

IBM WebSphere DataPower Appliances firmware V3.8.0 adds new load balancing capabilities, enhanced interoperability, and additional security

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At a glance

WebSphere® DataPower® Appliances help you:

- Improve competitiveness by strengthening business connectivity with partners and customers, and between internal organizations
- Streamline seemingly complex but highly valuable SOA and XML applications with specialized, low total cost of ownership, drop-in appliances
- Load balance service requests across your infrastructure
- Extend existing Microsoft® and TIBCO infrastructure with security, integration, and connectivity
- Leverage z/OS® infrastructure as part of your SOA enterprise
- Shorten SOA application deployment times when using DataPower configurationdriven simplicity
- Enhance B2B connectivity, protection, XML-level security, and Web service access control with powerful and thoughtful appliance security features
- Accelerate message distribution, and XML and Web services processing with dedicated, high-performance capabilities
- Assist in governing ever-valuable SOA infrastructure by adopting standardized run-time control points through DataPower
- Comply with U.S. federal IPv6 network (XM70, XI50, XS40, and XA35 models)

For ordering, contact your IBM® representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: NE001).

Overview

IBM WebSphere DataPower Appliances simplify, help govern, and enhance the security of XML and IT services. The five products in the portfolio extend the capabilities of your infrastructure by providing service-oriented architecture (SOA) connectivity, business-to-business (B2B) connectivity, gateway functions, and extremely low latency messaging. By offering an innovative, pragmatic approach to harness the power of SOA as purpose-built, easy-to-consume, and easy-to-use products, these appliances help you leverage the value of your existing infrastructure investments.

The rack-mountable IBM WebSphere DataPower Appliance family includes:

- IBM WebSphere DataPower Low Latency Appliance XM70
- IBM WebSphere DataPower B2B Appliance XB60

- IBM WebSphere DataPower Integration Appliance XI50
- IBM WebSphere DataPower XML Security Gateway XS40
- IBM WebSphere DataPower XML Accelerator XA35

V3.8.0 firmware enhancements include:

Enhanced load balancing

Enables self-balancing across a cluster of appliances and backend server load balancing, based on weights from the backend servers (options for XS40 and XI50 only)

Enhanced interoperability

- Out-of-the-box support for Microsoft .NET WCF Web services bindings
- WebSphere MQ V7 support
- Support for remotely hosted WebSphere Transformation Extender maps
- FTP/FTPS improvements
- Support handling for JavaScript[™] Object Notation (JSON) and REpresentational State Transfer (REST) applications

Enhanced security features

- Updated Web application firewall and threat protection
- Integration with IBM Tivoli® Security Policy Manager for distribution of WS-SecurityPolicy and Extensible Access Control Markup Language (XACML)
- Online Certificate Status Protocol (OSCP) improvements
- Integration with z/OS Communications Server PKI services

New B2B capabilities

- Updated B2B protocol support with the addition of EDIINT AS1 and plain text email (XB60 only)
- B2B interoperability through the completion of Drummond Group AS2 certification (XB60 only)
- Enhanced B2B transaction viewing by providing the ability to search and display AS Message IDs (XB60 only)
- AS2 transaction performance enhancements over previous releases

Enhanced connectivity

- Support for TIBCO EMS map messages (XI50, XB60, and XM70 only)
- Support for TIBCO Rendezvous (XM70 only)
- Support for transactional messaging with WebSphere JMS

Key prerequisites

- Network interface and network cable
- Network information (IP address, domain name server, gateway)
- Computer and console with serial port, keyboard, and mouse
- Power requirements for country specifications
- Internet access for connecting to external trading partners (XB60 only)
- WebSphere MQ Low Latency Messaging (XM70 only)

Planned availability date

• November 13, 2009: Electronic GA

Description

IBM WebSphere DataPower provides support so that z/OS access to encryption keys and digital certificates is available. Keys and certificates used by DataPower can be centrally stored and managed by z/OS. This logical integration is based on enhancements to z/OS V1.11 Communications Server.

The following WebSphere DataPower Appliances are available:

- IBM WebSphere DataPower Low Latency Appliance XM70
- IBM WebSphere DataPower B2B Appliance XB60
- IBM WebSphere DataPower Integration Appliance XI50
- IBM WebSphere DataPower XML Security Gateway XS40
- IBM WebSphere DataPower XML Accelerator XA35

The following options are available on the WebSphere DataPower Appliances:

- IBM WebSphere DataPower Option for Tivoli Access Manager (XM70, XB60, XS40, and XI50)
- IBM WebSphere DataPower Option for TIBCO (XM70, XB60, and XI50)
- IBM WebSphere DataPower Option for Database Connectivity (XM70 and XI50)

WebSphere DataPower Low Latency Appliance XM70

The XM70 is designed to deliver a purpose-built message switch appliance for predictive, low latency messaging, and market data distribution for a broad range of messages in the front-, middle-, and back-offices of financial markets, and for other industries with similar low latency messaging and integration needs. It is specifically designed to address the challenges inherent in low latency and high-throughput messaging environments, such as unpredictable performance, scaling required to meet increasing message and feed volumes, and overall management and complexity of messaging environments.

Core low latency messaging capabilities include:

- · Very-high-throughput, one-to-many multicast messaging
- High-speed, point-to-point communications using user datagram protocol (UDP) with reliable positive or negative feedback
- Reliable unicast, offering high-speed point-to-point messaging over TCP Peer-topeer support
- Support for many-to-many and many-to-one messaging patterns
- Destination (topic/queue) and message-based filtering
- Content-based routing, including high-speed FIX and XML message parsers
- Authentication, authorization, and audit (AAA)
- Virtually any-to-any transformation
- Protocol bridging (WebSphere MQ, WebSphere JMS, TIBCO EMS, and HTTP(S))
- High availability including message stream failover
- Total message ordering for both input and output
- · Congestion management
- Horizontal and vertical scalability
- Support for WebSphere MQ Low Latency Messaging clients

Application integration functions include:

- Virtually any-to-any data transformation between a wide range of data formats, including wire-speed XML transformation, text, binary, COBOL copybooks, industry standards, and custom formats
- · Sophisticated multistage pipeline processing and content-based message routing
- Optimized bridging between wire-line messaging protocols including MQ, WebSphere JMS, third-party JMS, FTP, and HTTP (XB60)
- · Data validation, field-level security, Web services management, and access control
- Direct-to-database access including DB2®, Oracle, and Sybase
- Extensive Web services support (SOAP, WSDL, WS-Security, WS-Addressing, WS-Policy, and WS-ReliableMessaging)

WebSphere DataPower B2B Appliance XB60

In this release of XB60, significant improvements to B2B performance and interoperability can help your business:

- Recognize a low total cost of ownership
- Easily manage and connect to trading partners using a broad range of industry standards
- Extend integration beyond the enterprise with a securely deployed B2B Gateway in the DMZ
- · Improve the performance and scalability of your B2B interfaces
- Govern B2B integration points through consolidated trading partner management

New features:

- EDIINT AS1 Protocol
- B2B Payloads over plaintext email
- Drummond AS2 Certification
- Display and search on MessageIDs in the B2B Viewer

WebSphere DataPower Integration Appliance XI50

The XI50 offers:

- Any-to-any data transformation between a wide range of data formats, including wire-speed XML transformation, text, binary, COBOL copybooks, industry standards, and custom formats
- Sophisticated multistage pipeline processing and content-based message routing
- Optimized bridging between wire-line messaging protocols including MQ, WebSphere JMS, third-party JMS, FTP, and HTTP
- Data validation, field-level security, Web services management, and access control
- · Direct-to-database access including DB2, Oracle, and Sybase

WebSphere DataPower Integration Appliance XI50 can connect natively to a DB2 V9 database, running on a range of platforms including z/OS. WebSphere DataPower Integration Appliance XI50 can use the XML capabilities built into DB2 V9 to:

- Insert XML text directly into the database
- Modify XML text stored in the database
- Query XML data using XQuery and SQL
- · Retrieve XML data

WebSphere DataPower Integration Appliance XI50 is a complete, purpose-built hardware platform for delivering highly manageable, security-enhanced, and scalable SOA solutions. As specialized SOA hardware, the XI50 provides, in a single hardened device, many core functions to SOA deployments, such as service level management, routing, data and policy transformations, policy enforcement, and access control. Additional advantages of a hardware appliance in the network

layer include the ability to perform more security and structural checks without performance degradation.

There are numerous opportunities to take advantage of the XI50 Enterprise Service Bus (ESB) capabilities, its legacy enablement and integration features, and its capacity to improve Web services management and SOA governance. Some sample use cases for the XI50 include:

• Drop-in integration for heterogeneous environments

As a core offering in the IBM ESB product portfolio, the XI50 is a purpose-built hardware ESB for simplified deployment and hardened security with the ability to quickly transform data between a wide variety of formats, including XML, legacy, industry standards, and custom formats. The XI50 provides core ESB functionality, including routing, bridging, transformation, and event handling. The XI50 provides a reliable, performance-oriented solution to many integration challenges. Because it is not limited to handling just XML, the XI50 resonates with IT organizations that need to benefit from the connectivity of SOA deployments but must also deal with their current reality of managing multiple proprietary, industry, company-specific, or legacy data formats. The XI50 is a true drop-in integration point for such environments, helping to reduce the time and cost of integrations, and speed the time-to-market for services.

• Innovative XML and Web-services enablement of legacy infrastructure

For accelerated, security-rich integration capabilities, the XI50 provides transport mediation, routing, and transformations among binary, text, and XML message formats. Visual tools can be used to describe data formats, create mappings between different formats, and define message flows. With native connectivity to DB2 and System z®, the XI50 offers an innovative solution for security-rich XML enablement of legacy systems, as well as mainframe connectivity.

Policy-driven approach to Web services management and SOA governance

Centralized Web services management tasks and policy enforcement, decoupled from applications, can help the XI50 increase your SOA infrastructure flexibility and scalability while simultaneously offering you improved insight, visibility, and control. Moving functions such as access control, Web services management, security, and policy enforcement onto the XI50 means that IT architects and operations, security, and business personnel can decouple these functions from the core business applications, helping to simplify development, deployment, and manageability.

• Integration with registry and repository, security, identity, and service management software

The XI50 integrates with a variety of registry and repository, security, identity, and service management software applications. Coupled with access control software such as IBM Tivoli Access Manager, the XI50 enforces fine-grained access controls. Working with the IBM Tivoli Federated Identity Manager, the XI50 provides federated Web services identity, and policy management between organizations and enterprises. Integrated with IBM Tivoli Composite Application Manager for SOA, the XI50 monitors Web service and SOA traffic flows for end-to-end service management and dashboard monitoring. Using a registry and repository such as WebSphere Registry and Repository can help you discover and reuse services and configure new services for DataPower policy and security enforcement. The combination of these applications and the robust XI50 security features can provide the comprehensive capabilities for SOA security and Web services management that enterprises increasingly require.

Advanced Web services standards support and interoperability

IBM recognizes that SOA must address the need to integrate heterogeneous environments both within and outside the enterprise. The WebSphere DataPower SOA Appliance portfolio has a long-standing history of support for key and advanced standards, including WS-Security, WS-Policy, WS-ReliableMessaging, Simple Object Access Protocol (SOAP), Web Services Distributed Management (WSDM), WS-I Profiles, WS-Addressing, eXtensible Access Control Markup Language (XACML), Security Assertion Markup Language (SAML), Secure Socket

Layer (SSL), and proprietary single sign-on (SSO) tokens. Additional third-party interoperability capabilities include Universal Description, Discovery, and Integration (UDDI) registries, and such databases as Oracle and Sybase.

• Integration across the IBM SOA foundation for smart SOA deployments

The XI50 has broad and deep integration across the IBM SOA foundation. Integration with popular integrated development environments such as the IBM Rational® portfolio can help reduce the time you spend in development and debugging. In addition to interoperability, the XI50 also features deep integration with products such as WebSphere MQ, WebSphere Enterprise Service Bus, WebSphere Message Broker, and DB2 to help process SOA transactions in a faster, more secure and simplified way. Additionally, the XI50 enables you to take advantage of the IBM autonomic computing self-management capabilities, creating infrastructures that require minimal intervention, which can help lower cost of ownership and improve service availability.

IBM WebSphere DataPower XML Security Gateway XS40

The XS40 appliance provides a security-enforcement point for XML and Web services transactions, including encryption, firewall filtering, digital signatures, schema validation, WS-Security, XML access control, XPath, and detailed logging. The XS40 includes:

Centralized policy management and enforcement

The outstanding performance of the XS40 can enable enterprises to centralize security functions in a single drop-in device that can enhance security and can reduce ongoing maintenance costs. Simple firewall and Web services proxy functionality can be configured via a Web GUI and run in minutes, or, using the power of XSLT, the XS40 can also create sophisticated security and routing rules. Combining integration with leading policy managers and service registries and support for such standards as WS-Security, WS-SecurityPolicy, WS-ReliableMessaging, and WS-Policy, the XS40 is an ideal policy enforcement and execution engine for securing next-generation applications. Managed locally or remotely, the XS40 supports SNMP, script-based configuration, and remote logging to integrate seamlessly with leading management software.

• XML/SOAP firewall

The XS40 filters traffic at wirespeed, based on information from protocol stack layers 2 through 7, from field-level message content and SOAP envelopes to IP address, port and hostname, payload size, or other metadata. Filters can be predefined and automatically uploaded to change security policies based on time of day or other triggers.

Field-level XML security

The XS40 selectively shares information through encryption/decryption and signing/verification of entire messages or of individual XML fields. These granular and conditional security policies can be based on nearly any variable including content, IP address, hostname, or other user-defined filters.

XML Web Services access control

The XS40 supports a variety of access control mechanisms, including XACML, Security Assertion Markup Language (SAML), SSL, LDAP, RADIUS, and simple client/URL maps. The XS40 can control access rights by rejecting unsigned messages and verifying signatures within SAML assertions.

Service virtualization

XML Web Services require companies to link partners to resources without leaking information about their location or configuration. With the combined power of URL rewriting, high-performance XSL transforms, and XML/SOAP routing, the XS40 can transparently map a rich set of services to protected back-end resources with high performance.

· Data validation

With its unique ability to perform XML Schema validation as well as message validation at wirespeed, the XS40 ensures incoming and outgoing XML documents are legitimate and properly structured. This protects against threats such as XML Denial of Service (XDoS) attacks, buffer overflows, or vulnerabilities created by deliberately or inadvertently malformed XML documents.

SSL acceleration

The XS40 scales transport layer security by accelerating bidirectional/mutual SSL transactions in hardware. The XS40 can be configured with multiple SSL identities functioning as client or server, with SSL policies based on message content or metadata such as port number or HTTP header.

IBM WebSphere DataPower XML Accelerator XA35

The XA35 can help speed common types of XML processing by offloading this processing from servers and networks. It can perform XML parsing, XML Schema validation, XPath routing, Extensible Stylesheet Language Transformations (XSLT), XML compression, and other essential XML processing with wirespeed XML performance.

The XA35 offers:

- Outstanding performance: The DataPower purpose-built message processing engine can deliver wirespeed performance for both XML to XML and XML to HTML transformations to help increase throughput and decrease latency.
- Ease of use: The self-learning XA35 provides drop-in acceleration with virtually no changes to the network or application software. No proprietary schemas, coding, or APIs are required to install or manage the device and it supports popular XML Integrated Development Environments (IDEs) to help reduce the number of hours spent in the development and debugging of XML applications.
- Help in reducing infrastructure costs: Unlike simple content switches that only redirect business documents, the DataPower XML Accelerator XA35 fully parses, processes, and transforms XML with wirespeed performance and scalability to help reduce the need for stacks of servers. The XA35 also supports accelerated SSL processing to help further lessen the load on server software.
- Help in cutting development costs: The XA35 can enable multiple applications to leverage a single, uniformed XML processing layer for all XML processing needs. By standardizing on high-performance hardware appliances, enterprises can deploy sophisticated applications while helping to eliminate unnecessary hours of application debugging and tuning for marginal performance gains.
- Intelligent XML processing: In addition to wirespeed processing, DataPower appliances support XML routing, XML pipeline processing, XML compression, XML/ XSL caching, as well as other intelligent processing capabilities to help manage XML traffic.
- Advanced management: The DataPower XML Accelerator XA35 provides real-time visibility into critical XML statistics such as throughput, transaction counts, errors, and other processing statistics. Data network level analysis is provided, and includes server health information and traffic statistics, as well as management and configuration data.

Optional features

The following options are available on the WebSphere DataPower Appliances:

Option for Tivoli Access Manager (XM70, XB60, XS40, and XI50)

Tivoli Access Manager enables these IBM WebSphere DataPower Appliances to leverage access control policies stored in Tivoli Access Manager.

Option for TIBCO (XM70, XB60, and XI50)

The TIBCO option lets you extend IBM WebSphere DataPower Integration Appliances so you can send and receive messages from TIBCO Enterprise Message Service (EMS).

Option for Database Connectivity (XM70 and XI50)

The Database Connectivity option lets you extend the WebSphere DataPower Integration Appliances to read and write data from relational databases such as IBM DB2, Oracle, Sybase, and Microsoft SQL Server.

PIN Entry Device (XI50 and XS40)

The PIN Entry Device (PED) provides Personal Identification Number (PIN) entry to the HSM. PIN entry is used along with the trusted path, to allow for highly secure user authentication and controlled hardware access.

Reference information

DataPower feature options

Refer to Hardware Announcement 109-234, dated April 28, 2009.

Machine

Model

Feature

5712

5712

5712

5712

Product number

Description

IBM WebSphere DataPower Option for TIBCO Rendezvous	9231	100	5045
IBM WebSphere DataPower Option for Application Optimization	9231	100	5046
IBM WebSphere DataPower MES Upgrade Indicator	9235	32X	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	ЗВХ	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	34X	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	3DX	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	42X	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	4BX	5712
IBM WebSphere DataPower MES Upgrade Indicator	9235	43X	5712

9235

9235

9235

9235

4CX

44X

4DX

45X

IBM WebSphere DataPower MES

IBM WebSphere DataPower MES

IBM WebSphere DataPower MES

IBM WebSphere DataPower MES

Upgrade Indicator

Upgrade Indicator

Upgrade Indicator

Upgrade Indicator

Feature rules

- The WebSphere DataPower Option for TIBCO Rendezvous feature 5045 can be ordered only with the initial order of 9235 Model 6BX. The WebSphere DataPower Feature Options Enablement feature 4976 will be automatically added to new orders placed for 9235-6BX when feature code 5046 under the 9231-100 is specified.
- The WebSphere DataPower Feature Options Enablement feature 4976 will be automatically added to new orders placed for 9235-3** and 9235-4** appliances when feature code 5046 for 9231-100 is specified.
- The WebSphere DataPower MES Upgrade Indicator feature 5712 will be automatically added to MES upgrade orders placed against 9235-3** or 9235-4** when feature code 5046 for 9231-100 is specified.

Feature summary

The following table shows the models for each of the available features.

Feature description	Machine	Feature	Available with 9235 models
WebSphere DataPower Option for TIBCO Rendezvous	9231-100	5045	6BX
WebSphere DataPower Option for Application Optimization	9231-100	5046	32X, 3BX, 34X, 3DX, 42X, 4BX, 43X, 4CX, 44X, 4DX, 45X, 4FX

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

https://www.ibm.com/partnerworld/mem/sla.jsp?num=109-581

Publications

WebSphere DataPower hardware publications in PDF format are available on the Doc Browser CD included with the WebSphere DataPower Appliance and on the DataPower documentation portal.

DataPower firmware documentation is available in PDF format on the DataPower documentation portal.

Visit the DataPower document portal at

http://www.ibm.com/services/forms/preLogin.do?source=swg-dpd

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For details on education offerings related to specific products, visit

http://www.ibm.com/services/learning/index.html

Select your country, and then select the product as the category.

Technical information

Specified operating environment

Physical specifications

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Standards

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Operating environment

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Hardware requirements

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Software requirements

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Planning information

Customer responsibilities

This product is designated for customer setup. Customer setup instructions are shipped with the product.

Cable orders

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Installability

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Packaging

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Supplies

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

Security, auditability, and control

For information, refer to Hardware Announcement 109-234, dated April 28, 2009.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Pricing

Specify feature codes

Specify reacure codes				
Description	Machine Type	Model	Feature code	
IBM WebSphere DataPower Option for TIBCO Rendezvous	9231	100	5045	
IBM WebSphere DataPower Option for Application Optimization	9231	100	5046	
IBM WebSphere DataPower MES Upgrade Indicator	9235	32X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	3BX	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	34X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	3DX	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	42X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	4BX	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	43X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	4CX	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	44X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	4DX	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	45X	5712	
IBM WebSphere DataPower MES Upgrade Indicator	9235	4FX	5712	
Machine			Feature	
Description type	Mode	d	code	Price
IBM WebSphere DataBower	100		5045	
Option for TIBCO Rendezvous	100		5045	\$ 6,250
IBM WebSphere D &2Bo wer Option	100		5046	\$20,000
for Application Optimization	_			
IBM WebSphere D &2395 wer MES Upgrade	32X		5712	N/C
Indicator				

IBM WebSphere D ataB5 wer MES	3BX	5712	N/C
Upgrade Indicator IBM WebSphere D &235 wer	34X	5712	N/C
MES Upgrade Indicator			
IBM WebSphere D &285 wer MES Upgrade	3DX	5712	N/C
Indicator			
IBM WebSphere Dæ285wer MES	42X	5712	N/C
Upgrade Indicator			
IBM WebSphere Dæ285wer MES	4BX	5712	N/C
Upgrade Indicator			
IBM WebSphere D &2P5 wer MES	43X	5712	N/C
Upgrade Indicator			
IBM WebSphere Dæ285wer MES	4CX	5712	N/C
Upgrade Indicator			
IBM WebSphere D &2P5 wer MES	44X	5712	N/C
Upgrade Indicator			
IBM WebSphere D &2395 wer MES	4DX	5712	N/C
Upgrade Indicator			
IBM WebSphere D &2395 wer MES	45X	5712	N/C
Upgrade Indicator			
IBM WebSphere D &2B5 wer MES	4FX	5712	N/C
Upgrade Indicator			

Feature install summary

Machine Type	Feature number		Plant install only	MES removal	MES add charge	Cables required	Customer Setup
9231	5045	N	Υ	N	N	N	N
9231	5046	N	N	N	N	N	Υ
9235	5712	Υ	N	N	N	N	Υ

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