

# IBM MQ Appliance M2002 datasheet

IBM MQ messaging, in a box



IBM MQ

The market's leading messaging solution on a dedicated high specification hardware appliance that is preoptimized to get the most out of your investment.



## Highlights

- High specification hardware running the latest IBM MQ software
- Simple maintenance and updates
- Hardware pre-tuned to get the most out of IBM MQ
- Locked down for security –no user exits
- Business continuity with High Availability and Disaster Recovery out of the box
- Consolidate existing IBM MQ estate to reduce TCO
- Integrate with other IBM MQ deployments

## The challenge of innovation

In this ever-changing climate, businesses are growing and adapting their infrastructures. This growth is balanced with the constant need to keep costs low to maximize profits. Businesses are looking to cut technologies that are deemed unnecessary and are exploring options that appear on the surface to offer the same functions, but which in reality can let them down. Security and reliability are vital, and businesses are recognizing more and more the need to have a plan to maintain business continuity should the unexpected occur.

## IBM MQ Appliance: the solution

The IBM MQ Appliance M2002 provides an optimized version of IBM MQ that runs on a premium hardware appliance. As an appliance, this product offers rapid deployment of secure and reliable enterprise messaging and simple administration, both in day-to-day operations and also when applying maintenance.

The IBM MQ Appliance includes the following features and benefits:

**High specification hardware running the latest IBM MQ software:** Built specifically with your needs in mind, and running the best of IBM MQ messaging

**Simple maintenance and updates:** Reduce operations time and effort with simple firmware updates



**Hardware pre-tuned to get the most out of IBM MQ:** We configure IBM MQ, so you don't have to

**Locked down for security – no user exits:** Have confidence in your environment  
Business continuity with High Availability and Disaster Recovery out of the box: Don't let single points of failure disrupt your business

**Consolidate existing IBM MQ estate to reduce TCO:** Combine queue managers onto fewer machines to save data center space

**Integrate with other IBM MQ deployments:** With the same software as other IBM MQ deployment options, use IBM MQ Appliances as a hub along with your IBM MQ software, or as a gateway to IBM MQ for z/OS

## Top Appliance Hardware

The IBM MQ Appliance M2002 is a hardware offering that is tailored specifically for IBM MQ. Instead of businesses purchasing and configuring additional hardware on which to run IBM MQ, this is a dedicated machine that has been pre-optimized to remove this effort and reduce Total Cost of Ownership (TCO). The appliance technology is based on IBM DataPower®, which has long proven itself in the market, and is further enhanced for IBM MQ Appliance customers by the inclusion of 4 large capacity (3.2TB) solid state drives (SSDs) and 4 40Gb ports. While the IBM DataPower® functions are not exposed, nor are available, businesses still benefit from the strengths and manageability of this impressive hardware, and those who have DataPower® users will benefit from that familiarity when getting started with the IBM MQ Appliance.



## Hardware specification:

	M2002 (current model)	M2001 (previous model)
Processors	2 x 12 core “Skylake” Intel Xeon Gold 6126T processors (6 cores active in B model). 2.60 GHz, Hyperthreading enabled	2 x 10 core “Ivy Bridge” x86 processors (6 cores active in B model). 2.80 GHz, Hyperthreading enabled.
RAM	192 GB RAM, 12 x 2666 MHz DDR4 DIMMs	192 GB RAM, 1600 MHz DIMMs
1Gb management ethernet portal	2 (1 supporting IPMI)	2 (1 supporting IPMI)
1Gb ethernet ports	8	8
10Gb ethernet ports	6	4
40Gb ethernet ports	4	-
Disk	4 x 3.2 TB SSDs under hardware controlled mirrored RAID (6 TB effective, 3 TB effective B model)	2 x 3.2 TB SSDs under hardware controlled mirrored RAID (3 TB effective)
RAID cache	2 GB RAID cache	1 GB RAID cache

## Maintenance simplified

Time is valuable. We make maintenance simple so that your team can focus on other tasks. New function, security updates, and maintenance fixes are all included in firmware updates, which can be applied through our friendly Web UI or the command line, according to preference. These updates are certified by IBM and tested against identical appliance hardware before distribution. IBM MQ administrators do not need to manage different IBM MQ installation scripts for each platform, nor need to validate that the operating systems updates have been separately performed prior to any other IBM MQ updates. Fix packs



entirely refresh and update the IBM MQ level, which saves time compared to applying individual fixes.

The IBM MQ Appliance can be used as a hub, so admins can make updates to the IBM MQ Appliance without the inconvenience of updating many individual servers and applications. Applications connect to the IBM MQ Appliance as IBM MQ Clients, or through other IBM MQ queue managers. This enables applications to run independently and their environments to be isolated, reducing maintenance impact on other areas.

## Pre-tuned for performance

Not every organization has enough IBM MQ experts to go around, and what does optimal performance look like anyway? Whilst there are those who want to tweak IBM MQ just so, there are others who would rather invest their time elsewhere. The IBM MQ Appliance gives you that time back, by arriving pre-optimized for you.

Want to see what that performance means in real terms?

Take a look: [ibm.biz/MQApplianceperf](https://ibm.biz/MQApplianceperf)

## Securing your business

Security is vital. Protecting your data means protecting your business and protecting your customers. Many messaging solutions provide protection of that data as it moves around your infrastructure, and the IBM MQ Appliance does the same thing, using TLS. For extra confidence, the IBM MQ Appliance goes one step further by encrypting data at the message level, which means that the data is also protected at rest.

To understand the difference between protecting at rest and on the move, read a blog from one of our experts: [ibm.biz/MQprotectingdata](https://ibm.biz/MQprotectingdata)



## Helping you to be available

The ability to serve our customers relies on our ability to remain available. A network going down can bring normal operations to a halt, and a loss of business. A data center becoming unavailable is even more severe, with every second potentially costing a large amount (Emerson states \$5,600 per minute).

The reality is that there are still businesses who don't plan for this. Data is lost unexpectedly and suddenly evenings and weekends are consumed in trying to recreate lost work and get systems back up. And when the business is running again, they can be faced with fines and loss of reputation.

All of our IBM MQ solutions offer great ways to help avoid these situations. The IBM MQ Appliance includes High Availability and Disaster Recovery out of the box. Pairs of appliances fail over between themselves and should there be a problem, one can take over from the other automatically (High Availability, typically within a data center or over small distances), or manually (Disaster Recovery, typically between data centers)

## Consolidation

For those who have a large IBM MQ estate, consolidating can be a good option. The IBM MQ Appliance is able to run many queue managers on a single box. This speeds deployment, offers scalability, and requires less data center space, power, and management. It can also be far simpler to update and maintain. Those considering this approach should contact their sales representative to request an ROI assessment.

## One IBM MQ

The IBM MQ Appliance is part of the IBM MQ family. All deployment options - whether software, cloud, z/OS, or appliance – run IBM MQ software. This is what makes the transition from a large IBM MQ software footprint to a smaller IBM MQ Appliance one so easy. It also means that should you want to use the IBM MQ Appliance in conjunction with other IBM MQ deployment options, you can. Indeed, using it as a hub for your software, or a gateway to z/OS are options that you may wish to consider. If you are implementing a hybrid cloud



environment, there is also the option to use the IBM MQ Appliance together with our managed cloud offering in the IBM Cloud or on AWS.

## IBM MQ Appliance: two models to suit differing needs

Businesses come in different shapes and sizes. We provide two IBM MQ Appliance models which whilst identical in appearance and construction, differ in disk space and processors. If you want to go big, select the M2002A. If you want to start smaller, select the M2002B model. If your needs change, you can always request an upgrade, and because it is the same box there is no need for a physical exchange, and the disruption that that can cause. Either version of the appliance can be deployed anywhere that you need IBM MQ queue manager functionality, whether in an enterprise data center, a branch office, a factory, etc. Both versions of the IBM MQ Appliance come with IBM MQ installed and licensed for use, and include two bonus IBM MQ Advanced capabilities, as well as entitlement to use the Aspera fasp.io gateway (IBM MQ 9.1.4 onwards). IBM Cloud or on AWS.

## Bonus features

If you select IBM MQ software, you choose between IBM MQ and IBM MQ Advanced, depending on your needs. IBM MQ Advanced builds upon IBM MQ and includes extra capabilities to make you even more successful, and is the choice for businesses looking to excel. IBM MQ Appliance gives you two of these capabilities as standard, with no requirement to trade up from a base edition.

### **End-to-end encryption**

In addition to protecting IBM MQ data on the wire (using TLS), you can encrypt data at rest. Compared to other solutions that focus on disk encryption to claim protection of data at rest, IBM MQ Appliance encrypts the message data itself, meaning that even with disk access, your data is safe. This provides you end-to-end data encryption, and peace of mind for you and your customers.

### **File Transfer**



Whilst no files can be stored on the IBM MQ Appliance itself, you can connect IBM MQ Appliance queue managers to IBM MQ file transfer agents. These agents are available at no cost when used in this way, and enable you to send file data in the form of messages.

The IBM MQ Appliance also unlocks entitlement to another useful non-IBM MQ feature:

## **More speed**

The Aspera fasp.io gateway enables you to send file data over large distances where latency might otherwise be a problem. With IBM MQ Appliance you can transfer file data, but with fasp.io, you can supercharge that transfer.

Take a look at the report to understand the performance impact: <http://ibm-messaging.github.io/mqperf/#fasp>

## Typical deployments and uses for the IBM MQ Appliance

### **Reduce costs and simplify your estate with a messaging hub**

Benefits:

- Cost reduction
- Standardization
- Operational efficiency
- Ease of future migrations

Solution:

You move queue managers into a hub to which multiple different applications can connect with IBM MQ Clients. This enables continued support for enterprise SLAs for availability. Because these queue managers are running on fewer appliances that are actually optimized for the software, you use less machines in your data center, and have fewer to migrate in the future. With the firmware updates that we make available, maintenance is simple, and your environment standardized.

You can use this hub as a gateway to other parts of your IBM MQ estate, should you continue to run IBM MQ on other deployment models, such as z/OS.





## Collaborate with partners, using IBM MQ Messaging

### Benefits:

- Saved time in setup of partner interface
- Control of resources available to a partner
- No requirement for partner to have IBM MQ expertise

### Solution:

You deploy an IBM MQ Appliance, which acts as the front-end within your enterprise to which the partner IBM MQ channel connects. You can focus on the connectivity and access from that appliance, helping to lower your risk, and providing your partner with the reliable connectivity they need. As the IBM MQ Appliance is pre-optimized, neither you nor your partner needs to spend time optimizing servers for IBM MQ, and with the simplicity of the IBM MQ Appliance, your partner does not need to be an expert in IBM MQ to work with you. You can be confident that the IBM MQ connectivity and configuration of the IBM MQ Appliance located within the business partner, and thus outside your enterprise domain, is correct, up-to-date, and meets your business standards. The IBM MQ Appliance is easy to physically deploy and can be pre-configured prior to delivery, so all the business partner needs to do is plug it in and get connected. You can provide high availability at the partner location by using paired appliances, without requiring external dependencies that the partner might struggle to provide and support.

## Deploy a messaging outpost

### Benefits:

- Local High Availability
- Resilient connectivity
- Little need for local IBM MQ expertise

### Solution:

You deploy IBM MQ Appliances to a remote part of your organization, for example, a branch, factory, or a warehouse. Your local applications can connect reliably and securely to head office and locally, due to the underlying IBM MQ software. The simplicity of the IBM MQ Appliance means that it does not matter that this type of remote location typically has limited infrastructure skills and even fewer local IBM MQ skills. In the event of a hardware failure, the paired appliances can fail over between themselves.

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## Why IBM?

IBM offers services and guidance that help build a vision and create a roadmap for messaging-oriented technologies. We have already spent over 25 years adapting and enhancing the market-leading message-queue-based messaging solution, IBM MQ. This powerful and reliable offering is available in a range of deployment types, to help customers where they need us most. Our IBM MQ solutions are the backbone of business across a plethora of industries and across the world and continue to help them thrive.

## For more information

To learn more about the IBM MQ Appliance, please contact your IBM representative or IBM Business Partner, or visit the following website:

<https://www.ibm.com/products/mq/appliance>

Additionally, IBM Global Financing provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit:

[ibm.com/financing](https://www.ibm.com/financing)