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Financial Institution, Singapore Large-Scale Community-Controlled Displays for Monitoring and Sharing Financial Exchange Data

A major financial services and trading corporation from Singapore recently decided to expand and update its system of news and data feeds. The upgraded system would need to consolidate control of all company video walls into a single, centralized system with distributed security, access, and reconfiguration controls. The key aim of this project was providing convenient, intuitive control of data and station feeds among all floor traders, while also integrating company marketing and signage channels into a centralized monitoring and control system available only to the chief trading officer.

Key Customer Requirements

Recently, a large investment and financial services firm in Singapore requested an upgrade for a market data display system that chiefly reports real-time market exchange data in two key networked locations: a primary 4x4 video wall on the trading floor, and a secondary 2x2 video wall mounted in the chief trader's private office, from where monitoring and control of the primary feed may also be administered.

In addition to these two video walls, there is also a passive vertical display that serves 3 independent feeds for customers and traders entering the trading floor, plus three smaller feeds in the company's lounge area, board room, and training center, each of which provides limited local access. The customer requirements were complicated by demands that mobile control of the primary video wall and meeting room be easily and intuitively accessed by employees, so that multiple sources of information could be posted according to predetermined access rules. Additionally, the firm required that the video wall in the chief trader's office not only be able to monitor the information on all video feeds, but also be able to send information from the chief trader's personal station to any other video feed in the firm's offices.

As with any technology investment, the financial services firm was looking to minimize the system's total cost of ownership, and this is what initially attracted their interest to ATEN technology. The determining factors that fixed their decision on ATEN were the ease of installation, our video wall's direct high-definition Seamless Switching feature, and the integrated custom feed controls provided by ATEN's authorized Distributor, Simply Conect. Finally, the main 4 x 4 video feed required a special, custom-coded display mechanism where a core 3 x 3 video display could be configured independently of the 7 individual panels making up the outer front and bottom edges of the main video wall, as shown in the diagram below.

ATEN Solution Benefits

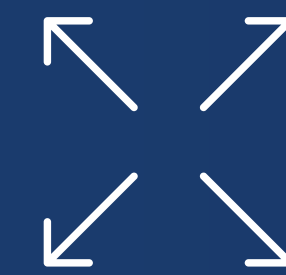
dedicated

ATEN's solution met this challenge with its VanCryst series of cascading switches, signal splitters, and signal extenders. Based around a core of two VM1600 Modular Matrix Switches, each loaded with 2 4-port HDMI and HDBaseT modules, the ATEN solution allows complete on-the-fly linking of every available source-to-display path over a highly reliable, simply deployed, cost-effective total-solution topography. In addition to displaying lossless, real-time market data and news sources over dedicated, permanent feeds, the ATEN solution additionally allows the export of information from any traders' station to any other feed in the firm.



The Core: The VM1600 Modular Matrix Switch

VM1600 Modular Matrix Switches provide modular integration of HDMI and HDBaseT signals with on-the-fly signal transmission and scaling. The two core VM1600 switches link the main floor's 4 x 4 video wall installation (measuring around 3m x 1.7m) with the smaller 2 x 2 display located in the private office of the chief trader, and further integrate into this core system all of the remaining smaller displays in the boardroom, lounge, and training center. The network topography involves dedicating a VM1600 to the 4 x 4 main video wall on the trading floor, while another VM1600 divides its feeds between serving 8 channels to this switch, another 4 feeds to the remaining chief trader's video wall, and another 3 feeds to the lounge, boardroom, and training center's video displays. One last channel serves the firm's general PA system. All video walls and feeds are further linked via RS-232 over HDBaseT Ethernet channels, allowing for fully centralized power controls for the two video walls and remaining displays.

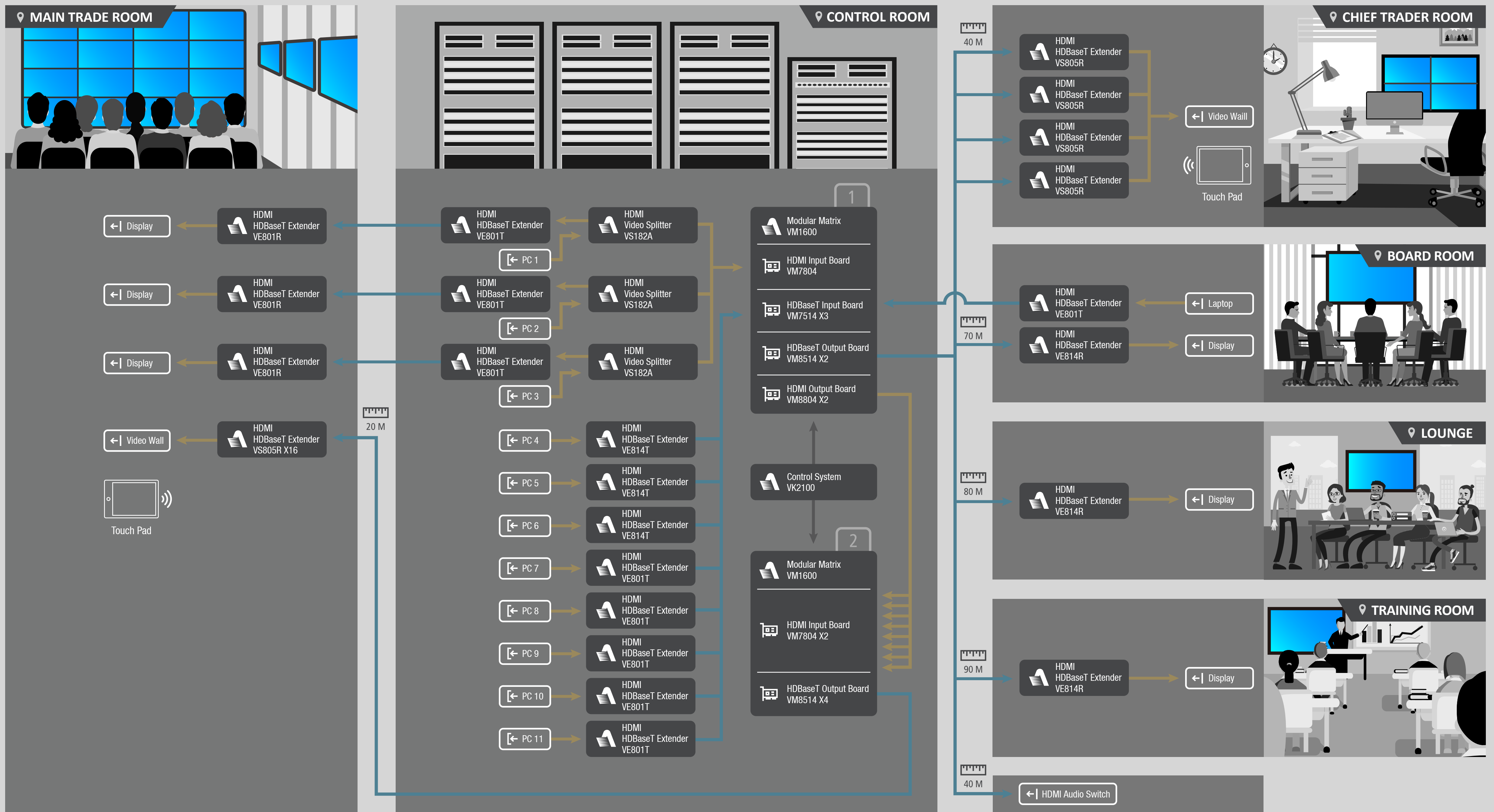


The Periphery :

Extending Control, Maximizing Convenience

The VM1600 switches are supplemented by two primary VanCryst sub-systems: the first is a collection of dedicated ATEN extenders and HDMI/HDBaseT signal splitters / extenders (VE8xxx and VS182A models), and the second primary subsystem is the VK2100 Controller.

The ATEN extenders allow the extension of all HDMI/HDBaseT signal transmissions (including the RS-232 channels) up to 100 meters, while the VS182A splitter allows the distribution of incoming A/V data feeds by splitting a single feed among multiple independent channels. Finally, control over each source-to-display path is coordinated using a single VK2100 controller with bespoke firmware customized by ATEN. This arrangement allows the main 4 x 4 video wall to serve a constant supply of on-the-fly exchange information to dedicated display channels, while simultaneously allowing any trader to override the main trading floor display to share developing market news and trends from his or her personal trading station. Finally, all feeds in the entire system may be centrally controlled by the chief trading officer using a single iPad.



Solution Architecture

Financial Institution Singapore



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



- Bi-directional RS-232 channel – allows you to connect to serial terminals or serial devices, such as touch screens and barcode scanners
- HDBaseT Connectivity – extends 4 HDBaseT connections up to 100 meters via single Cat 5e/6 cable
- Connected to VE805R: Seamless Switch™ – features close-to-zero-second switching, continuous video streams, real-time switching and stable signal transmissions

Video Wall –
features configurable video wall profiles for custom layouts via point-n-click web GUI

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

ATEN Control System

VK2100, VK6000, and ATEN Control System app



- Simple profile setup in 4 easy configuration steps via intuitive GUI
- Customizable GUI design and control operations for the iPad
- Built-in ATEN Library comprising 10,000+ device drivers and complete ATEN VanCryst product drivers

HDMI HDBaseT-Lite Receiver with Scaler

VE805R



- Scaler – features a scaling function to integrate a video wall seamlessly with various output formats
- Bi-directional RS-232 channel – allows you to connect to serial terminals or serial devices, such as touch screens and barcode scanners
- Seamless Switch™ – close-to-zero second switching that provides continuous video streams, real-time switching and stable signal transmissions

HDMI Extender over single Cat 5 with Dual Display

VE814T / VE814R



- Supports one local and two remote displays
- Supports two IR channels for bi-directional IR signal transmission
- HDMI (3D, Deep Color, 4Kx2K); HDCP-compatible

Product Overview

HDMI HDBaseT-Lite Transmitter

VE801T



- EDID Expert – configures optimum EDID settings for smooth power-up, high-quality display and use of the best resolution across different screens
- HDBaseT Anti-jamming – resists signal interference during high-quality video transmission
- Extends an HDMI connection over a long distance via one Cat 5e/6/6a cable