111 – H.264 Streaming Media Processor
- SW2 HD 4K Plus – Two Input HDMI Switcher
- IPCP Pro 250 – IP Link Pro Control Processor
- EBP 108 EU – eBUS Button Panel
- RCP 101 EU – Remote Control Panel for SMP series products
- SMB 213 – 3-gang Low Profile Surface Mount Box for Flex55 and EU Products
- Flex55 103 – 3-gang Mounting Kit for Flex55
- VLME 3001 – Single Pendant VoiceLift Pro Mic with eBUS
- Optional vRCP FlexOS App – Virtual Remote Control Panel for SMP Series

Capabilities

- Record and stream simultaneously
- Switching between camera and interactive whiteboard picture
- Confidence display for viewing live video stream
- Connectivity for HDMI laptop and USB drive
- Control for AV functions including power, switching inputs, and recording
System Design

Mounted in Room

Interactive Whiteboard

Camera

Laptop

USB Flash Drive for local storage

Extron SMB 213 Surface Mount Box configured with Flex55 Plate for HDMI and USB connectivity

EBP 108 EU eBUS Button Panel

RCP 101 EU Remote Control Panel

Extron vRCP Virtual Remote Control Panel

Extron SW2 HD 4K Plus Two Input HDMI Switcher

Mounted under Desk

Extron SMP 111 Streaming Media Processor

Extron VLR 302EB VoiceLift Pro Receiver

Extron VLP 302 VoiceLift Pro Pendant Microphone

Classroom for Flipped Learning with Whiteboard

HDMI Laptop

USB Flash Drive

USB

Audio

HDMI

eBUS

RS 232

Confidence Display

Extron IP CP Pro 250 IP Link Pro Control Processor

Extron VRCP Virtual Remote Control Panel

Extron RCP 101 EU Remote Control Panel

Extron EBP 108 EU eBUS Button Panel

USB Flash Drive for local storage

HDMI

USB

RS 232

USB
CLASSROOM LECTURE CAPTURE WITH OVERFLOW

Requirements
An existing large classroom needs to be upgraded with the capability to record and stream content to remote students. It also needs to integrate with a content management platform for distribution into common learning management systems.

The classroom has a ceiling tile microphone, front and ceiling speakers for voice reinforcement and program audio. The beamforming ceiling microphone detects where the teacher is, and this information is used to point the camera at the teacher with the MediaLink controller.

Several sources such as a document camera, instructor camera, and computer source must be streamed to remote students while also being viewed locally by students in the classroom.

Extron Equipment List

- SMP 352 – Dual Recording H.264 Streaming Media Processor
- IN1804 DO – Four Input 4K/60 Seamless Switcher
- DMP 64 Plus CAT – 6x4 ProDSP Digital Matrix Processor
- XPA U 1004 SB – Four Channel Bridgeable Output Amplifier 200 Watts Per Channel
- Cable Cubby 1202 – Cable Access Enclosure for AV Connectivity, Remote Control, and Power
- MLC Plus 200 – MediaLink Plus Controller
- SM 26 – SpeedMount Two-Way Surface Mount Speakers with 6.5" Woofer
- FF 220T – Full-Range Flat Field Speakers with Low Profile Enclosure

Capabilities

- Integrates document camera, instructor camera, and computer source into presentation system
- Record and stream simultaneously
- Supports content management platforms such as Kaltura, Panopto, and OpenCamp
- Supports Live streaming via YouTube, Facebook Live, Twitch, Wowza, and others
- Display camera and laptop picture in various window arrangements, including picture-in-picture and picture-by-picture arrangements
- Dual channel recording and streaming with confidence stream
- Connectivity for HDMI laptop, document camera and presenter camera
- Simple button control for AV functions including power, switching input and recording
Adding recording and live streaming to current classroom

**Fully Equipped Large Classroom**

**Mounted in ceiling/wall**
- Extron HDX 880
- Extron SMD 101
- Projector
- Extron MP 20
- Speaker ( Mounted on Wall )
- Video Projector

**Mounted on Lectern**
- Share MIRA/922
- Share Mira
- Extron Mic Flex 700
- Microphone Flex Control
- Extron MPA 210
- Stereo Mixer
- Extron IME8400
- PowerView

**Mounted in Lectern**
- Extron
- MPA U 3004 15
- Extron MPA U 3004 15
- Four Channel Power Amplifier
- Extron
- SMP 352
- Streaming Media Processor
- Extron SMP 352 Flex C AF
- ProAV Digital Matrix Processor
- USB Flash Drive

**Internet**
- LAN
- Firewall
- HDMI

**Content Delivery Networks**
- YouTube
- Facebook Live
- Vimeo
- Microsoft Stream
- MONGA

**Content Management System**
- Panopto
- Kaltura
- OpenCast

**Classroom Overflow**
- Extron
- SMD 101
- Streaming Media Encoder

**Watch on any device**
- Windows / Mac OS / Chromecast
- Tablet ( iOS / Android / Windows 10)
- Mobile phone ( iOS / Android )
Requirements

An existing auditorium needs to be upgraded with the capability to live stream events to remote students.

The auditorium has dual projectors and is equipped with front and ceiling speakers for voice reinforcement and program audio.

Several sources such as a document camera, instructor camera, and local PC need to be able to be streamed to remote students but also to be locally viewed by students. Streams from other classrooms (overflow) can also be viewed on the main projectors.

Extron Equipment List

- SME 211 – H.264 Streaming Media Encoder
- DTP CrossPoint 84 4K IPCP SA – Scaling Matrix Switcher with DTP extension, Control Processor, Audio DSP and Amplifier
- DTP HDMI 4K 230 Tx/Rx – DTP Transmitter/Receiver for HDMI
- DTP T EU 4K 231 – DTP Transmitter for Flex55 and EU Junction Boxes
- Cable Cubby 202 – Cable Access Enclosure for AV Connectivity, Remote Control, and Power
- TLP Pro 1025T – 10” Tabletop TouchLink Pro Touchpanel
- TLP Pro 525M – 5” Wall Mount TouchLink Pro Touchpanel
- XPA U 1002-100V – Two Channel Amplifier 100 watts at 100V
- SM 26 – SpeedMount Two-Way Surface Mount Speakers with 6.5” Woofer
- SF 26CT – SoundField XD Ceiling Speakers
- SMD 202 – Streaming Media Decoder

Capabilities

- Supports live streaming via YouTube, Facebook Live, Twitch, Wowza, and others
- All-in-one 4K matrix switcher, scaler, audio DSP with AEC, audio power amplifier, and control processor
- Video preview of live stream
- Seamless switching transitions
- Touchpanel control for AV functions including power, projector, switching sources and volume
- Connectivity and cable management with Cable Cubby®
Adding live event streaming to auditorium

**Auditorium**

- Mounted in ceiling/wall
- Mounted on Lectern
- Mounted in Rack
- Preview monitor
- Extron SME 211 Streaming Media Encoder

**Watch on any device**

- Windows / Mac OS / ChromeOS
- Tablet (iOS / Android / Windows 10)
- Mobile phone (iOS / Android)

**Content Delivery Networks**

- YouTube
- Vimeo
- Microsoft Stream

**System Design**

- LAN
- Firewall
- Internet
Requirements
To integrate professional grade camera and microphone into software conferencing platforms for remote teaching.

The voice of the teacher is reinforced locally in the classroom and the remote audio from the conference is also amplified and played back via ceiling speakers.

Additionally, these sessions can be recorded for later viewing.

Extron Equipment List
- MediaPort 200 – HDMI and Audio to USB Scaling Bridge
- SMP 351 – H.264 Streaming Media Processor
- MPA 152 Plus – Stereo Amplifier 15 W per channel
- FF 220T – Full-Range Flat Field Speakers with Low Profile Enclosure

Capabilities
- Record and stream simultaneously
- Seamlessly integrates Pro AV cameras and microphones into software codec applications
- Supports popular software communications platforms including Microsoft Skype/Skype for Business/Teams, Adobe Connect, Apple FaceTime, BlueJeans, Cisco Webex, Citrix, GoToMeeting, Google Hangouts, Lifesize Clearsea, and Zoom
- Local audio and voice reinforcement with 2 x 15 W amplifier and ceiling speakers
- USB 4x2 audio interface
- Integrated audio DSP
- Microphone and USB audio ducking
- Digital audio processing including gain, mixing, parametric EQ, filtering, dynamics, and ducking
- AEC reference output
- Video scaling provides USB output from 320x180 to 1080p
System Design

Mounted on/in Ceiling

Extron FF 220T Full-Range Flat Field Speaker

PTZ Camera

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron MPA 152 Plus Mini Power Amplifier

On Desk

Laptop with Conferencing Software

Extron MPA 152 Plus Mini Power Amplifier

HDMI

Confidence Display

HDMI

Mounted in Equipment Rack

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron FF 220T Full-Range Flat Field Speaker

Audio

Extron SMP 351 Streaming Media Processor

Metadata Added by Large Document OCR Software
## H.264 Streaming and Recording

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<th>Streaming Media Encoder</th>
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<td>SMP 111</td>
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<tr>
<td>1 Input Channel</td>
<td>1 Input Channel</td>
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<td>Presentation</td>
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<td>2 Output Streams</td>
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<td>Stream</td>
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<td>1 Recording</td>
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<td>Recording</td>
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<td>Recording</td>
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**Note:**
- SME 211 and SMP 111 handle 1 input channel with presentation streams.
- SMP 351 and SMP 352 handle 2 input channels with a combination of presentation and mixed streams.
- The diagram illustrates how these systems facilitate streaming and recording in distance learning applications.
Recording

Publish your recordings to a content management system to allow editing, assignment to different user groups, conversion to support different platforms and scale to support thousands of users.

Live Streaming

Enable live streaming for large scale audiences by streaming to a public content delivery network (CDN) such as YouTube or Facebook Live. Or via a Content Management System such as Kaltura or Panopto. Our solutions accommodate different line speeds, resolutions and provide a stream address that’s easy to navigate.
**SMP 351**

**H.264 Streaming Media Processor**

The SMP 351 is a high performance recording and streaming processor for capturing and distributing AV sources and presentations as recorded media or live streaming. It incorporates Extron’s FlexOS®, a flexible platform for automating system operation. Accepting HDMI, component, composite, and optional 3G-SDI signals, it applies two-window processing to the selected sources. The SMP 351 can record and stream simultaneously and can stream at two different resolutions and bit rates concurrently using a range of transport protocols and session management options. Comprehensive control and configuration features make the SMP 351 integration-friendly, and easy to control and operate. Requiring no licensing fees, the SMP 351 has a low cost of ownership, making it a cost-effective solution for delivering presentations to a larger audience.

**Key Features**

- Process two high resolution AV sources from up to five available input signals
- Record and stream simultaneously
- High quality scaling with flexible two-window management
- Produce MP4 media or M4A audio files that are compatible with virtually any media player
- Flexible system control options using RCP or vRCP
- Stream concurrently at two resolutions and bit rates from the same source
- LinkLicense® for Dual Channel Recording and Streaming
- LinkLicense for Enhanced Kaltura Features
- LinkLicense for Enhanced Panopto Features

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<th>Model</th>
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<td>SMP 300 Series Panopto Features Upgrade</td>
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<td>LinkLicense</td>
<td>SMP 300 Series Kaltura Features Upgrade</td>
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<tr>
<td>LinkLicense</td>
<td>SMP 300 Series Horizontal Video Mirroring Upgrade</td>
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</table>
**SMP 352**  
*Dual Recording H.264 Streaming Media Processor*

The SMP 352 is a high performance recording and streaming processor for capturing and distributing AV sources and presentations as recorded media or live streaming. It can create independent recordings from two different sources, and incorporates Extron’s FlexOS®, a flexible platform for automating system operation. The SMP 352 accepts HDMI, component, composite, and optional 3G-SDI signals and applies two-window processing to selected sources. It can record and stream simultaneously and can stream at two different resolutions and bit rates concurrently using a range of transport protocols and session management options. With no recurring licensing fees and comprehensive control and configuration features, the SMP 352 is a cost-effective, integration-friendly solution for delivering presentations to a larger audience.

**Key Features**

- Process two high resolution AV sources from up to five available input signals
- Record and stream simultaneously
- High quality scaling with flexible two-window management
- Produce MP4 media or M4A audio files that are compatible with virtually any media player
- Flexible system control options using RCP or vRCP
- Stream concurrently at two resolutions and bit rates from the same source
- Dual channel recording and streaming with confidence stream
- LinkLicense for Enhanced Kaltura Features
- LinkLicense for Enhanced Panopto Features

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</table>
SMP 111
Single Channel H.264 Streaming Media Processor
The SMP 111 is a high performance recording and streaming processor for capturing and distributing AV sources and presentations as live streaming and recorded media. The SMP 111 accepts an HDMI signal with embedded audio and an analog audio signal. Extron high performance scaling and flexible signal processing enable superior display of content from varying resolutions from computers and HDTV sources. The SMP 111 supports extensive streaming capabilities. It can record and stream simultaneously, with independent resolutions and bit rates, using a range of transport protocols and session management options. Recording with the SMP 111 provides easy capture of live HDMI signals to an internal flash drive and external USB drives. Requiring no licensing fees, the SMP 111 is a cost-effective solution for streaming and recording content.

Key Features
- Process live, high resolution HDMI video and audio with metadata
- Record and stream simultaneously
- High quality scaling with aspect ratio control, size, and position
- Produce MP4 media files that are compatible with virtually any media player
- Automatic file uploading
- Flexible system control options using RCP or vRCP
- RTMP streaming protocol supports popular third party hosting services
- RTMPS support for Facebook Live

SME 211
Streaming Media Encoder
The SME 211 is a high performance H.264 streaming media encoder for streaming audio and video signals over IP networks. It accepts an HDMI signal with embedded audio and an analog audio signal. Extron high performance scaling and flexible signal processing facilitate superior display of content from different sources. The SME 211 supports unicast and multicast streaming protocols, including RTMP for streaming directly to major Content Delivery Networks – CDNs, or social media platforms like Facebook and YouTube. Presets allow a quick recall of system configurations. The SME 211 can stream at two different resolutions and bit rates concurrently, supporting up to six simultaneous streams with push and pull streaming. Built in audio mixing and DSP features enable enhanced audio processing without requiring external mixing and DSP equipment.

Key Features
- Stream video at up to 1080p/60
- Bit rates up to 25 Mbps
- Enhanced encoding control
- Process live, high resolution HDMI video and audio
- Stream at two resolutions and bit rates simultaneously with independent stream control
- Simultaneous multicast and unicast streaming
**SMD 101**  
**H.264 Streaming Media Decoder**

The SMD 101 is a compact, high performance H.264 decoder used with Extron encoders to provide complete end-to-end AV streaming systems. It decodes live streams from H.264 encoders and plays back AV media files available from network shares. It is compatible with streaming resolutions and refresh rates up to 1080p/60. Advanced signal processing, scaling, and aspect ratio management supply high quality signals to AV displays. The SMD 101 offers integration-friendly control features such as IR remote, wired IR, RS-232, or Ethernet and an easy-to-navigate Web interface, which provide flexible control and management options. This compact, energy-efficient decoder is an ideal for use in overflow, monitoring, multi-channel streaming systems, high resolution signage, and messaging applications.

**Key Features**
- Supports live IP video stream decoding
- Supports streaming resolutions from 480x320 up to 1080p/60
- AV media file playback from network shares
- Compatible with MP4 and MPEG-2 Transport Stream container formats
- Selectable audio output format: HDMI-embedded stereo audio or analog stereo audio
- Integrated scaler offers selectable output resolutions from 640x480 to 1920x1200

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<td>H.264 Decoder</td>
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**SMD 202**  
**H.264 Streaming Media Player and Decoder**

The Extron SMD 202 is a compact, high performance media player and live stream decoder used in H.264 streaming applications. It provides the flexibility to present a locally connected AV signal, decode a live streaming source, or play back media files from internal memory, removable SD card, local USB, or network storage. The SMD 202 supports a wide range of media file container formats and streaming protocols, making it adaptable for use with a variety of encoded media. Advanced signal processing, scaling, and aspect ratio management supply high quality signals to AV displays. An intuitive, interactive on-screen menu makes setup and source selection using front panel buttons or the optional handheld IR remote control easy. Designed for pro AV applications, the SMD 202 can be controlled using Ethernet, RS-232, IR, or wired IR.

**Key Features**
- Plays back media files from internal memory, removable SD card, USB storage, or network shares
- Decodes live H.264 streams using a variety of streaming protocols
- Local HDMI input with embedded stereo or analog stereo audio
- Selectable output resolutions from 640x480 to 1920x1200 including 1080p/60
- Supports streaming resolutions from 480x320 up to 1080p/60
- Multi-language, interactive on-screen display for setup and source selection

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<th>Model</th>
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<td>SMD 202</td>
<td>H.264 Player and Decoder</td>
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**RCP 101**

**Remote Control Panels for SMP Series Products**

Extron RCP 101 Series remote control panels feature backlit transport controls for remote operation of Extron SMP Series products. A USB port provides convenient access to a thumb drive or external portable storage. RCP 101 panels have status and alarm indicator lights with an audible buzzer. A 15 foot (4.6 meter) USB cable is included. The RCP 101 panels may be used with Extron USB Extender Plus Series twisted pair extenders to support distances up to 330 feet (100 meters). Available in decorator-style, MK, and EU versions; the EU version is compatible with Flex55 enclosures or EU junction boxes. RCP 101 Series panels include black and a white faceplates to compliment a wide range of environments. MK model is available in white only.

**Key Features**

- Backlit transport controls for SMP Series products
- USB port supports thumb drives and external portable drives
- Available versions include decorator-style, MK, and EU
- Compatible with Flex55 mounting kits and enclosures - RCP 101 EU
- Status and alarm indicators with buzzer

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**vRCP FlexOS App**

**Virtual Remote Control Panel for SMP Series Products**

The new vRCP is a virtual remote control panel FlexOS App offering Extron SMP customers a free option to remotely control the SMP Series products on any device, using any browser, without needing to use a physical control interface. A simple and intuitive user interface provides customers an easy way to manage starting, stopping, pausing, and marking an SMP recording from anywhere in the room.

**Key Features**

- Remotely control SMP products using any mobile device browser, without an RCP, or in conjunction with an RCP
- Display record elapsed time to show how long the recording has run
- Display record remaining time to show the remaining time before a recording will end
- Display SMP recording status including stopped, setup (preparing for a new recording), recording, or paused
- Display SMP device name and location on a mobile browser page to ensure the correct SMP unit when managing multiple SMP devices
- Status indicator displays active alarm name, so the user can view the active alarm that relates to the recording on the mobile page

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**Model** | **Version Description** | **Part Number**
--- | --- | ---
RCP 101 D | SMP Series Remote Control Panel – Decorator-Style | 60-1598-01
RCP 101 MK | SMP Series Remote Control Panel – MK Mount | 60-1598-22
RCP 101 EU | SMP Series Remote Control Panel – Flex55 and EU | 60-1598-32
HDMI AND AUDIO TO USB SCALING BRIDGES

MediaPort 200
HDMI and Audio to USB Scaling Bridge

The Extron MediaPort 200 is an HDMI to USB bridge for integrating pro AV sources or systems with software codec conferencing applications. It works seamlessly with a computer using generic USB video and audio drivers. The MediaPort 200 features an HDMI input with HDCP-compliant loop through, accepts signals up to 1920x1200, and scales video to a USB 2.0 output. Audio features include program and mic inputs, HDMI audio de-embedding, and USB bidirectional audio, plus AEC reference and line level outputs. The MediaPort 200 also includes DSP with EQ, filters, mixing, dynamics, and ducking. This allows the MediaPort 200 to serve as a complete soft codec interface, with the added flexibility of integrating into larger hardware codec or DSP systems. The MediaPort 200 enables versatile integration of conferencing computers into pro AV designs.

Key Features
• Seamlessly integrates pro AV sources or systems into software codec applications
• USB 2.0 device connection uses generic USB drivers for universal compatibility

VoiceLift Pro Microphone EB
High Performance Wireless Microphone System with eBUS

The VoiceLift® Pro Microphone EB system integrates with eBUS® enabled control systems to provide voice amplification for a wide variety of installations. The VoiceLift receiver connects to the eBUS port on an Extron IPCP control processor for power and customizable control. State-of-the-art wireless technology for voice amplification utilizes digital transmission and pairing in a dedicated spectrum to provide superior performance over traditional systems. VoiceLift Pro EB integrates seamlessly with IPCP control processors and an audio power amplifier to provide a complete voice amplification solution.

Key Features
• Integration with Extron control systems provides flexible control capabilities. The pendant microphone buttons can trigger events such as an instant alert or start/stop recordings on an SMP series streaming processor to support lecture capture installations.
• Advanced RF wireless technology provides superior sound quality, increased reliability, greater range, and reduced interference over traditional systems
• DSP maximizes sound quality and intelligibility

Video scaling provides USB output from 320x180 to 1080p/15 to match common software codec requirements
• Integrated audio DSP
• AEC reference output
• HDCP-compliant HDMI input and loop-through

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<td>Single Pendant VoiceLift Pro Mic with eBUS</td>
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<td>VLME 3002H</td>
<td>Pendant &amp; Handheld VoiceLift Pro Mics with eBUS</td>
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