



CASE STUDY

NYU Shanghai Builds a World-Class Smart Campus with Extron AV Technology

Extron



Conference rooms at NYU Shanghai feature multiple wall-mounted displays for dynamic presentations, with podiums incorporating Extron solutions for streamlined connectivity for signal routing.

NYU Shanghai is China's first Sino-US research university and the third degree-granting campus in NYU's global network. Established in partnership with East China Normal University, it has quickly become a leading international institution. The New Bund Campus is NYU Shanghai's main campus, with a nine-story academic building including a 600-seat auditorium, 78 seminar rooms and lecture halls, laboratories, a 5,000-square-meter library, and a two-floor reading hall and colloquium. To support its rapid growth, NYU Shanghai selected Extron AV solutions to create a scalable, reliable, and collaborative learning environment across more than 100 teaching and meeting spaces.

CHALLENGES

The New Bund Campus required a comprehensive AV system to support both academic and administrative activities. From interactive teaching and hybrid learning to departmental meetings and high-profile presentations, each space had unique AV demands.



Instructor stations in NYU Shanghai classrooms feature Extron TLP Pro touchpanels for intuitive control and Cable Cubby enclosures for convenient connectivity, ensuring seamless signal routing and hybrid-ready presentations.

“We selected Extron for our new campus for its proven reliability, responsive support, and comprehensive API capabilities.

Extron meets top Pro AV standards with high efficiency, long service life, and system stability. Its intuitive software simplifies setup and management, reduces maintenance effort, and delivers a premium AV experience.”

Pan Chang
Senior Director, IT
NYU Shanghai

Strict budgetary requirements and tight timelines further complicated the design process. Financial pressures challenged the AV system design team to find innovative solutions that could meet performance requirements without compromising quality or functionality. In addition, the entire AV system needed to be installed, commissioned, and fully operational in under three months—all while maintaining the university’s high-performance standards.

DESIGN SOLUTION

To address the complex AV demands of its New Bund Campus, NYU Shanghai collaborated with Beijing Broadspace Co., Ltd. to leverage Extron’s scalable and flexible AV systems. From a 600-seat auditorium to compact seminar rooms, the university required a unified yet adaptable solution to support interactive teaching, hybrid learning, and efficient facility management. The design team prioritized ease of use, reliability, and smart automation, enabling faculty and staff to focus on teaching rather than technology.



Extron TLP Pro touchpanels in NYU Shanghai classrooms deliver intuitive AV control and high-performance. Their Gorilla Glass touchscreens are scratch and smudge resistant, making them ideal for high traffic educational environments.

“We commend Extron for its advanced AV technology and exceptional service. Its well documented, full-function APIs and control commands enable intelligent, centralized monitoring and management of campus AV systems. Extron delivers reliable, scalable, future-ready AV solutions backed by responsive, professional support.”

Teddy Zhang
Assistant Director, IT
NYU Shanghai

Fiber-Optic Signal Distribution Creates a Robust Campus Backbone

At the core of the AV infrastructure is the FOX3 Matrix 160x, a modular fiber optic matrix switcher that securely delivers high bandwidth 4K/60 HDMI video, USB, audio, and control signals across long distances. This system connects teaching and meeting spaces throughout the nine-story academic building. For large-scale signal routing within the building, the design incorporates XTP II CrossPoint Matrix Switchers to serve as the enterprise AV backbone, bridging local DTP room systems and the FOX3 fiber links for end-to-end distribution over twisted pair and fiber.

Interactive Smart Classrooms

NYU Shanghai standardized on Extron DTP CrossPoint Matrix Switchers in each classroom. These all-in-one presentation systems combine 4K/60 switching, built-in scalars, audio DSP with AEC, Class D power amplifiers, and an integrated control processor. The classrooms utilize a combination of endpoints to transmit AV signals from lecterns, wall plates, and teacher



Extron XTP II CrossPoint 3200 modular digital matrix switchers along with DTP3 T 202 HDMI transmitters and DTP3 R 201 receivers deliver robust 4K/60 signal routing and reliable AV performance.

laptops to the central switcher. In addition, DTP CrossPoint switchers support integrated twisted pair infrastructure, simplified cable routing, streamlined system design, and reduced cost.

Centralized Control and Automation

A key element of the design at the New Bund Campus is smart, centralized AV control. Extron IP Link Pro control processors integrated within DTP CrossPoint switchers support RS-232, RS-485, and Ethernet control, providing comprehensive control for signal routing, display power, sensors, and more. The system is intuitive and automated. When an instructor connects their laptop, the system automatically powers on the projector, lowers the screen, switches inputs to the instructor's laptop, and adjusts lighting for a smooth and effortless start to every presentation.

Small classrooms use a wall-mounted MLC Plus 100 controller. This user-friendly Ethernet-based push-button control system streamlines common AV functions, including power, input switching, volume adjustment, and network control.

Large rooms feature TLP Pro 1025M 10 inch wall-mount touchpanels, which offer a high-performance quad-core processor and the convenience of PoE - Power over Ethernet, eliminating the need for extra cables, while providing intuitive access to all system functions, customizable presets, and visual feedback.

Audio Performance and Processing

Audio coverage and clarity were essential in supporting both in-person and hybrid learning. Small- and mid-sized classrooms use DMP 64 Plus audio DSP processors with Dante® for audio mixing, AEC, and networked audio routing.

The auditorium, library, and labs utilize DMP 128 Plus processors with 12 analog mic/line inputs, eight analog outputs, up to four channels of USB digital audio I/O, eight audio file players, an ACP bus for connecting audio control panels, and configurable macros. The AT models also feature Dante® audio networking, supporting up to 48 digital audio inputs and 24 digital audio outputs for flexible, high-performance integration.

Power amplification in the Lecture Halls is handled by the NetPA U 1002 Two-Channel Power Amplifier, while the classrooms use the NetPA U 2002 SB Bridgeable Output

“We've seen dramatic improvements since deploying Extron AV solutions. End-user complaints are nearly eliminated, work orders dropped by 95%. Stable, energy-efficient, and easy-to-maintain systems greatly improve efficiency, lower IT workload, and deliver a seamless, high-performance experience for educators and students.”

Sunny Qi
Helpdesk Manager, IT
NYU Shanghai

Amplifier. Both models feature built-in Dante and DSP in an energy-saving design that delivers smooth, clean audio.

Seminar Rooms were equipped with SM 26 SpeedMount Two-Way Surface Mount Speakers with 6.5" woofers, offering a broad frequency response and high-quality voice and music reproduction ideal for the demands of academic settings.

Simplified Connectivity

To promote easy access for faculty and guest presenters, Cable Cubby 202 and Cable Cubby 100 enclosures were installed into lecterns, providing HDMI, USB-C, power, and network connections. Under each lectern, DTP transmitters send input signals to the classroom switcher, maintaining a tidy and consistent AV setup.

Hybrid-Ready Spaces

All classrooms and meeting spaces are designed with hybrid teaching in mind. USB, HDMI, and networked AV systems support seamless integration with UC platforms like Zoom and Microsoft Teams, while Dante-enabled audio components ensure consistent voice capture and echo cancellation for remote participants. Lecture capture and remote collaboration are supported via SMP 351 H.264 Streaming Media Processors, enabling real-time streaming and recording of lectures and seminars.

RESULTS

Despite the short timeline and budget pressures, NYU Shanghai's AV integration was completed successfully and on schedule. Extron's localized support and flexible product architecture played a key role in the project's success.

The result is a world-class smart campus that supports lecture capture, interactive instruction, and remote learning, while also streamlining faculty operations with intuitive AV control. The new system enhances communication, simplifies management, and lays a foundation for future expansion.

All photos courtesy of NYU Shanghai.

FEATURED EXTRON PRODUCTS

Model	Description
DTP CrossPoint 108 4K IPCP Q MA 70	10x8 Seamless 4K Scaling Presentation Matrix Switcher
DTP CrossPoint 84 4K IPCP MA 70	8x4 Seamless 4K Scaling Presentation Matrix Switcher
IN1804 DO	Four Input 4K/60 Seamless Scaling Switcher
DTP3 T 202 / R 201	4K/60 HDMI DTP3 Transmitter with Input Loop-Out and Receiver with Audio De-Embedding
DTP2 T 203	Three Input 4K/60 Switcher with Integrated DTP2 Transmitter
DTP HDMI 4K 230 Tx / Rx	HDMI DTP Transmitter and Receiver
DTP T HWP 4K 231 D / T EU 4K 231	DTP HDMI Transmitters – Wallplate and EU Box Styles
FOX3 Matrix 160x	Modular Fiber Optic Matrix Switcher from 8x8 to 160x160
FOX3 T 101 SM / R 101 SM	Fiber Optic HDMI Transmitter and Receiver – Singlemode
FOX3 T 201 SM / SR 201 SM	Fiber Optic HDMI Transmitter and Scaling Receiver with Audio and Control
FOX3 T 301 SM / R 311 SM	Fiber Optic HDMI Transmitter and Receiver with USB, Audio, Control, and 3D Sync
XTP II CrossPoint 3200	Modular Digital Matrix Switcher from 4x4 to 32x32 with SpeedSwitch Technology
XTP II CrossPoint 1600	Modular Digital Matrix Switcher from 4x4 to 16x16 with SpeedSwitch Technology
XTP T USW 103 4K / SR HD 4K	Three Input Switcher with HDMI Output and Scaling Receiver
SW4 HD 4K Plus	4K/60 HDMI Switcher with Ethernet Monitoring and Control
DA2 / DA4 HD 4K	HDMI 4K Distribution Amplifiers
DSC HD-HD 4K PLUS A	HDMI to HDMI 4K/60 Scaler with Audio Embedding and De-Embedding
USB Extender Plus T / R	Twisted Pair USB Extenders – Transmitter and Receiver
OCS 100	Occupancy Sensor
SMP 351	H.264 Streaming Media Processor
Cable Cubby 202 / 100	Cable Access Enclosures for AV Connectivity and Power
IPCP Pro 350 xi	IPCP Pro xi Control Processor
MLC Plus 100	MediaLink Plus Controller
TLP Pro 1025M	10" Wall Mount TouchLink Pro Touchpanel
DMP 64 Plus C AT / DMP 128 Plus AT	ProDSP Digital Matrix Processors with Dante
AXI 44 AT	4 Input, 4 Output Dante Audio Interface
NetPA U 1002-70V / U 2002 SB / U 1004	Power Amplifiers with DSP and Dante
SM 26	SpeedMount Two-Way Surface Mount Speakers with 6.5" Woofer

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