

The Telkonet iWire System™

Powerline Communications Technology Provides a Broadband Networking Solution for Digital Signage

Overview

Digital signage is a combination of high-resolution digital displays with dedicated computers and software delivering targeted messages over a network to viewers and customers in public places. Digital signage revolutionizes the media and information services by enabling the centralized and immediate update of content and delivery to targeted audiences in specific locations.

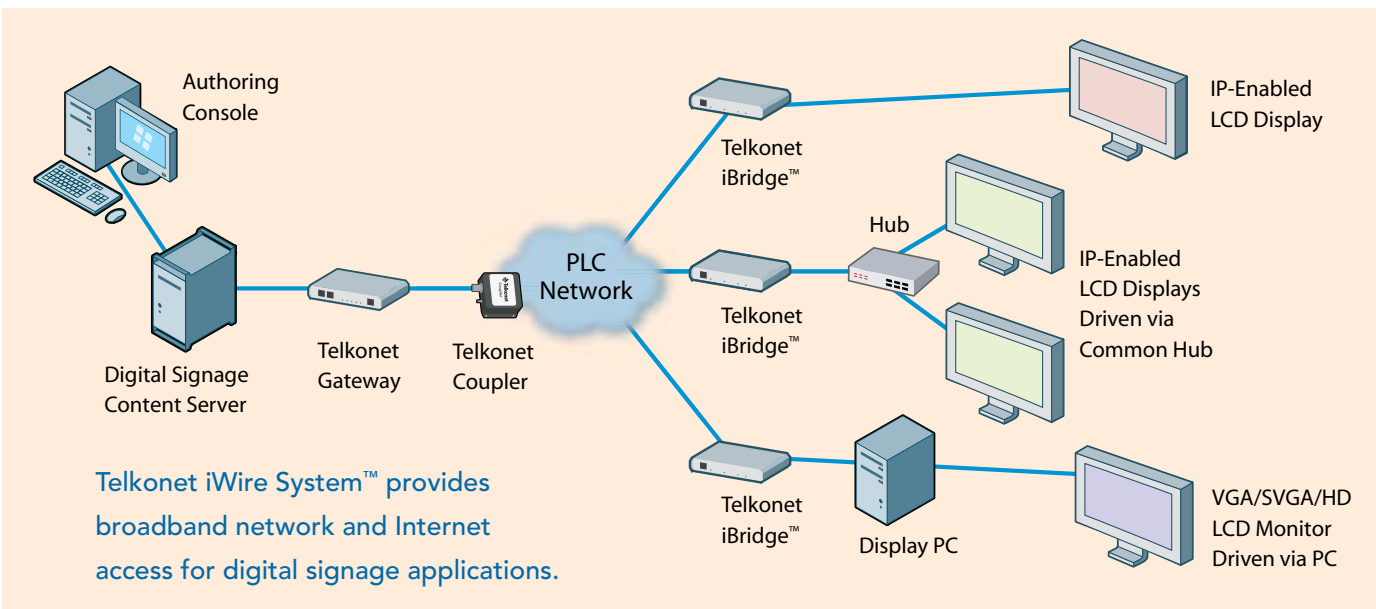
Digital signage includes scrolling message boards, LCD monitors, CRT monitors, kiosks, plasma display panels, electronic billboards and projection screens. The content displayed on digital signage screens can range from simple text and still images to full motion video. Digital signage can be static, such as a group of monitors with targeted messages, or dynamic, dependent on playlist content.

Digital signage is used for a variety of purposes, such as conveying information (flight status), advertisements, advertising by third parties, signage directing customers to a specific location and brand building. It is commonly used in retail stores, airports, bus stations, fast food restaurants and gas stations. A key benefit of digital signage is its flexibility, as a networked digital sign can easily and instantly change its message/content based on its location, the time of day, inventory levels, a special sale, the season, etc.

Components

A few basic components are needed to set up a digital signage network.

- 1) An authoring console, equipped with content management software, allows the definition of content in a variety of playback formats. Display content is entered into the authoring console. The content can range from simple text and still images to full-motion video, with or without audio, in a wide variety of formats, including Flash, audio video interleaved (AVI), moving picture experts group (MPEG), TV and satellite feeds, etc.
- 2) A server is needed, as the finished content is uploaded to a server via the central administration software controls on the authoring console. The server pushes content out to the various digital signage systems within a network.
- 3) A distribution infrastructure, consisting of a data network, fiber optic, CAT-5 cable or powerline communications (PLC), is required to broadcast media from the server to the displays. Digital signage can be placed anywhere there is access to the data network. The content can be individualized for each display.



“With Telkonet’s system, retailers can easily move their electronic displays around and plug them in where they want them, with both power and network access delivered from the same electrical outlet.”

Dale McClintock
Founder and Chief Product Officer, ImageArray

Challenges

A challenge of digital signage is to have a flexible distribution structure, where the Internet can be easily accessed at any location, rather than being limited to a fixed location where cable has been run for Internet access. Mobility is key – with the ability to place signage at strategic locations and then easily move them to new locations, such as in a supermarket, where digital signage is rotated throughout the store to advertise weekly specials. Additional challenges include finding a cost-effective Internet access platform, delivering consistent and reliable Internet connectivity, and having the ability to remotely monitor and control the digital signage content.

Solution – Powerline Communications Technology

Selecting the best digital signage distribution technology is a key contributor to actual digital signage performance. Using powerline communications (PLC) technology as the digital signage distribution infrastructure solves the challenges of cost, mobility and remote management.

With the Telkonet iWire System, which uses patented PLC technology, a building’s internal electrical wiring is transformed into an intelligent broadband networking platform. This is a cost-effective solution, as a building does not need to be retrofitted with CAT-5 wiring. It is simple and quick to install, without impacting everyday business activities or customers.

By connecting the Telkonet Gateway to the Internet router for the building, and then linking to the Telkonet Couplers that interface with the safety switches and circuit breaker panels, electrical outlets are Internet and network-ready. The Telkonet Gateway and Telkonet eXtender™ convert an Ethernet signal into a PLC communication format and inject that into the electrical infrastructure for the building. The Telkonet iBridge™ recovers the PLC signal and converts it back into standard Ethernet format for use in end-user devices.

Once the system is installed in the electrical room, all the outlets within a building are converted into high-speed data network connections, enabling Internet/data access and digital signage at any electrical outlet. This gives a retailer the mobility to locate or move signs wherever needed.

Network management is built into the Telkonet iWire System, so digital signage content can be delivered, monitored and controlled either on-site or remotely. Unlike other systems that require additional equipment to be purchased to support network management and Quality of Service (QoS), Telkonet’s Gateway includes embedded management tools, enabling monitoring and maintenance of multiple devices in multiple networks from a single Network Operations Center if desired. With Telkonet’s intuitive GUI, it is simple and quick to set and change bandwidth rates, and changes may be “pushed” to the target Telkonet iBridges immediately.

www.telkonet.com

Telkonet Headquarters

20374 Seneca Meadows Parkway
Germantown, Maryland 20876.7004 U.S.A.
sales@telkonet.com
international@telkonet.com

Phone: 240.912.1800
Toll-Free in the US: 866.375.6276
Fax: 240.912.1839