



IBM 2074 Model 2 Console Support Controller – Consolidating and Streamlining Console Support Function

Overview

The IBM 2074 Model 2 is a Multiple Image Facility (MIF)-capable console support controller with increased support for up to 64 consoles each running TN3270E emulation. It supports non-SNA, DFT data streams for “modern” terminal attachment. Because it is MIF-capable, multiple systems and LPARs can simultaneously have 3270 sessions routed through one IBM 2074 Model 2.

The IBM 2074 Model 2 is a control unit that connects to a host via a direct ESCON® channel, via an ESCON Director, or with a FICON™ Bridge. It connects to client PCs with:

- Ethernet (10 Mb/s)
- Fast Ethernet (100 Mb/s)
- 4 MB Token Ring
- 16 MB Token Ring

With the IBM 2074 Model 2 you can benefit from:

- Support for up to two ESCON interfaces
- Support for Multiple Image Facility (MIF)
- OMA media distribution for VM and z/VM™
- Remote consoles connected via TCP/IP network
- Consolidation of console support boxes, which can increase available floor space

Key Prerequisites

A TN3270E emulator must be installed on each client console.

Planned Availability Date

March 29, 2002

At a Glance

The IBM 2074 Model 2 Console Support Controller:

- Replaces the console support function of the IBM 3174 Establishment Controller. One IBM 2074 Model 2 can replace multiple 3174s.
- Replaces the IBM 2074 Model 1 and increases the number of supported sessions to 64 per controller.
- Is shipped with an integrated ESCON adapter with an option for a second ESCON adapter, both of which connect to a host via a direct ESCON channel, via an ESCON Director, or with a FICON Bridge.
- Provides integrated Optical Media Attach (OMA) support, which can be used to load z/VM distribution tapes (on CD-ROM in OMA format) onto IBM @server zSeries servers.
- Converts 3270 non-SNA, Distributed Function Terminal (DFT) ESCON data streams into LAN-based TN3270E data streams.
- Is used as a S/390® or zSeries system console and operating system console.
- Connects to client PCs with 10/100 Mb Ethernet, and 4/16 MB Token Ring.

For ordering, contact:

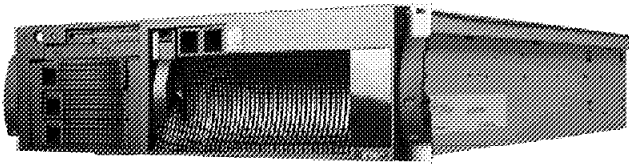
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800-IBM-CALL

Reference: YE001

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Description



The IBM 2074 Model 2 Console Support Controller connects to a host via a direct ESCON channel, via an ESCON Director, or with a FICON Bridge. The IBM 2074 Model 2 connects to client console PCs running TN3270E emulation and attached to Ethernet (10 Mb/s), Fast Ethernet (100 Mb/s), 4 MB Token Ring, or 16 MB Token Ring local area networks (LANs). The IBM 2074 Model 2 provides support of non-SNA, DFT data streams to help enable current and past operating systems to function if the 3174 and IBM 2074-001 are no longer available. One IBM 2074 Model 2 can replace multiple 3174s or 2074 Model 1s, depending on setup and use. If you are replacing multiple 3174s, you should purchase at least two IBM 2074 Model 2 Console Support Controllers to avoid creating a single point of failure.

The IBM 2074 Model 2's support for up to 64 consoles can increase the number of consoles on a single controller used for system, tape library, VTAM®, TCP/IP, and general operations duties. It can also provide increased capacity for configuring redundant console connections.

Euro Currency

This product is not impacted by euro currency.

Product Positioning

As the replacement for the console support function of the 3174 Establishment Controller and the IBM 2074 Model 1 Console Support Controller, the IBM 2074 Model 2 Console Support Controller can be used as a zSeries and S/390 system console and operating system console. The IBM 2074 Model 2 is a protocol converter that transforms 3270 non-SNA, Distributed Function Terminal (DFT) ESCON data streams into LAN-based TN3270E data streams.

The IBM 2074 Model 2 connects to a host via a direct ESCON channel, via an ESCON Director, or with a FICON Bridge. It connects to client console PCs with Ethernet (10 Mb/s), Fast Ethernet (100 Mb/s), 4 MB Token Ring, or 16 MB Token Ring. The IBM 2074 Model 2 provides support of non-SNA, DFT data streams to help enable current and past operating systems to function when the 3174 and IBM 2074-001 are not available.

One IBM 2074 Model 2 can replace multiple 3174s or 2074 Model 1s, depending on customer setup and use. The new IBM 2074 Model 2 is now shipped with one integrated ESCON adapter card and has an optional second ESCON adapter card feature. Each ESCON adapter can handle up to 32 console sessions for a total of 64 console sessions per IBM 2074 Model 2, as well as directly connecting to one or two CEC system attachments. With the use of an ESCON Director, one IBM 2074 Model 2 can attach to 64 different CECs. Thus one IBM 2074 Model 2 Console Support Controller can manage up to 64 LPARs or system images.

If you are replacing multiple 3174s, you should purchase at least two IBM 2074 Model 2 Console Support Controllers to avoid creating a single point of failure.

There is no multi-path support with the IBM 2074 Model 2. Although there are two ESCON cards and both can be attached to the same CEC, the IBM 2074 Model 2 cannot be configured so that the loss of one connection will nondisruptively switch sessions to the other ESCON adapter.

The IBM 2074 Model 2 is also shipped with two integrated 10/100 Fast Ethernet adapters and two integrated 4/16 Token Ring adapters for LAN attachment flexibility. The number of LAN attachment types is not an orderable feature and cannot be changed.

There is no model upgrade from an IBM 2074 Model 1 to an IBM 2074 Model 2.

The IBM 2074 Model 2 OMA feature allows you to use software distributed in the Optical Media Attach (OMA) format. Some IBM software products, for example VM/ESA® and z/VM, distribute installation and service in this format. The OMA feature is especially useful if you don't have tape drives that are compatible with the product's distribution media. The OMA feature is available for the IBM 2074 Model 1 when that model is upgraded to 2074 Driver level 1.0.8.

OMA competes with 2074 resources devoted to 3270 console I/O. It is intended for installation and service and its use may need to be restricted to off-peak times to avoid performance problems.

IBM representatives will review this announcement with all customers who have an IBM 2074 Model 1 on order. The IBM 2074 Model 2 is the replacement product for the IBM 2074 Model 1 and the IBM 3174. The IBM 2074 Model 2 supports up to 64 client consoles, which is double the support provided on the IBM 2074 Model 1. This allows the IBM 2074 Model 2 to provide a more scalable solution in a single footprint. Special attention should be given if you have a requirement for greater than 32 sessions on a single 2074. All outstanding proposals that include an IBM 2074 Model 1 should be reviewed and updated.

New orders for console controller function for zSeries and S/390 should specify the IBM 2074 Model 2. IBM 2074 Model 1 supply is limited, therefore customers who require IBM 2074 Model 1s should order as soon as possible. All IBM 2074 Model 1 orders should be reviewed and updated as appropriate, especially if you could benefit from the increased console capacity or are able to leverage the opportunity to consolidate multiple controllers onto a lesser number of machines than the Model 1 allows.

The packaging of the IBM 2074 Model 2 is different from the IBM 2074 Model 1. The IBM 2074 Model 2 now includes an integrated first ESCON adapter, which was a separate orderable feature on the IBM 2074 Model 1. A second optional ESCON feature may still be ordered. There is no model upgrade from an IBM 2074 Model 1 to an IBM 2074 Model 2.

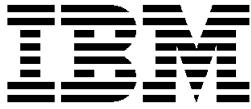
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February 26, 2002

Publications

2074 Console Support Controller Installation and Maintenance Information (G229-9028) is shipped with the product. Additional copies are available upon request or from the Web on Resource Link™. The Resource Link location is:

<http://www.ibm.com/servers/resourcelink>

2074 Console Support Controller Configuration Guide (SC28-6806) is available from the Web on Resource Link or through your IBM representative. The Resource Link location is:

<http://www.ibm.com/servers/resourcelink>

Technical Information

Specified Operating Environment

Physical Specifications

Size: The IBM 2074 Model 2 package is a rack model box measuring approximately:

- Width: 17.30 inches (standard 19-inch rack)
- Height: 5.00 inches (3U)
- Depth: 27.30 inches

The following additional space is required for the machine to function properly:

- Fifty millimeters must be allowed on both the left side and the right side for air flow.
- A 100-mm clearance should be allowed in the rear for cables.

Weight: IBM 2074 Model 2 system weight can be approximately 60 pounds when fully configured.

Operating Environment

Temperature, Humidity, and Altitude

Class B Extended Environment	Temperature (Degrees C)	Altitude (Meters)	Humidity (Percent)	Max Wet Bulb Temp (Deg C)
Product Operating	10-35	0-914	8-80	23
	10-32	914-2,133	8-80	23
Product Power Off	10-43		8-80	27
Machine Storage	1-60		5-80	29
Machine Shipment	-40-60		5-100 ¹	29

¹ Including condensation but excluding rain

Electromagnetic Compatibility: The IBM 2074 Model 2 will meet worldwide class "A" EMC requirements (such as FCC class A, CE Mark EMC requirements, CISPR 22 Class A, and VCCI class 1).

Power Requirements: The IBM 2074 Model 2 needs the following nominal power:

- 100-127 V ac 50 Hz or 60 Hz
- 200-240 V ac 50 Hz or 60 Hz

Hardware Requirements: A TN3270E emulator must be installed on each client console. Clients consoles should be at least 500 MHz, have 128 MB memory, and have accelerated graphics with at least 8 MB video memory. A 21-inch display is recommended to allow viewing of many console sessions at once.

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: <http://www.ibm.com>.

If more than one IBM 2074 Model 2 is installed in the same rack, then a keyboard/video/mouse (KVM) sharing console switch should be considered. With a console switch you can have one keyboard/mouse/display controlling multiple IBM 2074s. The use of a KVM sharing switch could complicate service issues, and might have to be removed to diagnose certain problems. A spare keyboard, mouse, and display would allow problem isolation without disrupting the other 2074s sharing the switch.

We recommend the IBM NetBAY Console Switch.

Each IBM 2074 Model 2 must have a keyboard, mouse, and display attached at all times. If you are using a console switch, then it provides this function when the active keyboard, mouse, and display are switched away.

Software Requirements: The IBM 2074 Model 2 requires no specific S/390® or IBM @server zSeries software. No user code will run on this box. The IBM 2074 Model 2 is compatible with existing 3270 data streams for VM, VM/ESA®, z/VM™, VSE/ESA™, MVS™, TPF, OS/390®, z/OS™, Linux, and z/OS.e, including back-level releases.

The IBM 2074 Model 2 is shipped with a custom CD-ROM that is preloaded onto the IBM 2074 Model 2 hard drive. The software on this CD-ROM is IBM Licensed Internal Code and may be used only under the LIC license for operation of the IBM 2074 Model 2 Console Support Controller. The customer must use the configuration utility to customize the box. The configuration utility is based on the Multiprise® 3000 "EMIO configuration" utility AWSCFG. The same IOCP/HCD must be done for the IBM 2074 Model 2 as for the 3174. However, the IBM 2074 Model 2 supports shared MIF channels.

Client PCs attach to an IBM 2074 Model 2 via Token Ring or Ethernet adapters using a TN3270E data stream. This means that the client must have a TN3270E emulator installed. IBM has tested the eNetwork Personal Communications V5.0 emulator running under Windows® 98 for compatibility, however there is no reason to believe that other compatible emulators will not work. Please contact the emulator product vendor directly for terms, conditions, prices, and other product details related to such vendor's emulator.

Compatibility: The IBM 2074 Model 2 Console Support Controller can be attached directly to the host via an ESCON® channel, or through an ESCON Director, or via a FICON™ Bridge. Because the IBM 2074 Model 2 is MIF-capable, one control unit can support multiple LPARs and CECs, creating the opportunity for you to conserve floor space by replacing multiple 3174s. Although an individual console session cannot be shared between LPARs, a single IBM 2074 Model 2 controller can have console sessions configured in different LPARs, in different CECs, and on different channels.

Limitations: The IBM 2074 Model 2 supports only TN3270E clients.

Although there is a total of 64 TN3270E sessions available, only two of these sessions may be configured locally on the 2074's display itself and then only for debugging, not production purposes.

The IBM 2074 Model 2 contains four LAN adapters, two of each kind. Two LAN adapters can't be connected to the same subnet. OS/2® doesn't support load balancing. The multiple LAN adapters are to allow you to connect to four different subnets.

There is no multi-path support with the IBM 2074 Model 2. Although there are two ESCON cards and both

can be attached to the same CEC, the IBM 2074 Model 2 cannot be configured so that the loss of one connection will nondisruptively switch sessions to the other ESCON adapter.

If more than one IBM 2074 Model 2 is installed in the same rack, then a keyboard/video/mouse (KVM) sharing console switch should be considered. With a console switch you can have one keyboard/mouse/display controlling multiple IBM 2074s. The use of a KVM sharing switch could complicate service issues, and might have to be removed to diagnose certain problems. A spare keyboard, mouse, and display would allow problem isolation without disrupting the other 2074s sharing the switch.

Planning Information

Customer Responsibilities: The IBM 2074 Model 2 Console Support Controller is classified as a CE-installed box. IBM customer engineers will be involved in the installation and installation planning activities. The customer must use the configuration utility to configure the box to customize the following items:

- LAN adapters
- LAN adapter IP addresses
- Frame type for each Ethernet Adapter (IEEE or DIX)
- Definition of the 32 possible sessions on each ESCON adapter card:
 - The source definition on the ESCON side: LPAR number, unit address, destination port number, and so on
 - The target definition for the client: IP address and/or LUNAME
 - Selection of a device type for each session: display (3278), printer (3287), or OMA tape (3422)
- TCP/IP port number definition for each ESCON adapter

Customers should also consider TCP/IP security technologies (for example, the creation of a Virtual Private Network [VPN] or Virtual LAN [VLAN]) as methods to increase security, especially if planning to use console sessions over remote TCP/IP connections.

Cable Orders: ESCON and LAN cables are supplied by the customer.

Security, Auditability, and Control

This product uses the security and auditability features of zSeries servers.

Customers should also consider TCP/IP security technologies (for example, the creation of a VPN or VLAN) as methods to increase security, especially if planning to use console sessions over remote TCP/IP connections.

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

Terms and Conditions

This product is available for purchase under the terms of the IBM Customer Agreement.

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may have been previously installed.

Regardless, IBM warranty terms apply.

IBM Credit Corporation Financing: No

Warranty Period: One year

Warranty Service: IBM On-Site Repair (IOR) 24 hours a day, 7 days a week, same-day response

Usage Plan Machine: No

IBM Hourly Service Rate Classification: Three

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

Rental Offering: No

Field-Installable Features: Yes

Model Conversions: No

Customer Setup: No

Graduated Charges: No

Licensed Internal Code: IBM Licensed Internal Code is licensed for use by a customer on a specific machine, designated by serial number, under the terms and conditions of the IBM Agreement for Licensed Internal Code.

Educational Allowance: A reduced charge is available to qualified education customers. The educational allowance may not be added to any other discount or allowance.

Prices

Contact your IBM representative for prices information for this announcement.

Order Now

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Note: Shipments will begin after the planned availability date.

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