DATACOM

DM4370

10G CARRIER ACCESS SWITCH

INSTALLATION GUIDE

204.4314.03 – September/2022

LEGAL NOTE

In spite the fact that all the precautions were taken in development of the present document, DATACOM shall not be held responsible for eventual errors or omissions as well as no obligation is assumed due to damages resulting from the use of the information included in this guide. The specifications provided in this manual shall be subject to changes with no prior notification and are not acknowledged as any type of contract.

WARRANTY

DATACOM's products are covered by a warranty against manufacturing defects during a minimum period of 12 (twelve) months including the legal term of 90 days, as from the date of issue of the supply Nota Fiscal (Invoice).

Our warranty is standard counter warranty, this means, for exercise of the warranty, the customer should send the product to DATACOM Authorized Technical Assistance with paid freight. The return freight of the equipment will be DATACOM responsibility.

To obtain additional information, see our warranty policy in www.datacom.com.br/en/home

Telephone Number: +55 51 3933-3094

CONTACTS

TECHNICAL SUPPORT

Datacom has available a support portal - DmSupport, to help the customers in use and config of our equipment.

Access to the DmSupport can be made through link: https://supportcenter.datacom.com.br

In this site the following are available: firmwares, technical datasheets, config guide, MIBs and manuals for download. In addition, it allows opening of calls for assistance with our technical team.

Telephone Number: +55 51 3933-3122

We would like to highlight that our assistance through telephone support is available from Monday through Friday from 08:00 AM through 05:30 PM.

Important: For support assistance 24x7, please request a quotation to our sales department.

GENERAL INFORMATION

For any other additional information, please visit the www.datacom.com.br/en/home or call:

DATACOM

Rua America, 1000

92990-000 – Eldorado do Sul – RS – Brazil

+55 51 3933-3000

PRODUCT DOCUMENTATION

ABOUT THIS DOCUMENT

This document is part of a set of documents prepared to provide all necessary information about DATACOM products.

SOFTWARE PLATFORM

- QUICK CONFIGURATION GUIDE – Provides instructions on how to set the functionalities in a quick manner in the equipment
- TROUBLESHOOTING GUIDE – Provides instructions on how to analyze, identify and solve problems with the product
- COMMAND REFERENCE – Provides all the commands related to the product
- RELEASE NOTES – Provides instructions on the new functionalities, identified defects and compatibilities between Software and Hardware

HARDWARE PLATFORM

- DATASHEET – Provides the product technical characteristics
- INSTALLATION GUIDE – Provides instructions on the procedures covering product installation

The availability of some documents can vary depending on the type of product.

Access https://supportcenter.datacom.com.br/ to locate the related documents or contact the Technical Support for additional information.

CONTENTS

1 INTRODUCING THE HARDWARE INSTALLATION GUIDE

1.1 ABOUT THIS GUIDE

This manual provides information about hardware specification and installation procedures from DM4370 switch. This document also covers initial configuration, those normally needed after hardware installation.

It is assumed that the individual or individuals managing any aspect of this product have basic understanding of Ethernet and Telecommunications networks.

1.2 INTENDED AUDIENCE

The DM4400 Hardware Installation Guide is intended for Network Administrators, technicians and other qualified service personnel responsible for installing, configuring, planning and maintaining the DM4370 platform.

1.3 CONVENTIONS

In order to improve the agreement, the following conventions are made throughout this guide:

1.3.1 Icons Convention

Icon	Type	Description
	Note	Notes give an explanation about some topic in the foregoing paragraph.
	Caution	This symbol means that this text is very important and, if the orientations were not correct followed, it may cause damage or hazard.
	Warning	This symbols means that, case the procedure was not correctly followed, may exist electrical shock risk.
	Warning	Represents LASER radiation. It is necessary to avoid eye and skin exposure.
	Caution	Indicates that equipment, or a part is ESDS (Electrostatic Discharge Sensitive). It should not be handled without grounding antistatic wrist strap or equivalent.
	Warning	Non-ionizing radiation emission.

	Note	WEEE Directive Symbol (Applicable in the European Union and other European countries with separate collection systems).This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your consumer waste equipment for recycling, please contact your local city recycling office or the dealer from whom you originally purchased the product.

A caution type notice calls attention to conditions that, if not avoided, may damage or destroy hardware or software.

A warning type notice calls attention to conditions that, if not avoided, could result in death or serious injury.

2 GETTING STARTED

2.1 SAFETY WARNINGS

Before to continue, read carefully the following safety warnings:

Prior to installation carefully read the whole manual.

Pay attention to the safety instructions during installation, operation or maintenance of this product. Installation, adjustments or maintenance must be performed only by qualified, trained and authorized personnel.

To prevent the risk of electrical shocks, before turning the equipment on or connecting an interface card or cable, install the protective grounding system.

Some pieces of equipment in this guide have optical modules of LASER emitting. Avoid exposure to eyes and skin.

The optical interface modules use transmitters with invisible LASER radiation. Never look directly at the LASER terminals or the optical fiber. Exposure to LASER emission may cause partial or total vision loss.

3 HARDWARE SPECIFICATIONS

This chapter describes the DM4370 switch hardware specifications.

3.1 PRODUCT OVERVIEW

This manual covers the DM4370 4GT+4GX+4XS product. The front panel of the switch is shown below.

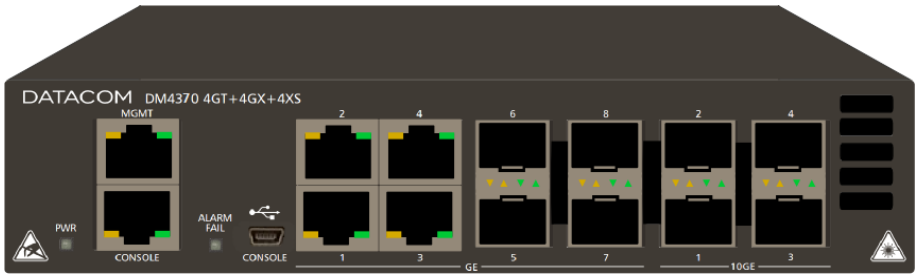


Figure 1 – DM4370 4GT+4GX+4XS front panel

More information on the switch's capabilities can be found in the Technical Specifications chapter.

3.2 PWR LED (POWER)

The PWR LED is an indicator that informs visually the status of the DM4370 power supply. The table below shows the expected behavior for this indicator.

Color	Status	Description
-	Off	Switch is off
GREEN	On	Switch is on

Table 1 – PWR LED

3.3 ALARM/FAIL LED

The ALARM/FAIL LED is an indicator that visually informs the status of the operating system, which is run on the DM4370. The table below shows the expected behavior for this indicator.

Color	Status	Description
-	Off	Switch operating normally without failures or alarms detected
RED	On	Switch in hardware failure status
ORANGE	On	Switch in alarm status

	Blinking	Switch is in firmware update process

Table 2 – ALARM/FAIL LED

3.4 CONSOLE INTERFACE

The DM4370 switch has a console interface for the local management of the product. The console interface uses an RJ45 connector and follows the RS232 (EIA/TIA 574) standard. A cable with a male RJ45 connector and a female DB9 connector must be used for the connection to a desktop or laptop.

The console interface on the RJ45 connector has two built-in LEDs that have no functionality in the switch and remain turned off under any operating conditions.

The console cable is an accessory included only in the collective package. Additional cables are purchased separately via code 710.0137.xx or assembled as described in the following illustrations. The pin assignment of the RJ45 connector and its match with the DB9 connector is described in table below.

Figure 2 – Console cable

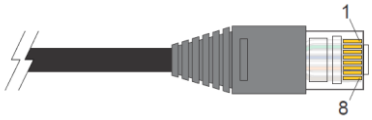


Figure 3 – RJ45 console cable connector pins

RJ45 Male	DB9 Female	Function	DM4370 Input/Output
1	-	Reserved	-
2	-	Reserved	-
3	2	RS232_TX	Output
4	5	DGND	Ground
5	5	DGND	Ground
6	3	RS232_RX	Input
7	-	Reserved	-

8	-	Reserved	-

Table 3 – Console interface connector pin assignment

3.5 Ethernet Management Interface

The DM4370 has a Copper Gigabit Ethernet interface for the dedicated management of the switch, which operates on full-duplex 10/100/1000Base-T. For details on how to use this interface, read the Ethernet Management Interface section.

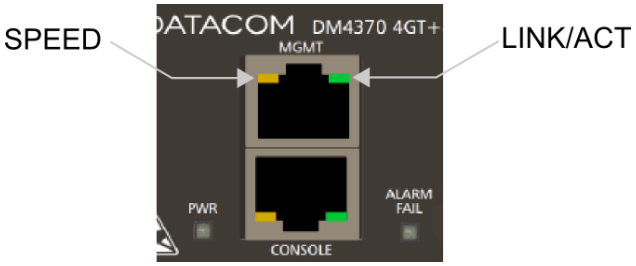


Figure 4 – Ethernet Management Interface

Indicator	Color	Status	Description
LINK/ACT	GREEN	Off	Link Down (inactive interface)
		On	Link Up (active interface)
		Blinking	Data transmitting and/or receiving activity
SPEED	YELLOW	Off	Interface operating in 1000Base-T mode
		On	Interface operating in 10Base-T or 100Base-T mode

Table 4 – Management Interface Indicator LEDs

The switch's Ethernet Management Interface does not support half-duplex mode.

3.6 USB Interface Device (Console)

The switch provides a type B mini-USB device interface connector that operates in console mode. The USB Console Interface is accessible via type B mini-USB adapter cable to type A USB host (accessory not included with the switch). The driver to use this interface in Windows can be found on the Datacom website. Contact Technical Support for more information on using this interface.

3.7 DATA INTERFACES

3.7.1 Copper Ethernet Interfaces (10/100/1000Base-T)

The DM4370 switch has 4 copper Gigabit Ethernet interfaces in dedicated RJ45 connectors, numbered from 1 to 4 on the front panel. There are LINK/ACT and SPEED LEDs that are built into the connectors corresponding to each interface, as shown below.

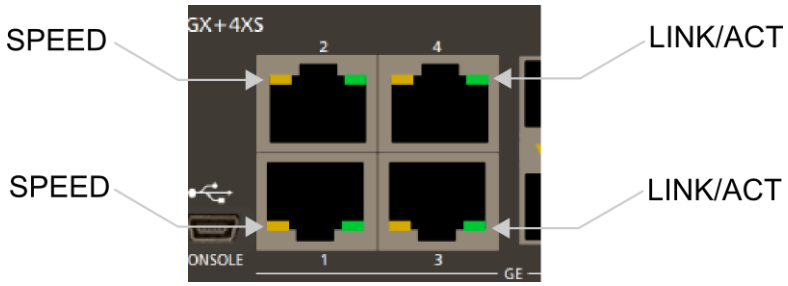


Figure 5 – Copper Ethernet Interfaces and LED indication

The copper interfaces present the LED convention described in the table below to indicate the operation and operating mode.

Indicator	Color	Status	Description
LINK/ACT	GREEN	Off	Link Down (inactive interface)
		On	Link Up (active interface)
		Blinking	Data transmitting and/or receiving activity
SPEED	YELLOW	Off	Port operating in 1000Base-T mode
		On	Port operating in 10Base-T or 100Base-T

Table 5 – Indicator LEDs of the copper Gigabit Ethernet interfaces

3.7.2 Gigabit Ethernet Interfaces (1000Base-X)

The DM4370 has 4 Gigabit Ethernet interfaces in dedicated SFP connectors and numbered from 5 to 8 on the front panel. There are LINK/ACT and SPEED LEDs that are built into the connectors corresponding to each interface, as shown below.

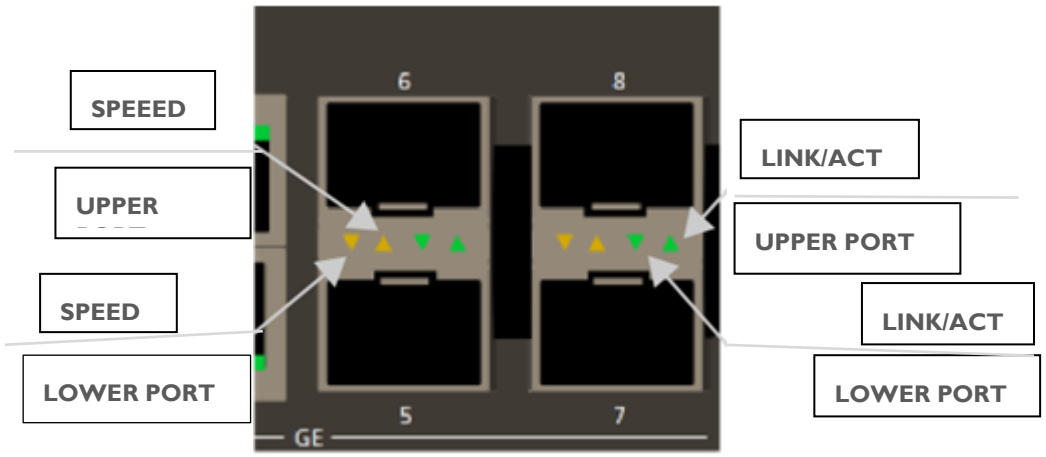


Figure 6 – Gigabit Ethernet SFP Interfaces and LED indication

The LED convention to indicate the operation and mode of the interfaces is described in the table below.

Indicator	Color	Status	Description
LINK/ACT	GREEN	Off	Link Down (inactive interface)
		On	Link Up (active interface)
		Blinking	Data transmitting and/or receiving activity
SPEED	YELLOW	Off	Interface operating in 10GBase-X mode
		On	Interface operating in 1000Base-X mode

Table 6 – Indicator LEDs of the Gigabit Ethernet SFP interfaces

3.7.3 SFP+ Gigabit Ethernet Interfaces (10GBase-X)

The DM4370 switch has 4 10 Gigabit Ethernet interfaces on dedicated SFP+ connectors and numbered from 1 to 4 on the front panel. There are LINK/ACT and SPEED LEDs that are built into the connectors corresponding to each interface, as shown below.

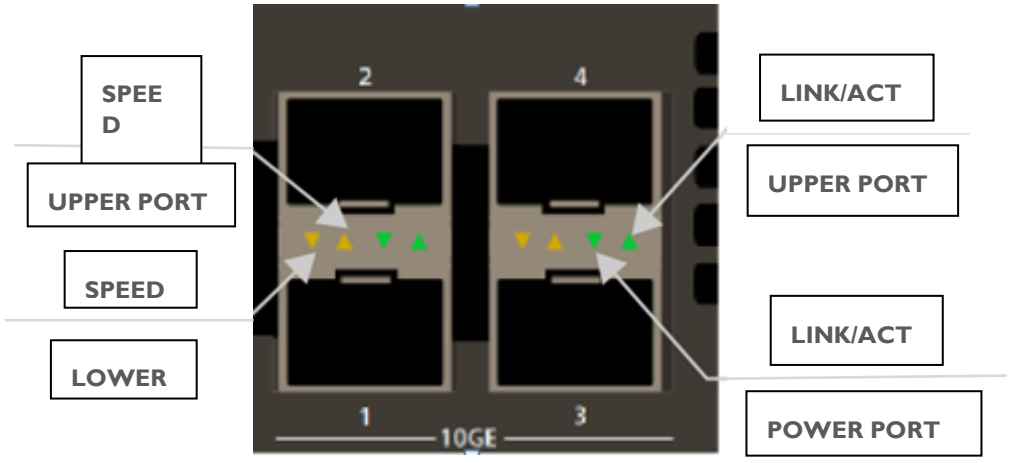


Figure 7 – SFP+10 Gigabit Ethernet Interfaces and LED indication

The LED convention to indicate the operation and mode of the interfaces is described in the table below.

Indicator	Color	Status	Description
LINK/ACT	GREEN	Off	Link Down (inactive interface)
		On	Link Up (active interface)
		Blinking	Data transmitting and/or receiving activity
SPEED	YELLOW	Off	Interface operating in 10GBase-X mode
		On	Interface operating in 1000Base-X mode

Table 7 – Indicator LEDs of the 10 Gigabit Ethernet SFP+ Interfaces

3.8 Power Inputs

The DM4370 switch has two independent power inputs on the rear panel, as shown in figure below. The product is turned on and operates automatically if either input is powered within the specified voltage levels.

Figure 8 – DM4370 Rear Panel

Additionally, the DM4370 switch supports redundant power supply and the insertion/removal of power cables (hot swap), thus allowing uninterrupted operation if one of the two power sources is turned off or fails.

The switch is de-energized through the power cable. The power outlet must be nearby and easily accessible.

This switch depends on pre-installed protection against short circuits.

In the situation where both power inputs are connected and operating with voltages within the specified range, the AC/DC power supply will take precedence over the DC power supply.

3.8.1 AC/DC Power Input

This power input has an IEC 320/C14 plug and works both for direct connection in conventional AC power (alternating current) as well as -48/60V DC power rails. The switch is capable of automatically detecting the

polarity, the type of input voltage used (AC or DC) and adjusting its internal operation. Information about tolerated input limits, power and current can be found in the Technical Specifications chapter.

The image below shows the plug's grounding information.

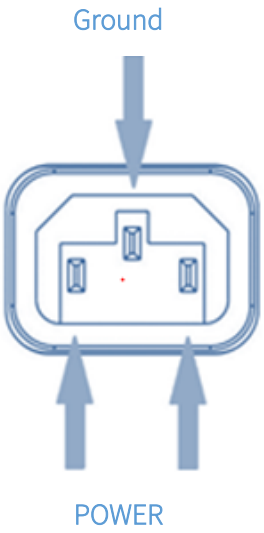


Figure 9 – IEC 320/C14 plug grounding

According to the NBR 14136 standard the switch's grounding pin must be connected to the grounding installations of the site where it will be installed since the power pins have no polarity indication.

3.8.2 DC Power Input

This power input has an IEC 320/C14 plug and works both for direct connection in conventional AC power (alternating current) as well as -48/60V DC power rails. The switch is capable of automatically detecting the polarity, the type of input voltage used (AC or DC) and adjusting its internal operation. Information about tolerated input limits, power and current can be found in the Technical Specifications chapter.

The image below shows the DC jack plug polarity information.

Figure 10 – DC Jack plug polarity

The external 12V power supply is a switch accessory, sold separately. Use only external power supply provided by DATACOM. Consult Technical Support for further information.

4 INSTALLING THE DM4370

This chapter explains the procedures, recommendations, and attention related to installing the DM4370.

The DM4370 must be installed in a dry, ventilated location. The sides, front panel and rear panel must remain unobstructed for proper switch ventilation and air convection. Never support any type of material over the switch.

The switch has a fan in the rear panel next to the power inputs to assist in the switch's heat dissipation. Never block the air vents while the switch is in operation.

4.1 DM4370 SWITCH PACKAGE CONTENTS

The switch is wrapped in protective plastic bubble wrap and packaged in individual cardboard boxes, in order to avoid damage to the product during shipping. Depending on the size of the purchase order a set of individual boxes can be packed inside a collective box, as shown in figure below.

A 1.5m power cord unit with 180° NBR14136 plug is available inside the individual box, in addition to the switch itself.

Open the top of the collective packaging (if applicable) and the front of the individual boxes and make sure that all of the items listed above are inside the package. Check that the switches are not damaged. If there is anything wrong contact Technical Support.

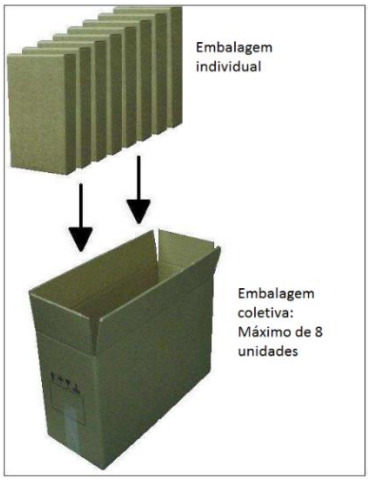


Figure 11 – Product packaging

4.2 IDENTIFYING THE PRODUCT

Check that the switch received matches the illustrations in this manual, as shown in figure below.

The DM4370 switch has a label on the bottom of its mechanical base. It contains model information, product code and serial number. Check if there is any divergent information on the label in relation to the information present on the packaging.

4.3 PREPARING THE SITE

Before to install the equipment, some cares must be taken to guarantee a successfully equipment deployment. The site planning process should consider the following requirements:

- Building,
- Environment,
- Equipment,
- Cabling.

4.3.1 Building requirements

Verify that building and electrical installations are in according to all code specifications (set of rules for building constructions) defined by governmental authority.

The construction of the site in question needs to be prepared to withstand mechanical and electrical loads of the new switch being installed. See the Technical Specifications to check relevant switch weight and power consumption information.

Be sure that the power supply circuit to the rack assembly is not overloaded.

4.3.2 Environment requirements

Electrical equipment generates a significant amount of heat. Therefore, it is essential to provide a temperature-controlled environment for assure performance and safety.

Additionally to temperature control, it is also necessary to install the equipment only in a humidity-controlled area that is free of airborne materials that can conduct electricity. Remember that too much humidity can cause a fire and too little humidity can produce electrical shock and fire.

4.3.3 Equipment requirements

To ensure correct operation, when you install the DM4370 switch observe the information available in Physical Specifications and Environmental Information sections.

4.4 19-INCH RACK INSTALLATION

The DM4370 switch can be installed on 19-inch racks using the MA-01 accessory (sold separately through 800.0141.xx code). Up to two DM2100 (EDDSII), DM2300, DM2500 and DM4370 units can be arranged side by side, occupying 1U in height.

Remove the screws securing the front rubber feet of the switch using a Phillips screwdriver, and use the same screws and the same hole to secure the DM4370 switch to the adapter, as shown in the image below.

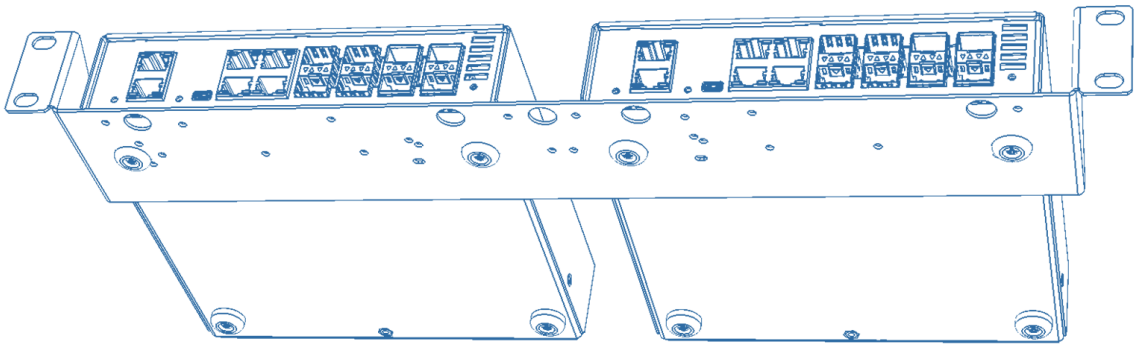


Figure 12 – MA-01

After installing the switch to the adapter, place the assembly on the rack and insert two standard M5 screws (not shipped with the switch) into each side ear of the adapter to secure the assembly to the rack's cage nuts (not shipped with the product). Finally, tighten the screws to ensure that the assembly is securely attached to the rack.

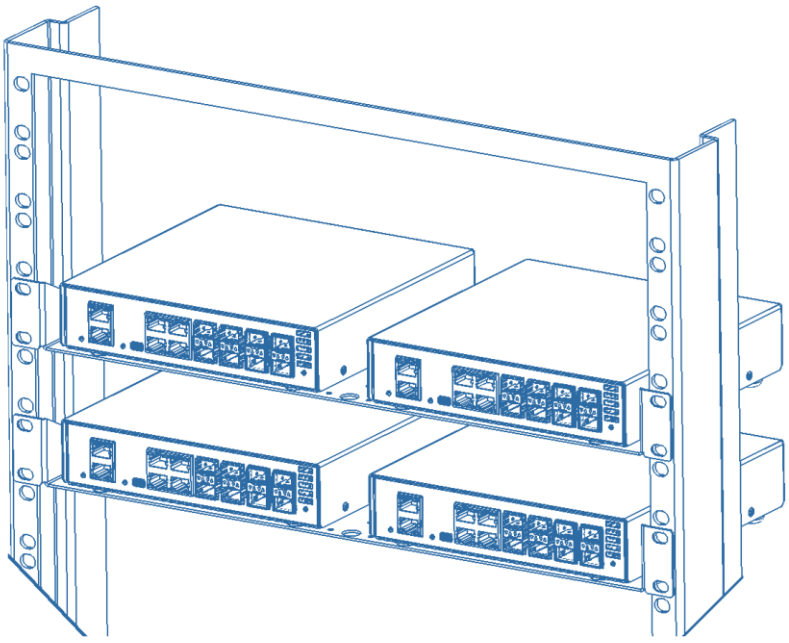


Figure 13 – Installation of the MA-01 to a 19-inch rack

4.5 Desktop Installation

The DM4370 switch has tabletop rubber feet, as shown below. Choose a flat surface near to an AC or DC power source to install the switch.

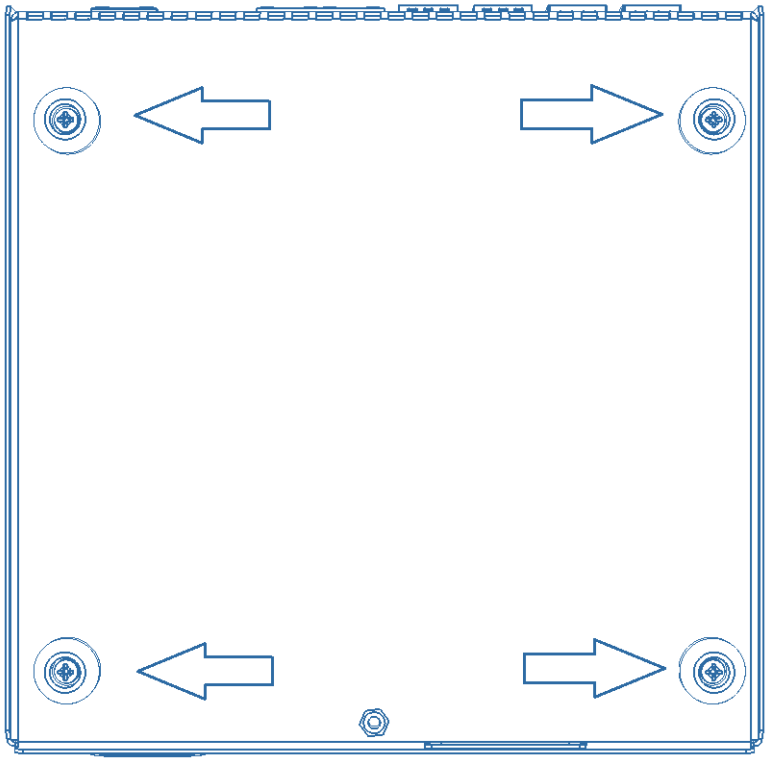


Figure 14 – DM4370 bottom view

4.6 Connecting the Power Supply

The DM4370 switch features two independent power inputs on the rear panel. The switch can operate normally if either of the two inputs is powered according to the expected voltage and current levels. Refer to Power Input and Technical specification sections for additional information on how to connect the power inputs.

4.7 Checking the Switch's Operation

Considering that the DM4370 switch was installed according to the guidelines in this manual, the steps below indicate if the switch is operating normally.

Step	Description
Step 1	▪ Immediately after the unit is powered by any of the power inputs, the green PWR LED should light up immediately

Step 2	▪ You should be able to see the fan, positioned at the rear panel, moving after the switch is turned on.

Table 8 – Operating normally

Find further information on the expected LED behavior in Hardware Specifications chapter.

Once the initialization process has been completed successfully, the operator must configure the switch's management as indicated in the Accessing the Switch section.

5 INSTALLING AND REMOVING TRANSCEIVERS

There may be restrictions for the use of copper SFP and 100Base-FX SFP modules in the SFP/SFP+ cages. Consult Technical Support for a list of modules tested with this switch.

This chapter describes how SFP/SFP+ modules should be installed and removed. It also provides information about the DATACOM guidelines for the cleaning and storage of modules and optical fibers.

SFP (Small Form-factor Pluggable) and SFP+ modules are inserted into the SFP/SFP+ cages, operating as transceivers between the switch and the selected optical communication path.

In order to ensure durability and good performance of the switch, it is very important to follow the guidelines described below.

- Care with the Optical Cords:

  ➢ Keep optical cords that are currently not in use with their protective cap. The core of the optical cords can become dirty and result in loss of performance just by being stored without their protective cap, even if stored in an appropriate cabinet;

  ➢ Clean the optical cords core before using them. To clean them it is necessary to use only specific cleaning material. Any other material used to clean the optical cord core may result in loss of performance or even irreparable damage to the cords.

- Care with the Optical Modules:

  ➢ In order to handle the optical modules, it is always necessary to use an antistatic wrist strap;

  ➢ In order to transport and store the optical modules, it is always necessary to do so in their original packaging to prevent any physical or electrostatic damage.

When performing any maintenance to the switch, make sure the maintenance technician is using the appropriate protections. Grounding (the use of an antistatic wrist strap) can prevent damage to the operator's health and damage to the switch.

The SFP/SFP+ modules provided by DATACOM meet INF-8074i and IEC 60825-1 specifications. Modules that are not approved do not guarantee correct operation of the switch and might damage it. Please contact Technical Support for more information on the risks of using non-approved modules and the possibility of their use.

Optical modules employ invisible radiation laser transmitters. Never look directly at the terminals of a module or optical cord. Exposure to laser emissions may cause partial or total loss of vision.

5.1 INSTALLING SFP/SFP+ MODULES

Follow the steps below to install SFP/SFP+ modules to the switch.

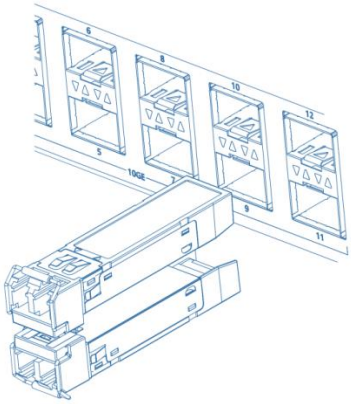
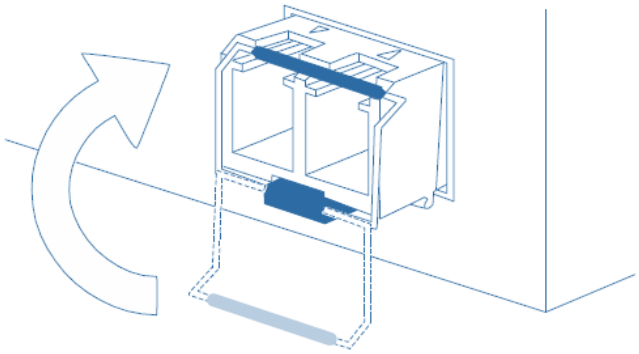
Step 1	▪ Insert the module into the SFP or SFP+ slot and push it in until it is firmly inserted, as shown in the image.  Figure 15 – Inserting the SFP module
Step 2	▪ After inserting the module, it is necessary to lock it by moving the bale-clasp latch. This flap also serves to lock the optical cords after they have been inserted.  Figure 16 – Safety flap
Step 3	▪ After positioning the bale-clasp latch, the optical cords can be inserted.

Table 9 – Installing SFP/SFP modules

5.2 REMOVING SFP/SFP+ MODULES

Before removing the optical cords, it is recommended that you check if there are labels on them that indicate in which switch and interface they should be connected, facilitating their identification later.

In order to remove the modules, simply follow the same insertion instructions in reverse order:

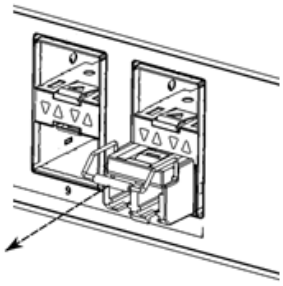
Step	Description
Step 1	▪ Remove the optical cords
Step 2	▪ Lower the bale-clasp latch
Step 3	▪ Pull the module by the bale-clasp latch, as shown in the image below.  Figure 17 – Removing the SFP module

Table 10 – Removing the SFP module

When the switch is operating at temperatures above 45°C the user must use industrial-grade SFP/SFP+ modules. Contact Technical Support if you have any questions.

6 LOGGING IN FOR FIRST TIME

Considering the equipment correctly installed as described previously, the user can manage it through a Command Line Interface (CLI). The CLI is accessed by using a direct console connection or by using a SSH connection from a remote management terminal.

6.1 CONNECTING BY CONSOLE INTERFACE

You can access the *Command Line Interface* (CLI) through the local console interface located on the left side of the switch's front panel; to do so, simply connect a compatible console cable and run a terminal emulator such as Hyper Terminal or similar on a desktop or laptop. The DM4370 default setting is baud rate 9600, with 1 stop bit and no parity, as shown in the image below.

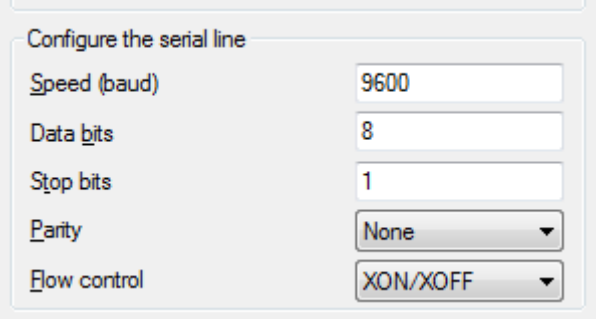


Figure 18 – Serial interface configuration on the computer

The DM4370 switch does not support hardware flow control. In the configuration of the Console Interface the hardware flow control should be disabled.

Step 1	▪ On the PC or laptop, start the terminal emulation program. The initial login prompt for a username appears: ➢ login as:
Step 2	▪ The default username and password are **admin**. Type the username followed by [Enter]: ➢ login as: admin [Enter]
Step 3	▪ Type the password followed by [Enter]: ➢ Password: admin [Enter]
Result	▪ The prompt as following will appear, indicating a successful login: ➢ Welcome to the DmOS CLI ➢ DM4370#

Table 11 – DM4370 Login

6.2 CONFIGURING A MANAGEMENT INTERFACE

The configuration below will set up the device management according to the above diagram. If you are connected by MGMT interface, the session will be disconnected after the commit. To continue setting the

device by MGMT interface, you must set an IP address on your PC whithin the same network or connect by Console:

Step 1	▪ Entering the configuration mode: # configure
Step 2	▪ Entering the configuration MGMT interface: (config)# **interface mgmt 1/1/1**
Step 3	▪ Configuring the IPv4 address on the MGMT interface: (config-mgmt-1/1/1)# **ipv4 address** 172.2.22.1/24
Step 4	▪ Removing the default IP address (only one is supported) and exit: (config-mgmt-1/1/1)# **no ipv4 address** 192.168.0.25/24 (config-mgmt-1/1/1)# **top**
Step 5	▪ Configuring the default gateway address and exit configure mode: (config)# **router static address-family ipv4** 0.0.0.0/0 **next-hop** 172.2.22.254
Step 6	▪ Applying and saving configuration changes: (config)# **commit**

Table 12 – Configuring Management Interface

See the Quick Configuration Guide for more information about the switch's management settings.

6.3 DEFAULT ACCOUNT

One account is configured by default on the DM4370: *admin*.

Account	Password	Description
admin	admin	admin is an account that has admin level privileges. So, it can view and change all device parameters. It is a complete read-and-write access to the entire device.

Table 13 – Default Account

Due the security reasons, it is strongly recommended to change the admin account password at the first time login.

6.4 Changing Default Administrator Account Password

For security reasons it is highly recommended to modify the default administrator account password.

Step 1	Entering the configuration mode: # configure
Step 2	Entering the user mode: `(config)# aaa user admin`
Step 3	Changing the password: `(config-user-admin)# password new-password`
Step 4	Exiting the user mode: `(config-user-admin)# exit`
Step 5	Applying and saving configuration changes: `(config)# commit`

Table 14 – Changing Password

7 TECHNICAL SPECIFICATION

7.1 INTERFACES

Interfaces	DM4370 4GT+4GX+4XS
Console (RJ45)	1
Management 10/100/1000Base-T (RJ45)	1
USB Device (tipo mini B)	1
10/100/1000Base-T (RJ45)	4
1000Base-X (SFP)	4
10GBase-X (SFP+)	4
AC/DC power input (IEC 320/C14)	1
12V DC power input (DC JACK)	1

Table 15 – Interfaces do produto

7.2 POWER SUPPLY

7.2.1 AC/DC Power Input (IEC 320/C14 connector)

	DM4370 4GT+4GX+4XS
Rated AC operating voltage	100 a 240 Vac (± 10%) 50/60Hz
Rated DC operating voltage	-48 to -60 Vdc (± 20%)
Rated AC current	0.25 A
Maximum AC current	0.35 A
Rated DC current	0.80 A
Maximum DC current	0.95 A

Table 16 – AC/DC power input specifications

7.2.2 12V DC Power Input (DC Jack connector)

	DM4370 4GT+4GX+4XS
Rated operating voltage	12 Vdc (± 5%)
Rated current	2.00 A
Maximum current	2.50 A

Table 17 – DC power input specifications

7.3 PHYSICAL SPECIFICATIONS

	DM4370 4GT+4GX+4XS
Height	43 mm
Width	189 mm
Depth	191 mm
Net weight	1.3 kg

Table 18 – DM4370 physical specifications

7.4 ENVIRONMENTAL INFORMATION

	DM4370 4GT+4GX+4XS
Operating temperature	0°C to 55°C
Operating relative humidity	10% to 90%, non-condensed

Operating altitude	0 to 3,000m
Storage temperature	-20°C to 70°C

Table 19 – DM4370 operating conditions

For 10G Ports, when the switch is operating at temperatures above 40°C the user must use industrial-grade SFP+ modules.

For 1G Ports, when the switch is operating at temperatures above 50°C the user must use industrial-grade SFP modules.

Contact Technical Support if you have any questions.

8 STANDARDS AND REGULATIONS

Class	Standard	Description
➢ Directive 2014/30/EU Electromagnetic Compatibility		
EMC	Ato 1120	REQUISITOS TÉCNICOS DE COMPATIBILIDADE ELETROMAGNÉTICA PARA AVALIAÇÃO DACONFORMIDADE DE PRODUTOS PARA TELECOMUNICAÇÕES
ECM	ETSI EN 300 386	Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements; Harmonised Standard covering the essential requirements of the Directive 2014/30/EU
EMC	EN 55032	Electromagnetic compatibility of multimedia equipment - Emission requirements
EMC	EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
EMC	EN 61000-4-6	Immunity to conducted disturbances, induced by radio-frequency fields
EMC	EN 61000-4-2	Electrostatic discharge immunity test
EMC	EN 61000-4-4	Electrical fast transient/burst immunity test
EMC	EN 61000-4-5	Surge immunity test
EMC	EN 61000-4-3	Radiated, radio-frequency, electromagnetic field immunity test
EMC	EN 61000-3-2	Limits for harmonic current emissions
EMC	EN 61000-3-3	Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems
➢ Directive 2014/35/EU Low Voltage		
Safety	EN 60825-1	Safety of laser products
Safety	EN 60950-1	Information technology equipment – Safety – Part 1: General requirements
➢ Directive 2011/65/EU Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS)		
RoHS	EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
➢ Directive 2012/19/EU Waste Electrical & Electronic Equipment (WEEE)		
➢ Environmental Conditions		
--	EN 300 019-1-1, Class 1.2	Environmental Conditions for storage
--	EN 300 019-1-2, Class 2.3	Environmental Conditions for Transport

DATACOM

Rua América, 1000 | 92990-000 | Eldorado do Sul | RS | Brazil
+55 51 3933 3000
sales@datacom.com.br