

AC800MM1-DS

Docking Station for ES820 memory modules
User's Guide



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ES820 Docking Station - User's Guide R01 EN - 05.2017

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1 **About this Manual**

This chapter contains information about the following topics:

- "Identification of Safety Notices" on page 5
- "Presentation of Information" on page 6
- "Scope of Supply" on page 6

1.1 **Identification of Safety Notices**

The safety notices contained in this manual are identified with the danger symbol shown below:



The safety notices shown below are used for this purpose. They provide notes to extremely important information. Please read this information carefully.



DANGER!

indicates an immediate danger with a high risk of death or serious injury, if not avoided.



WARNING!

indicates a possible danger with moderate risk of death or (serious) injury, if not avoided.



CAUTION!

identifies a hazard with low risk that could result in minor or medium physical injuries or property damages if not avoided.

1.2 Presentation of Information

All activities to be performed by the user are presented in a "Use Case" format. That is, the goal to be accomplished is briefly defined in the heading, and the respective steps required for reaching this goal are then presented in a list. The presentation looks as follows:

Goal definition:

any advance information...

- Step 1
Any explanation for step 1...
- Step 2
Any explanation for step 2...
- Step 3
Any explanation for step 3...

Any concluding comments...

Typographical conventions

The following typographical conventions are used:

Bold	Labels of the device
<i>Italic</i>	Particularly important text passages

Important notes for the user are presented as follows:

Note

Important note for the user.

1.3 Scope of Supply

Prior to the initial commissioning of the module, please check whether the module was delivered with all required components and cables (see chapter 7 on page 23).

Additional cables and adapters can be obtained separately from ETAS. A list of available accessories and their order designation is located in chapter 7 on page 23 of this manual or in the ETAS product catalog.

2 Basic Safety Notices

This chapter contains information about the following topics:

- "General Safety Information" on page 7
- "Requirements for Users and Duties for Operators" on page 7
- "Intended Use" on page 7

2.1 General Safety Information

Please observe the Product Safety Notices ("ETAS Safety Notice") and the following safety notices to avoid health issues or damage to the device.

Note

Carefully read the documentation (Product Safety Advice and this User's Guide) that belongs to the product prior to the startup.

ETAS GmbH does not assume any liability for damages resulting from improper handling, unintended use or non-observance of the safety precautions.

2.2 Requirements for Users and Duties for Operators

The product may be assembled, operated and maintained only if you have the necessary qualification and experience for this product. Improper use or use by a user without sufficient qualification can lead to damages or injuries to one's health or damage to property.

The system integrator is responsible for the safety of systems that use the product.

General safety at work

Existing specifications regarding health and safety and accident prevention must be observed. All applicable regulations and statutes regarding operation must be strictly followed when using this product.

2.3 Intended Use

Application area of the product

This product was developed and approved for applications in the automotive sector. The module is suitable for use in interiors.

For use in other application areas, please contact your ETAS contact partner.

Requirements for the technical state of the product

The product is designed in accordance with state-of-the-art technology and recognized safety rules. The product may be operated only in a technically flawless condition and according to the intended purpose and with regard to safety and dangers as stated in the respective product documentation. If the product is not used according to its intended purpose, the protection of the product may be impaired.

Requirements for operation

- Use the product only according to the specifications in the corresponding User's Guide. With any deviating operation, the product safety is longer ensured.
- Observe the requirements on the ambient conditions.
- Do not use the product in a wet or damp environment.
- Do not use the product in potentially explosive atmospheres.

Electrical safety and power supply

- Observe the regulations applicable at the operating location concerning electrical safety as well as the laws and regulations concerning work safety!
- Connect only current circuits with safety extra-low voltage in accordance with EN 61140 (degree of protection III) to the connections of the module.
- Ensure that the connection and setting values are being followed (see the information in the chapter "Technical data").
- Do not apply any voltages to the connections of the module that do not correspond to the specifications of the respective connection.

Power supply

- Power is supplied to the module via an external adapter.
- Operation of the module via a USB 1.x interface is not supported.
- The use of USB cables other than those supplied is not supported.
- The use of USB extension cables is not supported.

**CAUTION!**

Only use the power adapter provided.

Connection to the power supply

- The module is connected to the power supply via the provided external power supply with 5 V (3 A) output voltage.
- Make sure the connection to the power supply is easily accessible.
- Route the power cord in such a way that it is protected against abrasion, damages, deformation and kinking!

Disconnect the module from the power supply

The module does not have an operating voltage switch. It can be disconnected as follows:

- Disconnect the power adapter connector from the power adapter socket on the module
- or
- Disconnect the power adapter from the power supply.

Approved cables

- Only use ETAS cables at the connections of the module.
- Observe the maximum permissible cable lengths.
- Do not use damaged cables. Cables may be repaired only by ETAS.

**CAUTION!*****Never apply force to insert a plug into a socket.***

Make sure that there is no contamination in and on the connection, that the plug fits the socket, and that you correctly aligned the plugs with the connection.

Requirements for the location

Place the module on a smooth, level and firm surface.

Ventilation requirements

Keep the module away from heat sources and protect it against direct exposure to the sun.

Transport

Do not transport the module by the cable of the module or any other cables.

Maintenance

The product is maintenance-free.

Repairs

If an ETAS hardware product should require a repair, return the product to ETAS.

Cleaning the module housing

- Use a dry or lightly moistened, soft, lint-free cloth to clean the module housing.
- Do not use any sprays, solvents or abrasive cleaners which could damage the housing.
- Make sure that no moisture enters the housing. Never spray cleaning agents directly onto the module.

Opening the module

**CAUTION!*****Risk of damage to the module and loss of protection rating IP2X characteristics.***

Do not open or change the module housing.

Work on the module housing may only be performed by ETAS.

Potential equalization

**CAUTION!**

Potential equalization in the vehicle is possible via the shielding of the connecting cables of the modules.

Install the modules only at locations with the same electrical potential or isolate the modules from the installation location.

Cabling

For detailed information about cabling, see the User's Guide for the module.

3 Hardware description

3.1 Overview

The AC800MM1-DS docking station provides the option of transferring measurements recorded by an ES820 onto the AC800MM1 memory module to the PC via USB 3.0.

The AC800MM1-DS can be used for the following tasks:

- Transfer of measurements recorded on AC800MM1 to the PC

3.2 Properties

The most important properties of the AC800MM1-DS docking station at a glance:

- Transfer with USB 3.0
- No additional driver necessary

3.3 USB port

The AC800MM1-DS docking station features a USB 3.0 port type B and can be connected to the USB 3.0 port type A of a PC using the supplied cable.

Note

Please use only the supplied USB cable.

3.4 Power supply

The power supply of the AC800MM1-DS docking station is provided via an external power supply with 5 V (3 A) output voltage.



CAUTION!

Please use only the supplied power supply!

See the information about the scope of supply on Page 23.

3.5 Display of operating state

The operating state is indicated via an LED on the front side of the AC800MM1-DS docking station.

Status of LED	Description
off	Voltage supply is not connected to the device
on	Voltage supply is connected to the device
flashes	Data transfer via USB. The flashing rate depends on the USB transfer rate (HighSpeed, SuperSpeed).

4 Commissioning

4.1 Inserting and removing the AC800MM1-DS memory module

4.1.1 Delivery of the AC800MM1-DS

Note

The memory slot of the drive recorder for accepting a memory module is empty in the delivery state. The memory module must be ordered separately.

4.1.2 Inserting the memory module in the AC800MM1-DS

- Insert the memory module with the correct side and with the guide strips pointing up into the memory slot of the docking station. Do not wedge the memory module and position the pressure turn-lock fasteners correctly.

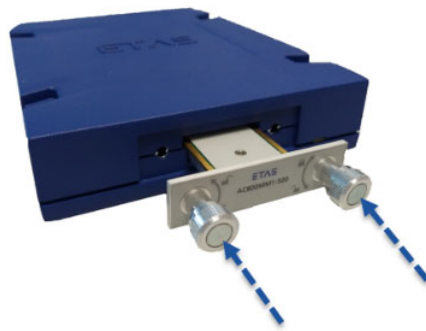


Fig. 4-1 Pushing in the memory module

- Push the memory module in up to the limit stop of the memory slot.
The insertion forces of the memory module contacts must be overcome in the process.



Fig. 4-2 Pushing in the pressure turn-lock fasteners

- Push in the two pressure turn-lock fasteners of the memory module and turn them clockwise.

The memory module is locked inside the memory slot of the AC800MM1-DS module.

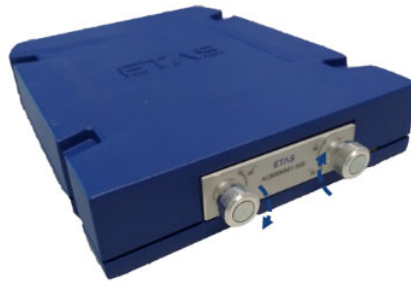


Fig. 4-3 Turning the pressure turn-lock fasteners

4.1.3 Removing the memory module from the AC800MM1-DS

- Wait until the running data transfer is complete.



CAUTION!

Data loss is possible!

The memory module must not be removed from the docking station while writing the data to the memory module.

- Push in the two pressure turn-lock fasteners of the memory slot cover and turn them counterclockwise. The memory slot cover is unlocked.



Fig. 4-4 Turning and pushing in the pressure turn-lock fasteners

Note

The memory module is secured in the AC800MM1-DS module with two pressure turn-lock fasteners. It can be removed or installed without a tool. The pressure turn-lock fasteners are captively connected with the memory module.

- Pull the memory module out of the AC800MM1-DS docking station at the two pressure turn-lock fasteners.

The insertion forces of the memory module contacts must be overcome in the process.



Fig. 4-5 Pulling out the memory module

Before removing the memory module in the drive recorder ES820.1, any running measurement must be ended and data access to the memory module must be completed!

5 Troubleshooting Problems

This chapter gives some information of what you can do when problems arise with the AC800MM1-DS and when general problems arise that are not specific to a certain software or hardware product.

5.1 Displays of the LED

For assessing the operating states and for removing errors of the AC800MM1-DS, observe the display of the LED which provide information about the function of the interfaces and the AC800MM1-DS.

5.2 Problems with the AC800MM1-DS

The following table lists several possible problems and their corresponding solution attempts. In case of further questions, please contact our technical service.

Problem	Diagnostics questions	Possible solution
The computer does not install the standard Windows drivers when the module is connected for the first time.	Has the Windows USB driver already been installed?	Check whether the module is listed in the Windows Device Manager. It may already be installed, or it was installed by the operating system.
	Is the USB port of the PC defective?	Try using a different USB port of the computer. Restart the PC.
No drive is displayed in Windows Explorer.	Was the memory module correctly inserted in the device?	Check whether the memory module has been inserted in the device. Check whether the module is listed in the Windows Disk Management. The memory module could not be prepared for access by Windows (partitioned).

6 Technical Data






This chapter contains information about the following topics:

- "General data" on page 19
- "RoHS conformity" on page 20
- "CE marking" on page 21
- "Product return and recycling" on page 21
- "Mechanical data" on page 21
- "System requirements" on page 22
- "Electrical data" on page 22

6.1 General data

6.1.1 Identifications on the product

The following symbols are used for product labeling:

Symbol	Meaning
	The User's Guide must be read prior to the startup of the product!
SN: 1234567	Serial number of the product (7-digit) with barcode
F 00K 110 491	Order number of the product
V1.00	Hardware version of the product
5 V	Operating voltage range (DC voltage)
1.5 A	Current consumption, max.
AC800MM1-DS	Product designation
	Manufacturer's address
	Marking for China RoHS, see chapter 6.2
	Marking for WEEE, see chapter 6.4
	Marking for CE conformity, see chapter 6.3

6.1.2 Standards and norms

The module corresponds to the following standards:

Default	Test
EN 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements
EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use
EN 60529	Degree of protection through housing (IP code), class of protection IP2X
EN 60068-2-32	Environmental testing - Part 2: Tests; Test Ed: Free fall

6.1.3 Ambient conditions

Temperature range (operation)	+5 °C to +40 °C -40 °F to +105 °F
Temperature range (storage)	+5 °C to +55 °C -40 °F to +130 °F
Relative humidity, non-condensing	15% to 95% (operation) 0% to 95% (storage)
Operating altitude	max. 2,000 m / 6,560 ft
Degree of protection	IP2X
Degree of pollution	2

Note

*The module is suited only for use inside of rooms. The module is **not** suitable for installation in the passenger compartment, engine compartment, and similar environments.*

6.1.4 Maintenance of the product

Do not open or modify the module housing! Work on the module may only be performed by qualified personnel. Return defective modules to ETAS for repair.

6.1.5 Cleaning the product

We recommend cleaning the product with a dry cloth.

6.2 RoHS conformity

European Union

The EU Directive 2011/65/EU limits the use of certain dangerous materials for electric and electronic devices (RoHS conformity).

ETAS confirms that the product meets this directive applicable in the European Union.

China

With the China RoHS identification attached to the product or its packaging, ETAS confirms that the product meets the guidelines of the "China RoHS" (Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation) applicable in the People's Republic of China.

6.3 CE marking

With the CE mark attached to the product or its packaging, ETAS confirms that the product corresponds to the product-specific, applicable European Directives. The CE Declaration of Conformity for the product is available upon request.

6.4 Product return and recycling

The European Union (EU) released the Directive for Waste Electrical and Electronic Equipment - WEEE to ensure the setup of systems for collecting, treating and recycling electronic waste in all countries of the EU.

This ensures that the devices are recycled in a resource-friendly way that does not represent any risk to personal health and the environment.



Fig. 6-1 WEEE symbol

The WEEE symbol on the product or its packaging identifies that the product may not be disposed of together with the remaining trash.

The user is obligated to separately collect old devices and provide them to the WEEE return system for recycling.

The WEEE Directive applies to all ETAS devices, but not to external cables or batteries. Additional information about the recycling program of ETAS GmbH is available from the ETAS sales and service locations.

6.5 Mechanical data

Housing dimensions (H x W x D)	35 mm x 120 mm x 156 mm
	1.38 in x 4.72 in x 6.14 in
Weight (without USB cable)	approx. 300 g / 10.58 oz
	approx. 410 g / 14.46 oz including memory module
Connection on the PC side	USB connector type A

6.6 System requirements

6.6.1 Hardware

PC with USB port

PC	IBM-compatible PC
USB port	USB 2.0 HighSpeed (480 Mbit/s)
	USB 3.0 SuperSpeed (5 Gbit/s)
	USB connector type A
Operating system	Windows 7
	Windows 8
	Windows 10
Driver	none
Configuration	Plug & Play

Power supply

The power supply of the product is provided via the supplied external 5-V power supply.

Note

Power supply via USB is not supported.

Note

Operating a module on USB 1.x interfaces is not supported.

Windows user rights

Ensure that you have the required Windows user rights for the installation of the USB driver (administrator rights).

6.6.2 Software

No further drivers are required for operating the module.

6.7 Electrical data

Voltage supply

Operating voltage	5 V DC
Current consumption, max. (operation)	max. 1.5 A
External power supply (SMI18-5)	Input: 0.48 A, 100 - 240 V AC, 50 - 60 Hz, Class II Output: 3 A, 5 V DC

7 **Ordering Information**

Order Name	Short Name	Order Number
AC800MM1-DS	AC800MM1-DS	F-00K-110-491

Package Contents

Docking Station for AC800MM1-xxx
 AC800MM1-DS_ETAS_Safety_Advice
 Liste "Content of this Package"
 China-RoHS-leaflet_Compact_green_cn

3rd Party Suppliers
 CUI AC-DC Power Supply 5V 3A

3rd Party Suppliers		OEM OrderCodes
CUI AC-DC Power Supply 5V 3A	SMI18-5	SMI18-5-V-P5
Würth USB 3.0 Cable, Type A - Type B		692 903 100 000

8 **ETAS Contact Addresses**

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Fax: +49 711 3423-2106

WWW: www.etas.com

ETAS Subsidiaries and Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the ETAS website:

ETAS subsidiaries WWW: www.etas.com/en/contact.php

ETAS technical support WWW: www.etas.com/en/hotlines.php

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