



# Duke Kunshan University

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## INTRODUCTION

Duke Kunshan University (DKU) in Kunshan, Jiangsu, China, is a joint venture between Duke University and Wuhan University, with support from Kunshan Municipal Government. DKU is a world-class liberal arts university that offers 14 undergraduate majors and five graduate programs across various disciplines. To meet growing educational demands, DKU is expanding the campus, improving functionality and educational quality, and developing a 'smart' campus that will better serve its students and faculty.

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**"CRESTRON'S DESIGN REALLY RESONATED WITH THE SCHOOL'S INITIAL CONCEPT, AND THEY PROVIDED VALUABLE ADVICE ON NETWORK AND SYSTEM ARCHITECTURE. THESE SUGGESTIONS WERE SUCCESSFULLY INTEGRATED INTO THE CONSTRUCTION PROCESS."**

**Ning Bai**

*General Manager of Phase II Construction,  
Duke Kunshan University*



## THE CHALLENGE

What distinguishes DKU from other institutions is the absence of a single, comprehensive teaching building. Instead, teaching facilities are spread across various buildings. This, coupled with the diverse room types and numerous audiovisual products, presents a considerable challenge in implementing a fully IP-based architecture.

## THE SOLUTION

To meet its audiovisual needs, DKU adopted the Crestron DM NVX® AV-over-IP platform along with the Crestron Virtual Control VC-4 system. These advanced solutions enable a seamless transition to a fully IP-based AV infrastructure, allowing for centralized management of all classrooms and spaces through a web-based interface. This network-centric foundation empowers the university to efficiently manage and allocate AV resources from a central hub, effectively supporting its academic, administrative, and conferencing needs.

**"WE CHOSE CRESTRON DM NVX FOR ITS HIGH FLEXIBILITY. IT INTEGRATES VIDEO, AUDIO, USB, AND CONTROL OVER A SINGLE CAT5E CABLE, SIMPLIFYING DEPLOYMENT AND MANAGEMENT. THE DM-NVX-360 AND DM-NVX-363, WHICH FUNCTION AS BOTH ENCODERS AND DECODERS, FURTHER ENHANCE FLEXIBILITY AND EASE OF USE."**

**Kekai Qi**  
*Audio-Video Consultant,  
EAA Consultants Co., Ltd.*



## THE TECHNOLOGY

The Phase II construction project includes 22 buildings and requires a comprehensive distributed audiovisual system due to the size of the campus. Consequently, over 900 Crestron DM NVX® AV-over-IP technology units have been installed to ensure seamless connectivity across different room types and locations while supporting multiple signal formats.

Crestron DM NVX technology delivers high-quality audio and video and is perfect for educational purposes since it ensures that content is presented clearly. Its distributed architecture efficiently routes audiovisual signals to any space without extra wiring, allowing for easy adjustments for future input and output devices. In addition to DM NVX technology, Crestron controls help manage classrooms equipped with projectors, touch-screen displays, wireless microphones, ceiling microphones, recording equipment, cameras, and other tools that enhance local, remote, and interactive learning.

**"WE FIND THE FORWARD ERROR CORRECTION (FEC) FEATURE OF CRESTRON DM NVX ESSENTIAL FOR STABLE VIDEO TRANSMISSION. IN OUR CLASSROOMS AND MEETING ROOMS, DM NVX MAINTAINS VIDEO STABILITY EVEN WHEN MOTORIZED SCREENS, CURTAINS, OR LIGHTING ARE IN USE."**

**Kekai Qi**  
*Audio-Video Consultant,  
EAA Consultants Co., Ltd.*

## THE TECHNOLOGY

To create a 'smart' campus with an IT-driven design, DKU has adopted Crestron VC-4 virtual control system instead of traditional central control systems. This system is hosted on the university's servers, making it easy to manage all classrooms and spaces through a user-friendly web interface. With the Crestron Fusion® monitoring and scheduling cloud platform, users can control thousands of devices across the campus from a single management platform, removing the need to visit each space and significantly improving the efficiency of IT operations staff. Environmental elements like lighting and curtains can be adjusted for different teaching scenarios. In remote teaching situations, classroom cameras can switch between front and rear views to capture both students and instructors, enabling high-quality interactive remote learning.

At DKU, the implementation of DM NVX technology has transformed both academic and athletic experiences on campus. Beyond enhancing classroom environments, this cutting-edge technology extends to sports facilities, providing audiovisual support that enriches students' athletic engagements. For instance, the training center boasts sound systems, LED screens, microphones, and signal interfaces, allowing for dynamic training sessions that merge music and visual effects, adding a vibrant dimension to extracurricular activities.



**"THE CRESTRON ENGINEERING TEAM HAS BEEN INCREDIBLY PROFESSIONAL, WORKING CLOSELY WITH US TO FINE TUNE THE EQUIPMENT FOR OUR VARIOUS TEACHING NEEDS. THANKS TO THE TEAMWORK FROM BOTH SIDES, WE HAVE SUCCESSFULLY DESIGNED AND DEPLOYED THE IT ARCHITECTURE FOR THE VC-4 SERVER."**

**William Wan**  
Chief IT Engineer,  
Duke Kunshan University





## RESULTS

The integration of Crestron's technology has significantly improved the functionality of classroom spaces, self-study areas, and extracurricular venues, resulting in a better experience for students and educators alike. With over 900 DM NVX technology devices installed across the campus, the university enjoys superior audio and video transmission throughout its facilities. Additionally, 77 classrooms have been equipped with the VC-4 system, which is seamlessly integrated into the backend infrastructure to ensure reliable operation in the educational environment.

"During the entire process, from system design and equipment delivery to system tuning, the Crestron team was highly involved, working closely with the design firm and integrators. They offered valuable insights and suggestions. Thanks to everyone's efforts, we successfully completed the phase II project, and our current achievements clearly reflect our successful collaboration," says William Wan, Chief IT Engineer at Duke Kunshan University.

## Featured Products

**DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder**  
DM-NVX-360

**DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder with Downmixing and Dante® Audio**  
DM-NVX-363

**Crestron Virtual Control Server Software**  
VC-4-ROOM

**Crestron Fusion® On-Premises Software**  
SW-FUSION-P-L

**10.1 in. Wall Mount Touch Screen**  
TSW-1070

**10.1 in. Room Scheduling Touch Screen**  
TSS-1070

**FlipTop™ FT2 Series Cable Management System**  
FT2-1400-ELEC