dorax®

innovation
& solution

Product Catalogue 2024

dorax®

Dorax Fan Modules are designed for rack cabinet temperature control , which is key to the smooth operation in data centers.

Surprisingly quiet, long-lasting and performance-guaranteed fan components, designed according to need, meet many expectations and needs with management modules.

Being avaliable with options, they are the **ideal solution** for functional, durable and silent cabin ventilation!

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About Us

Dorax Fan Modules

Dorax Fan Units

about Us

With our experience since 1990, we provide our customers with **personalized, dynamic, international standard leading technologies.**

We are progressing with the aim of being an effective player **globally** with our team who took a role since the beginning and shaping of the industry in our country.

As doraks, being involved in every field where communication technologies are used since their establishment in our country, we manufacture accessories used in infrastructure systems as well as installing them.

We adopt are constantly developing the skills necessary to maintain dynamic, pioneering, international standards-based system.

production principles

Producing the Quality

We believe that quality is not acquired at the final check but begins with the design.

From the moment we learn your demands, we design the most optimum and long-lasting solution for your system, prioritize quality at every stage of production and test it in our quality control processes.

Delivery on Time

Dorax products can travel for long periods while being distributed all over the world.

We understand the importance of following shipment deadlines and we work diligently to maintain our zero delay rate.

Trust in the Product and Services

With our confidence in our product and production process, we believe that our products are one of the strongest links of the chain in the systems they are used.

We pride ourselves on the trust in our products and in providing the most suitable solution.

Lifetime Product Satisfaction

We are always with you for your questions and needs about the product with out aftersales services. Dorax products stand out with their trouble-free operation for years. after-sales support and user-oriented custom solutions.

our service principles

"Zero Problem" Policy

By staying in coordination with all units affecting the project, it is a priority to notify possible problems in advance, to develop solutions, and to prevent cost and time loss with pre-production studies. It is also a part of our policy that the systems we install can operate smoothly and remain up-to-date for many years.

Team Work

Team spirit is taken as core, while the awareness of individual responsibility is formed, coordination is maintained and our team members add their experienced skills. It creates the business and individual ground to enable employees to develop themselves, increase their competencies and abilities, and maximize internal harmony and efficiency.

Occupational Safety Priority

Dorax, which undergoes regular occupational safety trainings and controls, aims to create an accident-free work environmen. Being aware of life-threatening dangers, complying with all occupational safety rules in all working conditions.

Customer Satisfaction

Dorax, which prioritizes the needs of its customers, aims to offer solutions that are personalized, need-oriented and suitable for long-term use, with the most advanced technologies, by analyzing their needs.

After-sales services are offered as well.

Dorax Fan Units and Modules

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- **Can be customized to the need**
- **Durable and long-lasting**
- **High Performance**
- **Super silent with its special design**
- **Easy installation and maintenance advantage**
- **International standards**

Fan Units and modules designed and produced by Dorax will start in a new era in rack cabinets and data centers with their silence, long product life, high performance and easy installation and customization features.

Whether the units produced in the specified configuration or the modules and components that make up these units, you are presented as new wonders of Dorax innovation...

Case Options

Standart

Slim

Rack 3U

Fan Number Options

Single Double 4 Fan 6 Fan

Color Options

Black Gray

Management Module Options

Slim On Off Module

Slim All in One Module

Standart On Off Module

Standart All in One Modül

Dijital Basic Module

Dijital Pro Module

Dijital Smart Modül
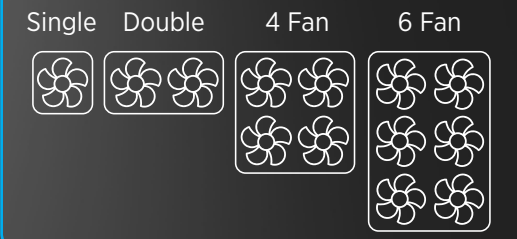
Socket Connection Options

C14   C14 Combo (ON/OFF and Fuse Included)   Combo Socket Power Module   C14 Socket Power Module

Cable Connection Options

C14   C20   Schuko   NEMA   UK

Components of perfection...

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Durable Case Types

According to customer expectations and cabinet designs the case types produced by Dorax are: SLIM type, compatible with 25 mm high fans and saves space,

STANDARD type, which is used with the most common 38 mm fans, Also 3U and 19" wide case types that are mounted on rack uprights or side covers for intermediate air circulation.

Cases are designed and manufactured according to the principles of easy assembly, durability and antivibration. Cases are available in different colors other than RAL 9005 and 7035.

Silicone Clips

Elastic mounting pins are developed and produced as an alternative to metal screws to connect the fan and body.

When the fan-body connection is made with these elastic pins, in addition to the advantage of fast installation, the vibration that occurs during the rotation of the fan is isolated from the body and noise on the metal surface is decreased.

The vibration occurring on the fan itself is also decreased with the silicone clips, which helps with longer lifespan of fans.
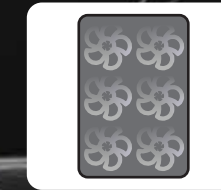
Practical Assembly Module

The Fan Mounting Module allows the fast and accurate installation of elements connected such as fans (up to 6 fans), internal & external thermostats, On-Off switches, protection fuses and main energy connection. The modüle is recommended to be used together with the On/Off Switch-Fuse Module

It is fixed with 4 pins without the need for screwing. It allows rapid assembly of all elements with length adjusted cables mounted on it.

It can form a whole unit and be attached directly to the fan casing with the thermostat that can be mounted or with an external cable it can be connected to a thermostat mounted anywhere in the rack.

Co-Aging System

Dorax has designed and produced modules that meet the expectations of long life, smooth operation, low energy consumption and silence by preventing unnecessary operation of fan units.

By dividing the fans in the case into two separate groups and rotating the working time of each group in certain periods it is aimed to operate all fans for the same amount of time.

The life expectancy is also increased by changing the fan rotation speed to the environmental conditions, and a quiet and peaceful working environment is created with less noise with low speed.

Fans with Alternatives

Many different types of fans are used in the fan units. Five or seven bladed fans with dimensions of 120 x 120 x 38 mm, 120x120x25 mm can be of AC 220V, AC 110V, EC 110-220V, DC 12V voltage types, and each fan unit is designed accordingly.

For fans to be quiet and long-lasting, ball type products with cells lasting between 50-80 thousand hours are preferred.

1 °C Accuracy

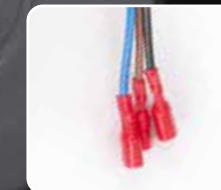Analog (mechanical) thermostats have a sensitivity of 4-8 °C and do not meet expectations in critical places.

DIGITAL FAN MODULES designed and produced by Dorax are equipped with sensors that work with 0.1°C sensitivity, and the temperature ranges can be set to 1°C, operating with high precision.

Customizable Modular Structure

Apart from the standard 2-4-6 fan units, Dorax can also customize for different designs and needs.

With its spectrum of options consisting of advanced modules instead of the existing simple fan units, Dorax can quickly put the expectations that customer's dreams or needs to production.

Customizable Modular Structure

Apart from the standard 2-4-6 fan units, Dorax can also customize for different designs and needs.

With its spectrum of options consisting of advanced modules instead of the existing simple fan units, Dorax can quickly put the expectations that customer's dreams or needs to production.

Technical Features	
Number of Fans	1 - 2 - 4 - 6
Thermostate	Mechanical
	Digital
Energy Input	220 VAC – 110 VAC (Optional)
Energy Input Type	Cable Connection (Schuko – UK -Nema 5/15 - C14 – C20 Plug Options)
	C14 Socket
	Combo Socket (C14 Socket + Fuse + ON/OFF Switch)
Yönetim Modülleri	ON/OFF MODULE (ON/OFF Switch, Fuse)
	All In One Module (ON/OFF Switch, Fuse,Thermostate, LED Indicator)
	Digital Basic Module (LCD Screen , ON/OFF Switch, Digital Thermostate, Temperature Setting Button, Up to 6 fan connection terminals, Direct Energy Input, Fixed speed fan)
	Digital Pro Module (LCD Screen , ON/OFF Switch, Digital Thermostate, Temperature Setting Button, Up to 6 fan connection terminals, Direct Energy Input, Variable speed fan according to temperature, Alarm output)
	Smart Module (LCD Screen, On/Off switch, Digital Thermostat, Temperature Setting buttons, Up to 6 fan connection terminals, Direct Energy Input, Variable speed fan according to temperature, Alarm output, Co-Aging Operating System, Two separate groups of fans in different speed and working time)
Fan	20 VAC / 0.11 Amp / Metal Body / 5 Blades (7 blade option)
Energy Cable	3 x 0.75mm 1 - 1.5 - 2 - 2.5 - 3 m. TTR Cable (Length on demand)
Connection Type	Ceiling
	Rack Mount (3U - 19")
	Back or Side Covers
Color	Black (RAL 9005)
	Gray (RAL 7035)

Rack
Cabinet
Fan
Modules

Digital Smart Management Module

- **Co-Aging**
- **1 °C setting range**
- **Digital thermostat sensor**
- **Heat alarm**
- **Fire retardant plastic body**
- **Different color options**

Can used only in standard fan units. 1 to 6 fans can be connected. On the front panel, the LCD screen that shows the ambient temperature, set temperature and the operating status of the fans, temperature adjustment buttons, On/Off button and digital thermostat sensor. On the back side are fan connection terminals, normally open (NO) relay contact output for alarm and energy input terminals. It can work with 100 - 240 VAC. The module is located in a plastic case and can be produced in different colors.

Nylon 6-v1 is used as material.

How it works

Fans work in two separate groups. They operate at four different speed levels depending on the ambient temperature : 25% - 50% - 75% and 100%. The operating status of the fans is shown as an upward-growing arrow in the active speed mode, and the lower speed groups are shown with fixed bars. Ambient temperature is shown in the lower left corner of the LCD screen. The set temperature value is shown in the lower right corner. When first energized, this value is 25 degrees and the fans start working automatically according to this value. This value can be adjusted to +18 / +35 in 1 degree steps with the up-down buttons.

The fans do not operate when the ambient temperature is more than 2 degrees below the set temperature value. When the ambient temperature is 2 degrees below the set temperature, one group of fans operates at 25% speed until the ambient temperature rises 2 degrees above the set value, while the other group is OFF.

At values between 2-4 degrees, one of the groups is at 50% speed and the other is at 25%

speed,

One of the groups between 4-6 degrees is at 75% speed, the other is at 50% speed,

One of the groups between 6-7 degrees is at 100% speed, the other is at 75% speed,

If the ambient temperature increases by more than 10 degrees, all groups are operating at 100% while the alarm contact closes and alarm activates. AMBIENT TEMPERATURE VALUE starts flashing on the LCD screen.

Smart Fan Management Module has the CO-AGING feature. With Co-Aging fan groups rotate operating status every 5 minutes. Thus, all fans operate at equal times and conditions.

The module can be turned off with the On/Off button. In this case, it goes into standby mode, the LCD screen light turns off and the fans stop. Energy is still in the system. When it is turned on again, the last set temperature value becomes active. In order to completely cut off the energy, it is recommended to use a Combo Connection Socket with On/Off switch, fuse and C14 socket at the energy input.

12

13

Digital Pro Management Module

- **1 °C setting range**
- **Digital thermostat sensor**
- **Heat alarm**
- **Fire retardant plastic body**
- **Different color options**

Can be used only in standard fan units. 1 to 6 fans can be connected.

On the front panel, there is an LCD screen that shows the ambient temperature, set temperature and the operating status of the fans, temperature adjustment buttons, On/Off button and digital thermostat sensor.

On the back there are fan connection terminals, normally open (NO) relay contact output for alarm and energy input terminals. It can work with 100-240 VAC. The module is located in a plastic case and can be produced in different colors.

Nylon 6 - V1 is used as material.

How it works

Fans operate at four different speeds depending on the ambient temperature: 25% - 50% - 75% and 100%. The operating status of the fans is shown by bars that grow upward according to speed. Ambient temperature is shown in the lower left corner of the LCD screen. The set temperature value is shown in the lower right corner. When first energized, this value is 25 degrees and the fans start to work automatically according to this value. This value can be adjusted to +18 / +35 in 1 degree steps with the up and down buttons. The fans do not operate when the ambient temperature is more than 2 degrees below the set temperature value. When the ambient temperature is 2 degrees below the set temperature, the fans are at 25% speed until the ambient temperature rises 2 degrees above the set value.

50% speed between 2-4 degrees,

It operates at 75% speed between 4-6 degrees and 100% speed between 6-7 degrees.

If the ambient temperature increases more than

10 degrees, the alarm contact closes and generates alarm information. AMBIENT TEMPERATURE VALUE starts to flash on the LCD screen. The module can be turned off with the On/Off button. In this case, it goes into standby mode, the LCD screen light turns off and the fans stop. Energy is still available in the system. When turned on again, the last set temperature value becomes active. In order to completely cut off the energy, it is recommended to use a Combo Connection socket with On/Off switch, fuse and C14 socket at the energy input.

14

15

Digital Pro Management Module

- **1 °C setting range**
- **Digital thermostat sensor**
- **Heat alarm**
- **Fire retardant plastic body**
- **Different color options**

It is used only in standard fan units. 1 to 6 fans can be connected.

On the front panel, the LCD screen that shows the ambient temperature, set tempe-rature and the operating status of the fans, temperature adjustment buttons, On/Off button and digital thermostat sensor. On the back side are fan connection terminals, normally open (NO) relay contact output for alarm and energy input terminals. It can ope-rate with 100 - 240 VAC.

The module is located in a plastic case and can be produced in different colors.

Nylon 6-v1 is used as material.

How it works

The operating status of the fans is shown by bars growing upwards. Ambient temperature is shown in the lower left corner of the LCD scre-en. The set temperature value is shown in the lower right corner.

When first energized, this value is 25 degrees and, the fans start working automatically accor-ding to this value. This value can be adjusted to +18 / +35 in 1 degree steps with the up-down buttons. The fans start working when the set temperature value is more than 1 degree above the ambient temperature. The fans stop when the ambient temperature drops 0.1 degrees below. The module can be turned off with the On/Off button. In this case, it goes into stand-by mode, the LCD screen light turns off and the fans stop. Energy is still available in the system. When it is turned on again, the last set tem-perature value becomes active. If the ambient temperature increases by more than 10 degrees, it generates alarm information. AMBIENT TEM-

PERATURE VALUE starts flashing on the LCD screen. In order to completely cut off the power, it is recommended to use a Combo Connection socket with a mechanical On/Off switch, fuse and C14 socket on the power input.

All in One
Analog Management Module

- **5 °C temperature range**
- **Mechanical thermostat**
- **Fire retardant plastic body**
- **Different color body - label option**

Sizes available for Slim and Normal fan units.

On the front panel of the modüle: On/Off switch, fuse (glass), Mechanical thermostat (adjustable between 0 - 70 °C), LED indicators showing energy and fan operating status, and fan mounting terminals on the back for mounting up to 6 fans for external thermostat connection with terminal block there are energy input terminals.

The module is located in a plastic case and can be produced in different colors. Nylon 6 - V1 is used as material.

ON/OFF Switch
Fuse Module

- **Fire retardant plastic body**
- **Different color body - label option**

Mountable for Slim or Standard Fan units and has an On/Off Switch (6A) and Button Fuse (5A). It is recommended to be used with the Fan Mounting Board.

Slim Case All in One Analog Management Module

• **5 °C temperature range**
• **Mechanical thermostat**
• **Fire retardant plastic body**
• **Different color body - label option**

Sizes available for Slim and Normal fan units.

On the front panel of the modüle: On/Off switch, fuse (glass), Mechanical thermostat (adjustable between 0 - 70 °C), LED indicators showing energy and fan operating status, and fan mounting terminals on the back for mounting up to 6 fans for external thermostat connection with terminal block there are energy input terminals.

The module is located in a plastic case and can be produced in different colors. Nylon 6 - V1 is used as material.

Slim Case ON/OFF Switch Fuse Module

• **Fire retardant plastic body**
• **Different color body - label option**

Mountable for Slim or Standard Fan units and has an On/Off Switch (6A) and Button Fuse (5A). It is recommended to be used with the Fan Mounting Board.

Inside Fan Mounting Module

Fire retardant plastic body

Different color option

Easy installation

This module allows connection of 1 to 6 fans, On/Off switches, fuses, energy input connections and external/internal thermostat to be made easily and accurately. Once the cable lengths are adjusted according to the structure of the fan unit, connection can be made to all components without using a hand tool.

Energy input modules

In addition to direct energy connection to fan units with cables, energy connection is also possible using with different types of sockets through connection cables. Energy connection with socket allows the plug at the other end to be used with plugs that comply with different country standards. This way, a single type of fan unit can be compatibility with the electrical systems of different countries.

C14 Input

It is the most common socket type in the computer systems. Cables that can easily connect to the PDU inside the cabin can be provided.

C14 Input Power Socket Module

This modüle is recommended when the socket internal connections are not preffered to be inside the fan unit. The power socket module is equipped with perforated windows that allow cable only, C14 socket only or Combo C14 socket connections. In this way, it can be easily adapted to future needs.

Combo Input Module

In addition to the C14 power connection, this module also includes an On/Off switch and an internal fuse to physically cut off the electricity. While protecting the unit in case of circuit overload, the physical on-off function of electricity is also provided. Digital Fan Modules do not contain a physical power cut-off switch. Therefore, it is recommended to use it together with these modules.

Combo Power Input Module

With all the advantages of the combo socket, it is recommended to be used in cases where internal connections are not required to be located within the fan unit. The power socket module is equipped with perforated windows that allow: cable only, C14 socket only or Combo C14 socket connections. In this way, it can be easily adapted to future needs.

Model Comparison		SLİM FAN	STANDART FAN	3U - 19" FAN
Management Module	ON/ Switch Fuse	✔	✔	✔
	All In One Analog	✔	✔	✔
	Digital Thermostat — Basic	—	✔	✔
	Digital Thermostat — Pro	—	✔	✔
	Digital Thermostat — Smart Fan	—	✔	—
Power Input	Cable Input	✔	✔	✔
	C14 Input Module	✔	✔	✔
	Combo Input Module	—	✔	✔
	C14+Socket Module	—	✔	—
	Combo + Socket Module	—	✔	—
Cable Type	Schuko Pluf Cable	✔	✔	✔
	UK Plug Cable	✔	✔	✔
	Nema 5/15 Plug Cable	✔	✔	✔
	C14 Plug Cable	✔	✔	✔
	C20 Plug Cable	✔	✔	✔
Case Color	Black	✔	✔	✔
	Grey	✔	✔	✔

Rack Cabinet Fan Units

Slim Case Fan Units

Slim design to maximise usable rack interior space

25 mm.

Schuko, UK, Nema 5-15, C14, or C20 plug power cable options.

Brand Logo Option

On Off or All in One module options available for different needs.

120 x 120 x 25 mm. in size, 110 VAC or 220 VAC power, special design, super quiet fans.

Silicone clips for less noise and practical installation

2-4-6 fan capacity options

Gray and black color options or optional case color in desired color

Since the ceiling mounting method does not change, slim or standard fan modules can be used with the same mounting method.

Slim Case ON/OFF Switch- Fuse Module Units

Slim Case ON/OFF Switch Fuse Module Fan Unit with 2 Fans

Slim Case ON/OFF Switch Fuse Module Fan Unit with 4 Fans

Slim Case ON/OFF Switch Fuse Module Fan Unit with 6 Fans

Slim Case All In One Analog Management Module Units

Slim Case All In One Analog Management Module Fan Unit with 2 Fans

Slim Case All In One Analog Management Module Fan Unit with 4 Fans

Slim Case All In One Analog Management Module Fan Unit with 6 Fans

27

Standart Case Fan Units

120 x 120 x 38mm. in size, 110 VAC or 220 VAC power, special design, super quiet fans.

2-4-6 fan capacity options

5 different module options available for combinations to the need.

Schuko, UK, Nema 5-15, C14, or C20 plug power cable options.

Silicone clips for less noise and practical installation

Gray and black color options or optional case color in desired color

Brand Logo Option

Standart Case ON/OFF Switch Fuse Units

Standard Case ON/OFF Switch Fuse Module Fan Unit with 2 Fans

Standard Case ON/OFF Switch Fuse Module Fan Unit with 4 Fans

Standard Case ON/OFF Switch Fuse Module Fan Unit with 6 Fans

Standard Case All In One Analog Management Units

Standard Case All In One Analog Management Module Fan Unit with 2 Fans

Standard Case All In One Analog Management Module Fan Unit with 4 Fans

Standard Case All In One Analog Management Module Fan Unit with 6 Fans

Standard Case Digital Basic Units

Standard Case
Digital Basic Module
Fan Unit with 2 Fans

Standard Case
Digital Basic Module
Fan Unit with 4 Fans

Standard Case
Digital Basic Module
Fan Unit with 6 Fans

Standard Case Smart Management Units

Standard Case
Smart Management Module
Fan Unit with 2 Fans

Standard Case
Smart Management Module
Fan Unit with 4 Fans

Standard Case
Smart Management Module
Fan Unit with 6 Fans

Standard Case Digital Pro Management Units

Standard Case Digital Pro
Management Module
Fan Unit with 2 Fans

Standard Case Digital Pro
Management Module
Fan Unit with 4 Fans

Standard Case Digital Pro
Management Module
Fan Unit with 6 Fans

Rack 3U Case Fan Units

Schuko, UK, Nema 5-15, C14, or
C20 plug power cable options.

Silicone clips
for less noise
and practical
installation

Smart Fan
Management
Module

120 x 120 x 38mm. in size,
110 VAC or 220 VAC power,
special design, super quiet fans.

Rack Mount 3U Case
Smart Management
Module 2 Fans