A primary school in Hong Kong is looking for a major upgrade to its A/V multimedia system. The school requires up to 1080p signal transmission from 6 different sources (VGA and HDMI) to 1 website and 13 displays (VGA and HDMI) across their campus. The solution would need to extend up to 60 meters across 3 floors and carry a diverse range of source content, including the headmaster’s addresses during assembly and other events (camera), school announcements (camera), experiments and science projects (digital overhead projector), and educational movies (DVD player).
ATEN Solution Benefits

☑️ ☑️ Complete compatibility

The VC812 HDMI→VGA and VC180 VGA→HDMI converters provide complete compatibility between old and new hardware, allowing a smooth and cost-effective transition for the school.

☑️ Award-winning usability

Designed with the user in mind, the VM1600 16x16 Modular Matrix Switch is a pro A/V solution for video wall and digital signage applications. With its Red Dot Design Award-winning interface, the VM1600 reduces the complexity associated with video wall configurations, digital signage setups, and their control, ensuring the shortest learning curve for all staff at the school.

啷 Long distance and high-quality HDMI

The HDBaseT-Lite Extenders (VE802T/VE802R) are able to deliver 1080p HDMI video transmissions up to 70m via Cat 6a cables, without signal interference. Thanks to Power over HDBaseT (POH) technology, the VE802 is powered entirely through its Ethernet cable and does not require an external power source – providing the lowest installation hassle and cost for the school-wide system.

_future-proof

The VM1600’s module-like constructive, which allows a variety of different input/output boards to be switched in and out, ensures that the ATEN A/V solution is both dynamic and easily upgradeable. Furthermore, as both the VM1600 and VE802 extenders support 4K transmissions when using Cat 6a cabling (to 40m – easily upgradeable to 70m with the VE812), the school is already set for the future standard in ultra high definition broadcasts.
Solution Architecture

- **CLASSROOM**
  - Display
  - HDBaseT Video Extender VE802R
  - HDMI Video Extender VE802T

- **PLAYGROUND**
  - Display
  - HDBaseT Video Extender VE812R
  - HDMI Video Extender VE812T

- **SCHOOL HALL**
  - Display
  - HDBaseT Video Extender VE812R
  - HDMI to VGA Video Converter VC812

- **LABORATORY & FUNCTION ROOM**
  - Modular Matrix VM1600

- **CAMPUS TV PRODUCTION ROOM**
  - Live Broadcast
  - Display
  - Camera
  - DVD Player
  - Computer
  - VGA to HDMI Video Converter VC180
  - HDMI Video Extender VE802T

- **LOCATION**
  - CAT 6a
  - HDMI
  - Distance
  - Location

ATEN Product
ATEN I/O Board

Input
Output
## Product Overview

**Modular Matrix Switch**  
VM1600

- Connects any of 16 video sources to any of 16 displays
- Video wall – allows you to create custom video wall layouts via intuitive web GUI
- Seamless Switch™ – provides continuous video streams, real-time switching and stable signal transmission

**4–Port HDBaseT Input/Output Board**  
VM7514 / VM8514

- HDBaseT Connectivity – extends 4 HDBaseT connections up to 100 meters via single Cat 5e/6 cable
- HDBaseT Anti–jamming – resists signal interference during video transmission using HDBaseT technology
- Bi–directional IR channel – IR transmission is processed one direction at a time

**4–Port HDMI Input/Output Board**  
VM7804 / VM8804

- Superior video quality – HDTV resolutions of 480p, 720p, 1080i and 1080p (1920 x 1080)
- Audio–enabled, HDMI audio can be extracted and stereo audio can be embedded
- Consumer Electronics Control (CEC) support
Product Overview

HDMI HDBaseT–Lite Transmitter/Receiver
VE802T / VE802R

- POH (Power over HDBaseT) – supplies power from Transmitter to Receiver over a long distance via one Cat 5e/6/6a cable
- HDBaseT Connectivity – extends an HDMI connection over a long distance via one Cat 5e/6/6a cable
- HDMI (3D, Deep Color, 4K) and HDCP compatible

VGA to HDMI Converter
VC180

- Superior video quality – up to 1080p, WUXGA
- No software required – eliminates incompatibility and installation issues
- Supports dual power sources: VGA port or power adapter (in case the VGA port cannot provide sufficient power)