ProXime™

ATEN®

Simply Better Connections™

Application Guide

Digital KVM Extension Solution
for Digital Signage

⬂ *Real-time Information Display*

An increasing number of locations such as shopping malls, plazas, bus terminals, hospitals, banks, cinemas, and other public spaces where people gather are now abandoning the use of traditional poster advertising. They are instead using digital signage displays to deliver corporate imaging or product marketing to their target audience. Static advertising is gradually being substituted by large digital screen displays. Furthermore, real-time information requests have also increased the demand for digital signage. For example, it has always been important to provide the latest information to passengers in airports, stations, and other transports hubs, and as the information becomes increasingly complex, it has become even more important that it is updated in real time. Traditional methods of updating information are unable to efficiently handle this increase in information.

Due to the demand for real time information, these environments are turning to digital signage solutions to realize their objectives. These environments, such as train stations, generally cover a large area and need digital displays placed all over the installation; the long distance between the displays and source device is an important consideration. In addition, there may also be different types of display on the installation that require different content to be displayed. In these kinds of installation, the ability to easily select a different source for each display is a great benefit to administrators. Furthermore, in addition to real-time information display, excellent video quality is also a major concern when adopting a new solution, due to the demands of various A/V applications used in digital signage. Finally, a solution that offers interactive functionality, such as touchscreens, is increasingly an important consideration as customers and travelers require customized real-time information on demand.

⬂ *Mission*

Over the last three decades, ATEN has specialized in connectivity solutions in information technology and offers a wide range of video and extension related products. Currently, ATEN's challenge has been to develop a solution that offers unlimited distance extension coupled with high-quality video transmission. The video quality must be maintained in long-distance transmissions, and an audio signal should be carried as well as the keyboard, mouse and video signals. Since the target installations are so large, and the number of displays needs to be able to increase on demand, ATEN's mission was to utilize its existing resources to provide a flexible, easily-configured solution with smart management functionality that allows not only the duplication of a single source to multiple displays but also various sources to different displays.

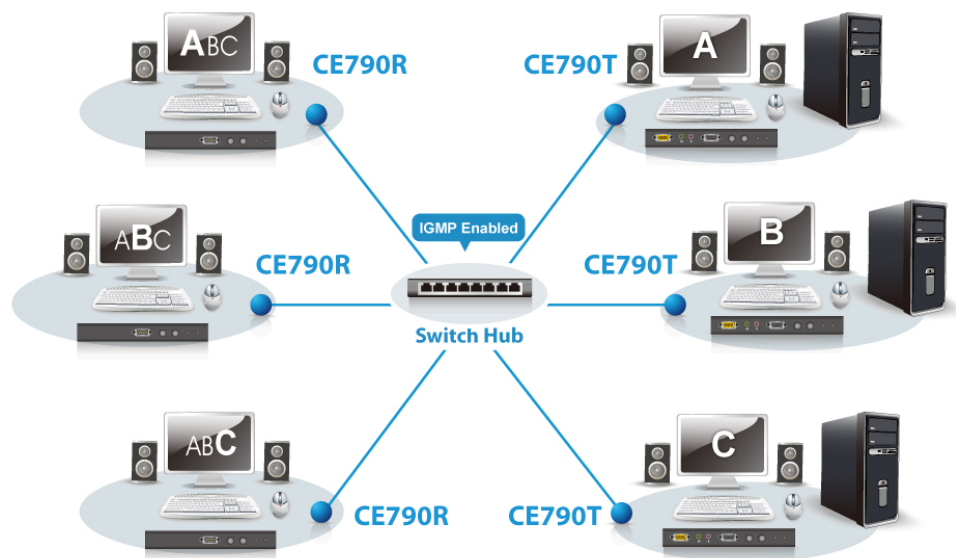**Application Guide**
Digital KVM Extension Solution

⊗ *Solution*

UNLIMITED ACCESS from Anywhere Over the Intranet

CE790 Digital KVM Extender

ATEN CE790 Digital KVM Extension Solution Allows Unlimited Access and Complete Control of Your Computing Resources Over the Intranet

The CE790 is an IP based KVM Extender system with RS-232 serial functionality that allows access to a computer system from a remote USB console (USB keyboard, monitor, and USB mouse) located anywhere on your existing network infrastructure.

The CE790 system consists of a transmitter (CE790T) that connects to the computer system and a receiver (CE790R) that is located on the user's desk. For even greater flexibility, any number of transmitters can be configured with any number of receivers, providing access and control of various computing resources from any number of remote consoles via a standard TCP/IP network. Furthermore, the CE790 supports high quality digital audio and video streaming transmissions, ensuring that users obtain superior A/V signals from anywhere on the Intranet with no distance limitation. Each unit is assigned a unique IP address and connects via a single Cat 5e cable, making the CE790 Digital KVM Extender system perfect for use in the installation where you need multiple consoles in conveniently accessible locations, such as control rooms.

* The CE790 can be installed in point to point, point to multipoint and multipoint to multipoint configurations. Multipoint configurations require a separate purchase - contact your dealer for details.
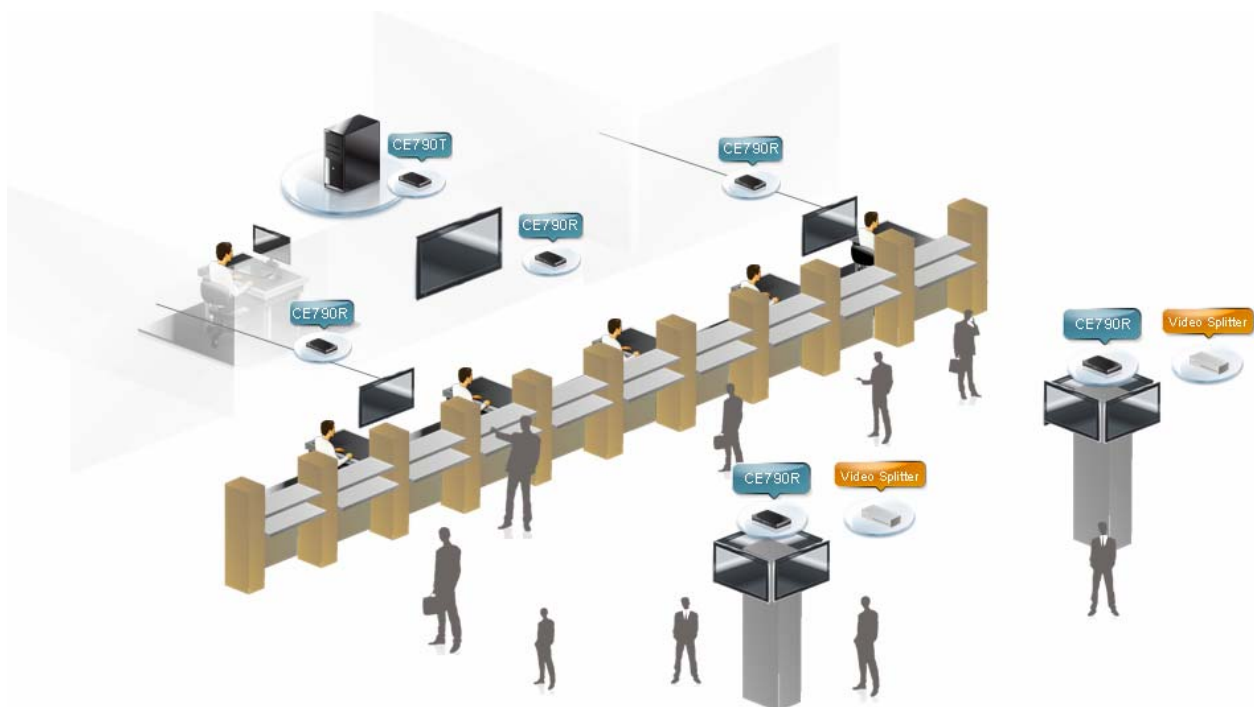* In multipoint configurations, the IGMP (Internet Group Management Protocol) function of your network switches/hubs should be enabled to avoid deterioration of data throughput. If you do not know how to enable IGMP, please contact your network administrator.

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Application

>> Duplicating a Single Source to Multiple Displays

Applications: *Department Stores, Institutions, Shopping Plazas, Theaters*

Installations in smaller environments generally utilize a point-to-multipoint configuration to duplicate the same content to multiple displays. Connect one receiver (CE790R) for each display and connect a transmitter (CE790T) to the source server. Once all the receivers and transmitters are connected to the LAN, the ATEN Digital KVM Extension Solution is in place and ready to be configured. After some simple configuration and activating broadcast mode, you are ready to deliver high-quality source content to each display that is connected to the receivers. The console ports of the transmitter also allow an administrator to set up one additional console for maintenance and monitoring. In addition, to reduce the total installation cost, ATEN Video Splitters can be integrated in a Digital KVM Extension installation to duplicate the video signal from the receiver to multiple displays located nearby.
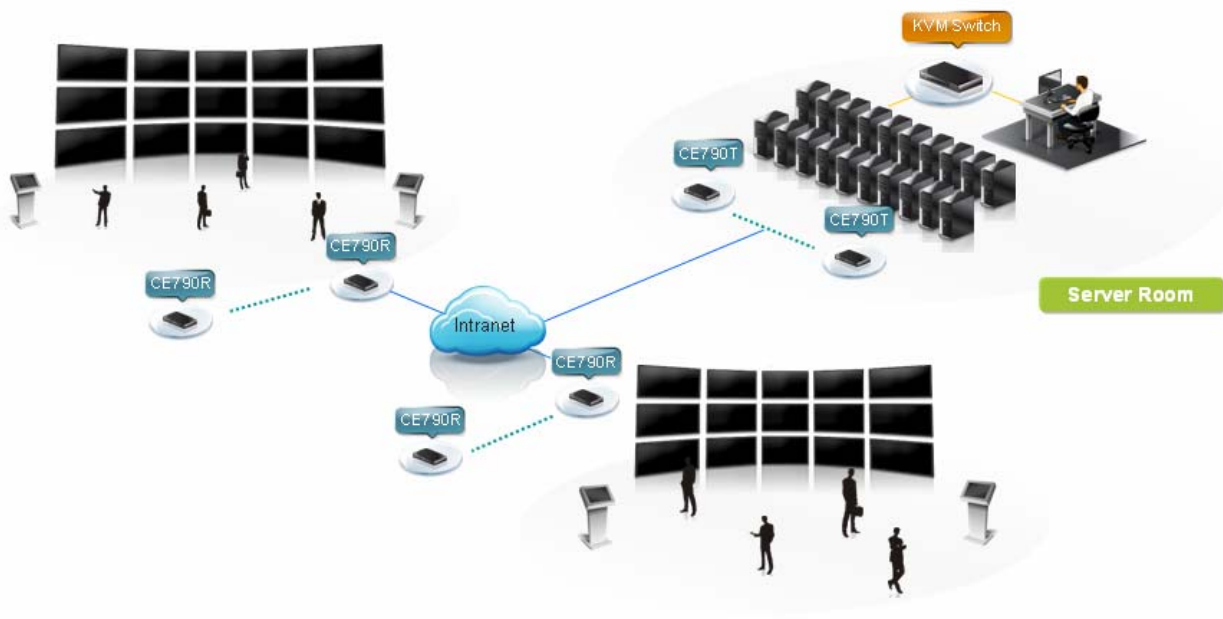
Video Splitters

A video splitter not only duplicates the video/audio signal from a single source to multiple outputs, but also boosts the signal so it can be conveyed over long distances before unacceptable degradation occurs. Since the signal is boosted, video loss is kept at a minimum and multiple splitters can be cascaded to accommodate even more output displays.

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↘ Application

>> Routing Multiple Video Sources to Different Displays

Applications: *Airports, Transport Hubs, Bus Stations, Railway Stations, Shopping Malls*

When it is necessary to show different information on different displays in public places in a large installation, the multipoint-to-multipoint capabilities of the Digital KVM Extension Solution make it an ideal solution. Connect one receiver (CE790R) for each display and connect a transmitter (CE790T) for each source device and connect them all to the LAN. In the server room, an administrator can connect all the consoles ports of the transmitters to a KVM switch to take the place of all the individual transmitter consoles, and then the administrator is able to control and monitor multiple source devices via a single console. In addition, with RS-232 serial functionality, a touchscreen can be integrated in the installation for interactive service applications.

KVM Switches – *An Essential Server Management Device*

A KVM (Keyboard, Video and Mouse) switch is an advanced, hardware-based solution that allows centralized access to multiple computers easily and conveniently from a single keyboard, monitor, and mouse. A KVM switch is useful in an extensive range of environments, suitable for SOHO users, small and medium businesses, and large corporations. ATEN offers a wide range of KVM switch to meet various needs. Please visit our website for more product information.

⬎ *Benefits*

- **Distance Extension and Secure Placement** – with Transmitter/Receiver module design, the Digital KVM Extension Solution allows users to extend the distance between source devices and displays.

- **Broadcast Mode Support** – enables one source to be displayed on multiple monitors.

- Transmits over Intranet – works over existing LAN environment – unlimited distance, no trailing smear. With this feature, the solution greatly reduces the total installation cost and time, especially in large public places.

- **Flexible Configurations** – allows flexible point-to-point, point-to-multipoint, and multipoint-to-multipoint administration. It fulfills the expansion need of console/computer by allowing the easy addition of the Transmitter/Receiver to the installation. Furthermore, it also greatly reduces maintenance time and costs.

- **Digital Audio/Video Streaming** – This allows A/V signals transmitted via the Intranet to maintain an excellent quality (up to 1920 x 1080). With superior video signal support, the CE790 maximizes the possibilities of A/V applications.

- **Dual Console Operation** – allows you to control your computing source from both the receiver and transmitter consoles. Connecting the console devices or a KVM switch to the console ports of a transmitter enables an administrator to manage the computers efficiently.

- **Easy-to-use** – Provides an intuitive On Screen Display (OSD) on both the transmitter and receiver units for easy setup and operation. The administrator is able to manage all the consoles and assign a source for each display.

- **RS-232 serial functionality support** – allows touchscreens to be included in the installation, which is especially suitable for interactive service applications. For example, users may request information via touchscreen operation.

- **Integration with KVM switch/Video Splitters** –offers flexibility, cost-saving, space-saving and efficiency by integrating a rack KVM switch with the transmitters for centralized management of all source devices. Video splitter integration greatly reduces the total cost of the whole installation and provides additional flexibility.

*The specification and pictures are subject to change without notice.

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