

## Experion LX eServer Specification



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1.0	July 2014	1 <sup>st</sup> release

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# 1. Introduction

## 1.1. Experion LX eServer Overview

Experion LX eServer provides secured web browser-based access to Experion LX information for remote users. Remote access is made possible thanks to Experion LX eServer's architecture which protects and preserves the integrity of the process control environment by focusing casual users towards a single access point and isolating the process control network from the business network.

## 1.2. Experion LX eServer Client Types

Experion LX eServer offers two client types: Standard and Premium Access. Experion LX eServer Standard Access supports snapshots of user built custom displays through a browser client and does not require any software to be installed on the client. Experion LX eServer Premium Access supports view only user built custom displays, Experion LX system trends and reports, with real time updates. Aside from trends and reports on eServer Premium Access no Experion LX system displays, including Alarm Summaries and Faceplates, are supported on eServer. The tables below highlight the key differences between the two eServer client types.

### 1.2.1. Experion LX eServer Standard Access

Experion LX eServer Standard Access	
Description	Experion LX eServer Standard Access enables remote users to view static versions of the Experion LX custom displays within any web browser.
Details	<ul style="list-style-type: none"> <li>Users can view Experion LX custom displays using any type of Web browser, independent of client hardware configuration or operating system. Users do not need to download or install additional software. The Experion LX displays shown are the same displays that can be accessed from an Experion LX Console or Flex Station, no conversion is required.</li> <li>The Experion LX custom displays are populated with static "snapshot" data. Users are limited to using simple navigation controls on the pages such as embedded simple links. Users can request an update of the display data by using the browser refresh command.</li> <li>Standard access clients are not individually licensed; enabling access for hundreds of casual users .</li> <li>eServer standard access clients view cached custom displays. The cache time is the time that the display page is kept and served to users. When a page older than the cache time is requested, an updated page is served. Setting longer cache times allows the eServer to serve hundreds of users. If used to provide a frequently updating view of large amount of process data, 10-20 users may be served.</li> </ul>

### 1.2.2. Experion LX eServer Premium Access

<b>Experion LX eServer Premium Access – displays and trends</b>	
Description	Experion LX eServer Premium Access enables remote users to view live Experion LX displays, trends and reports within Microsoft's Internet Explorer (IE). Access to these displays is always view-only, excluding any write access.
Details	<ul style="list-style-type: none"><li>• Users can view Experion LX displays using Microsoft Internet Explorer. Users need to download an application that enables premium access features on their Microsoft Internet Explorer, such as automatic refresh and support of Experion LX custom display dynamics; alternatively, for users that wish to download the application, users can access Experion LX eServer Premium Access using a Microsoft Terminal Services client.</li><li>• Premium access clients are configured with a rotary connection, enabling numerous casual users to access the Experion LX eServer as needed, which is advantageous from a licensing point of view. For example when 38 Premium Access connections are configured, 38 connections can be established at one time but the software could be available to many more than 38 individual clients.</li></ul>

### 1.3. Related Solutions

Experion LX Mobile Station is a fully functional alternative for remote display of Experion LX components.

## 2. Specifications

### 2.1. Client Sizing

Limits shown here apply to the number of clients supported for a single Experion LX eServer.

Clients per eServer node	Maximum
Premium Access Clients	38
Standard Access Clients	Unlimited

### 2.2. Database Sizing

Experion LX eServer connects to one or more Experion LX Servers and can serve data and displays from these Experion LX Servers to its clients.

Items	Specifications	Comments
Maximum number of Remote Data Access points per eServer node	250,000	This is the total number of points that an eServer can access.
Maximum number of DSA-connected servers per eServer node <sup>1</sup>	60	Experion LX eServer connects to up to this number of Experion LX servers.
Note 1 – Assumes eServer has its own EMDB, and all Experion LX Servers are external servers; otherwise a limit of 30 applies.		

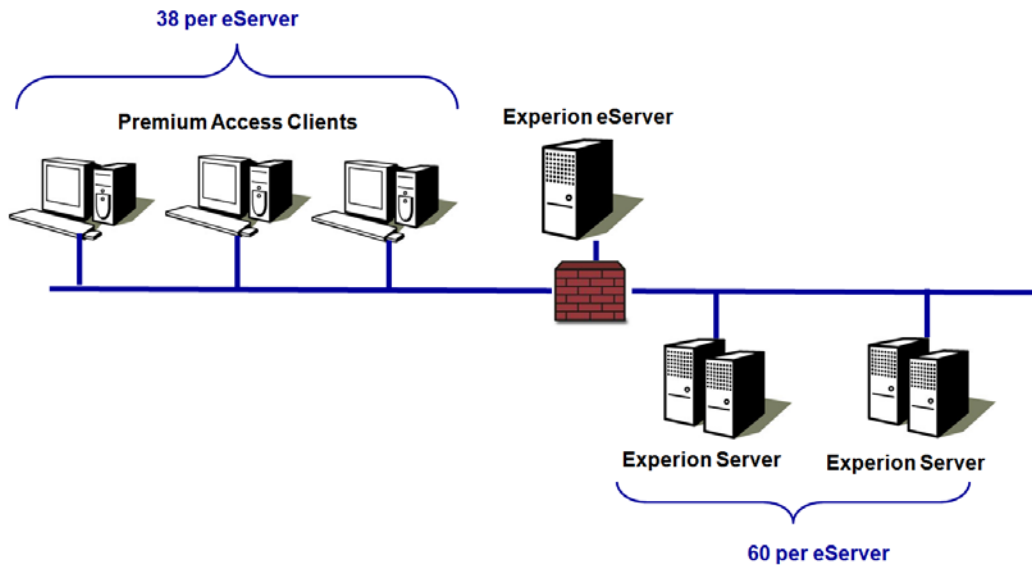


Figure 1. eServer sizing limits

## 2.3. eServer Client Types

Display Type Specifications	Specification
Standard Access Clients <sup>1,2</sup>	Experion LX custom displays
Premium Access Clients <sup>1,3</sup>	Experion LX custom displays Experion LX trends <sup>4</sup> Experion LX reports <sup>5</sup>
<p>Note 1 – Access to alarms and events is blocked and displays do not show alarm status information.</p> <p>Note 2 – Experion LX custom displays are presented in a view-only, non-interactive format; controls that require interaction with the host system such as combo boxes do not work. Embedded simple hyperlinks are supported. Does not support dynamic shape behavior and display scripts. Trends, trend objects, reports, detail displays, faceplates, pop-ups, chart visualization, alarm and event summaries, system status displays, configuration displays, groups and other operational functions are not supported.</p> <p>Note 3 – Experion LX custom displays, trends and reports are presented in a view-only format. Supports dynamic shape behavior and display scripts. Because Microsoft Internet Explorer is used instead of the Station environment, some limitations compared to Station apply and detail displays, faceplates, chart visualization, alarm and event summaries, system status displays, configuration displays, groups and other operational functions are not supported.</p> <p>Note 4 – Clients can view pre-configured trends; clients can not add trend pens. Excludes trend with events. Trend interactions include pause and restart, zooming, scrolling, turning trend pens on and off (de-clutter), copy-paste of trend data and changing the time period, time interval, chart type and scale.</p> <p>Note 5 – Clients can view pre-configured reports.</p>	

## 2.4. Alarm and Events

Items	Specifications	Comments
Alarms and Event information	Blocked	Access to alarms and events is blocked and displays do not show alarm status information.

## 2.5. Experion LX eServer Interoperability

Distributed System Architecture interoperability is defined as a DSA-based runtime connection between Experion LX eServer and the Experion LX server(s). Experion LX eServer uses DSA to get data from Experion LX servers, so if different Experion LX versions are being used only those that support DSA interoperability are supported. To share display files eServer must be at the same release or at a more recent release than the Experion LX servers it connects to.

Experion LX eServer Release	Can inter-operate with Experion LX R110.x?	Can inter-operate with Experion LX R100.x?
R110.x	Yes	Yes

## 2.6. Experion LX eServer Data Subscribing Performance - WAN

Available Network Bandwidth <sup>1</sup>	Max Network Throughput (Parameters / Second) <sup>2,3</sup>
64 Kbps	100
128 Kbps	200
256 Kbps	400
512 Kbps	800
1Mbps	1000
2 Mbps	2000
10 Mbps	10000
<p>Note 1 – “Available Network Bandwidth” means dedicated continuously available bandwidth for DSA use between two DSA connected servers, and not shared bandwidth with other applications.</p> <p>Note 2 – Maximum traffic on any individual network segment.</p> <p>Note 3 - For satellite performance refer to the Experion LX HMI Specification.</p>	

## 2.7. Trends (Premium Access Only)

Items	Specifications	Comments
Trend sets	3,000	
Trend pens per set	32	
Trend periods	1, 5, 20 minutes 1, 2, 4, 8, 12 hours 1, 2, 5 days 1, 2, 4 weeks 3, 6 months 1 year	
Maximum number of Trend pens that eServer can subscribe to from all remote servers	100	



## 2.8. Network Infrastructure

Network	Comments
Fault Tolerant Ethernet <sup>1</sup>	Honeywell's patented Fault Tolerant Ethernet (FTE) network uses off-the-shelf networking hardware to allow Ethernet to provide "DCS network" functionality. FTE provides a robust and high availability network infrastructure.
Ethernet	Experion LX eServer also support an Ethernet network infrastructure to communicate to nodes throughout the system.
Note 1 - The FTE solution employs a single logical network over redundant media. By providing more communication paths between nodes, FTE also tolerates more faults, including all single faults and many multiple faults. In addition, FTE is transparent to higher-level applications, which benefit from the high network availability that FTE provides, without requiring any additional software configuration. Normal Ethernet nodes (non-FTE) can also connect to an FTE network and benefit from a more available communications environment than conventional Ethernet redundancy schemes offer.	

### 3. Experion LX eServer Sizing and Hardware Requirements

#### 3.1. Server System Performance Sizing

A computer must meet the following specifications to be used as an Experion LX eServer. These guidelines are intended to provide a minimum baseline. Honeywell computer platforms will meet these specifications and carry full support as a qualified offering. For installation information on computer platforms, including physical, electrical, corrosion, and other environmental requirements, please consult Honeywell installation guides or Dell documents.

System Configuration	System "Type"
Systems with up to 10 DSA Connected servers	Standard
Systems beyond this limit and up to the maximums specified	Performance

#### 3.2. Experion LX eServer Hardware Requirements

System Configuration	Standard	Performance
Processor	Single CPU: 2.70GHZ Dual Core™ or faster	Single CPU: 2.33 GHz Four Core XEON or faster
RAM	3 GB <sup>1</sup>	4 GB <sup>1</sup>
Networking	100 Mbps Ethernet or FTE	
Video Resolution	1024 x 768 65K colors	1024 x 768 65K colors
Video RAM	8 MB	8 MB
Operating System	Windows 2008 server (32-bit), English version	
Hard Drive	80 GB	160GB
Example Hardware <sup>2</sup>	DELL T110II	DELL T320
<p>Note 1 – For better performance, users should upgrade the systems with an additional 2-4 GB of RAM.</p> <p>Note 2 – The systems listed here are for comparison only. The default system configuration of this platform sold by Honeywell will meet or exceed the recommended components listed.</p>		

### 3.3. Experion LX eServer Standard Access Client Computer Requirements

A client needs a standard Web browser to view the Standard Access client pages. Clients can be of any type of hardware and operating system including office desktops, off-the-shelf PDAs, hand-held and mobile devices etc, making eServer Standard Access the most versatile Experion LX client.

System Configuration	Minimum
Browser type	Any browser type
Networking	Any network connection, including low bandwidth connections

### 3.4. Experion LX eServer Premium Access Client Computer Requirements

A computer must meet the following specifications to be used as an Experion LX eServer Premium Access client. These guidelines are intended to provide a minimum baseline.

System Configuration	Standard
Processor	2.33GHz (or better) dual corer
RAM	2 GB
Networking	100 Mbps Ethernet or FTE
Video resolution	1280x1024 1600x1200 1680x1050 1920x1200 65K colors
Video memory (VRAM) per channel	32 MB
Operating system	Windows 7 Professional (32-bit) , English version
Browser type	Microsoft Internet Explorer 9
Example platforms <sup>1</sup>	HP6305
Note 1 – For further information on Honeywell computer platforms, see their respective specifications.	

## 4. Model Numbers

### 4.1. Experion LX eServer Base Software

Model Number	Description
LX-EBASE1	Experion LX eServer Base Package

### 4.2. Experion LX eServer Premium Access

Model Number	Description
LX-ETPREM1	Experion LX eServer Premium Access per User
Note 1 – Requires CV-EBASE1	

### 4.3. Media Kit

Model Number	Description
LX-MME112	Experion LX R110 Media Kit, Migration/Demo

## 5. Glossary

Term or Acronym	Description
DSA	Distributed System Architecture
EMDB	Enterprise Model Database. The Experion LX Enterprise Model provides an intuitive way to manage the Experion LX system.
Experion LX Server	The node (optionally redundant) at the heart of Experion LX. The servers encompasses a wide range of subsystems including history collection, SCADA interfaces, alarm/event, etc.

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