

Moderro IEM Management Software

Product Overview and Datasheet

Version 2.6

Moderro Technologies

www.moderro.com

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Intelligent Digital Signage transforms customer experiences and help organizations reduce costs, improve user engagement, and increase revenue.

Moderro’s Intelligent Digital Signage solutions deliver web-based applications and multimedia content through interactive signage and kiosks to users in retail stores, bank branches, conference centers, corporate offices, transit stations, and any location where engaging communication and interaction is required.

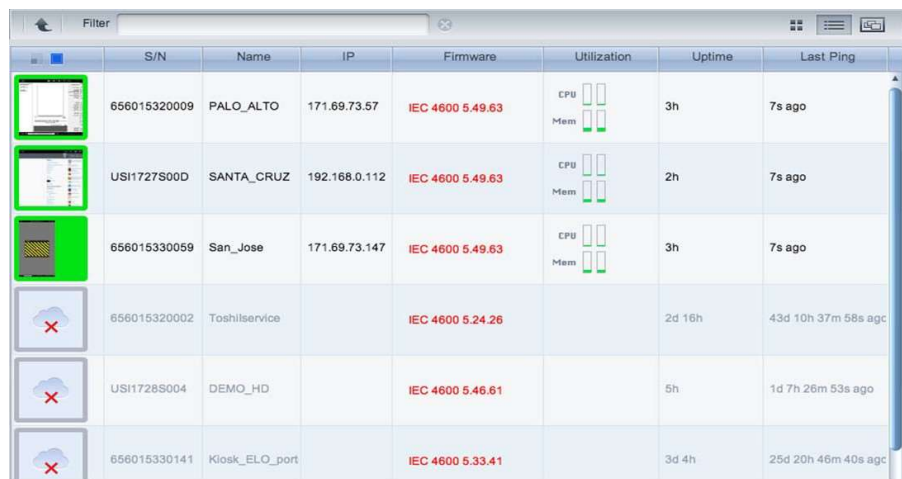
While most digital signage solutions are simple standalone devices, Moderro’s Intelligent Digital Signage Solution brings together touchscreen interactive displays, web technologies, interactive multimedia, networking, and collaboration into a connected, integrated solution.













The solution consists of signage controllers (Moderro IEC controllers), signage management software (Moderro IEM Management Software), signage applications, and integration with an organization’s network.

IEM Management Software Overview

The Moderro IEM (Interactive Experience Manager) software is a management console that is used to remotely configure, control, and monitor Moderro IEC 4650 digital sign controllers. IEM provides for user management as well as real-time monitoring, live viewing of remote screen content, notification of events, and session management. IEC 4650 devices are registered in the IEM either individually or in batches. IEM is accessed through a web portal with a menu-based GUI (Figure 1).

Figure 1. Interactive Experience Manager GUI



	S/N	Name	IP	Firmware	Utilization	Uptime	Last Ping
	656015320009	PALO_ALTO	171.69.73.57	IEC 4600 5.49.63	CPU  Mem 	3h	7s ago
	USI1727S00D	SANTA_CRUZ	192.168.0.112	IEC 4600 5.49.63	CPU  Mem 	2h	7s ago
	656015330059	San_Jose	171.69.73.147	IEC 4600 5.49.63	CPU  Mem 	3h	7s ago
	656015320002	Toshilservice		IEC 4600 5.24.26		2d 16h	43d 10h 37m 58s ago
	USI1728S004	DEMO_HD		IEC 4600 5.46.61		5h	1d 7h 26m 53s ago
	656015330141	Kiosk_ELO_port		IEC 4600 5.33.41		3d 4h	25d 20h 46m 40s ago

Accounts are created to segregate users, devices, and policies. Users are assigned to an account. They can then configure and manage the devices associated with that account.

IEM monitors the IEC 4650 devices at regular intervals. The status of the devices is collected within a period of time set by the user. For example, Figure 2 shows the status (ON or OFF) of each IEC 4650 and that a firmware upgrade is available for the last device (indicated by the red “FW” next to the device). Users can be notified when the status of devices in their account changes.

Figure 2. Device Status Display



Device logs can be sorted and analyzed by clicking the Events tab of a device. Similarly, the device’s performance can be monitored by viewing the Performance tab of a device. The logs can be sent to a third-party server. IEM also collects screenshots from the IEC 4650 devices at intervals specified by the user. An administrator controls multiple IEC 4650 devices through policies (see Figure 3). Policies provide an easy and flexible way of applying settings to a group of users or devices.

Figure 3. Policies



A policy is a restrictive mechanism, providing the user with a tool to enforce certain behavior. Policies represent dynamic and transportable setup rules. Policies can be persistent (long-term) or transient (short-term) and can be scheduled per kiosk based on time or events.

Principles of Operation

- To be managed, IEC 4650 devices must first exist on IEM. The devices can be provisioned in advance with IEM.
- The properties set within policies applied to a device takes precedence over properties set within the profile of a device. Properties are additive; therefore, if a policy doesn't override a property, the property will stay unchanged.
- Multiple policies can be attached to the same device or group. If policies contain conflicting settings, the policy that is higher in the stack order takes precedence. Device policies take precedence over group policies.
- Device and manager versions are best-effort compatible. A device that has a version that is not actively supported by the manager will still be supported, although some features may not work. The fact that the device version is incompatible is indicated by a red FW flag on the Moderro IEM GUI. Communication between the client and the manager is defined by the communication protocol and specification that defines the capabilities of each firmware build. Older communication protocols are supported in the newer manager builds, but older specifications that reflect properties of the firmware are often not fully compatible with the later specifications.
- Policies can be persistent or transient (applied for short periods of time). Transient policies are marked by an "action" flag and are made available in the form of a button under "Custom Actions." These policies change the settings on the IEC 4650 device temporarily and will be reset on the next restart (or can be rolled back with a counteraction policy). Action policies can only work for run-time properties (properties marked by an orange arrow in the profile).
- Notifications work on a subscription basis. Once a notification has been created, it must be assigned to an administrator. A notification can submit to a third-party application to collect the data; that application's URL is provisioned in the user's profile.
- To optimize client performance, an application should use the available native components. Native components are available in the form of a Browser API and essentially move resource-intensive or asynchronously used components outside the browser processing space.

IEM Product Features

IEM management software is installed on a virtual machine on a server in an organization's IT infrastructure. IEM communicates with the IEC 4650 signage controllers in the network using the HTTP/S protocol. Support for multitenancy is built into the IEM with a nested accounts structure.

IEM features include:

- Comprehensive and scalable management platform
- Web-based GUI
- Remote configuration and management of devices
- Batch registration of devices
- License management
- Group-based or policy-based management
- Policy scheduling
- Cumulative view of configuration changes applied to a device
- Segregation of accounts, users, devices, and policies
- Access control
- Login and session security
- Real-time status of devices
- Notification of events
- Visibility into current screen content
- Device performance data
- High Availability
- Command line interface for system configuration and management
- Controlled SSH access for Cisco TAC engineers

IEM allows an administrator to perform the following functions:

- **Configuration:** An administrator can configure all IEC 4650 device settings remotely, including the startup URL, display behavior, SIP clients for two-way video calls, and peripheral support.
- **Policy management:** Policies provide an easy and flexible way for an administrator to apply settings to a group of users or devices. Policies can be scheduled either for a single IEC 4650 device or a group of devices. Policies can be scheduled on an hourly, daily, weekly, monthly or one-time basis.
- **Kiosk control:** An administrator can monitor and control the behavior of a kiosk remotely in real time, including muting a station, locking out the user, and sending messages to the user.
- **Session management:** An administrator can manage users' sessions on the kiosks by setting time limits, forcing a user to log out, system reset after a session, and other functions.
- **Monitoring:** Data is sent from the IEC 4650 devices to the Moderro IEM at regular intervals. An administrator can analyze the event logs and performance data to troubleshoot issues. The logs can be sent to a third-party server.

Example Kiosk Configuration

Figure 1 shows an example configuration of a kiosk powered by the IEC 4650 and managed by IEM management software in a Cisco networking environment.

Figure 1. Kiosk Configuration Example



Intelligent Digital Signage Benefits

In today's fast-paced world, companies and organizations are challenged to communicate and interact effectively with customers, students, or employees. Using the latest multimedia and digital technologies, Moderro Intelligent Digital Signage solutions can attract and engage audiences and provide numerous benefits to organizations:

- **Reduce costs** by providing self-service solutions that customers can use to interact and access information anytime, anywhere
- **Enable new interactive services** to improve the customer experience
- **Educate the customer** with relevant information in real time
- **Increase visibility** into products and services offered
- **Improve customer service** with easy self-service operation and virtual assistance
- **Increase revenues** by providing third-party advertising and cross-selling
- **Increase efficiency and consistency** by allowing reuse of existing web content
- **Simplify deployment** with an integrated solution architecture (network, collaboration, video, interactive media, and noninteractive media)
- **Reduce use of management resources** with remote manageability
- **Reduce deployment and management timelines** using policies and groups



Figure 3 - Example of Interactive Display

When looking for digital signage solutions, organizations find that most signage solutions are simple standalone solutions that are difficult to integrate into an enterprise-wide system. Furthermore, many solutions are PC-based and thus expensive and difficult to manage, especially in large organizations.

Organizations also need to address challenges with interactive signage deployments such as costly content creation, inconsistent experience across different devices and siloed, non-scalable solutions for different types of digital media, interaction, and collaboration.

Moderro's Intelligent Digital Signage architecture address these challenges by bringing together touchscreen displays, web technologies, multimedia, and collaboration in one integrated solution.

Moderro's integration of video collaboration with interactive displays and kiosks using a network-based

architecture is much more efficient to deploy, maintain, scale, and upgrade than other signage solutions.

Moderro's architecture uses open-standards web technologies, so organizations can use much of their existing web content and application development.

Through its partnership with Cisco, Moderro's digital signage solutions have been successfully deployed in hundreds of organizations around the world. Moderro continues to work closely with Cisco to bring the many benefits of these advanced digital signage solutions to your organization.

Ordering Information

An IEM license is required for each IEC 4650 device that is managed by the IEM. A single license is available or license bundles can be purchased that support up to 10, 50, 100, 500, or 1,000 devices.

The following table provides product numbers for the Moderro IEM software and licenses.

Product Number	Description
R-IEP-SW-BASE-20-K9	IE SW Base 20
L-IEP-MGR-FL-1	1 IE Manager License
L-IEP-MGR-FL-10	10 IE Manager Licenses
L-IEP-MGR-FL-50	50 IE Manager Licenses
L-IEP-MGR-FL-100	100 IE Manager Licenses
L-IEP-MGR-FL-500	500 IE Manager Licenses
L-IEP-MGR-FL-1000	1000 IE Manager Licenses

For More Information

For more information about Moderro IEM software, visit www.moderro.com or contact your Moderro account representative.

For IEM technical documentation, visit www.moderro.com/support