



DRIVING EMBEDDED EXCELLENCE

ETAS Drive Recorder Display App V7.3

User Guide

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Drive Recorder Display App V7.3 - User Guide R04 EN - 12.2021

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1 Introduction to the Display App

The Drive Recorder Display App is a software application that is installed together with the Drive Recorder software from Drive Recorder V7.2.19. The Display App is designed to run on a USB monitor with a touch screen.

This section features information on the following topics:

[1.1 Intended Use](#)

[1.2 Target Group](#)

[1.3 Further Information](#)

[1.4 Classification of Safety Messages](#)

[1.5 Safety Information](#)

[1.6 Hardware Requirements](#)

For information on operation, see "[Operating the Display App](#)" on page 9.

1.1 Intended Use

The Display App is part of the Drive Recorder software from Drive Recorder V7.2.19.

The Display App gives the user access to the Drive Recorder via a monitor with a touch screen. For this purpose, recording jobs must be preconfigured by an ES820/INCA expert using the Drive Recorder Configurator.

For recommended display types, see "[Hardware Requirements](#)" on page 8.

The Display App is designed for the following purposes:

- Use in a vehicle for the purpose of test drives
- Use in combination with the Drive Recorder Configurator and the ES820 Drive Recorder
- Starting and stopping recording jobs that are preconfigured by the Drive Recorder Configurator
- Displaying status information on ongoing recording jobs
- Displaying Drive Recorder system information, such as data storing capacity, power management, log file information, and diagnostic information
- Displaying the data transfer status

The Display App must only be used by qualified personnel as defined in "[Target Group](#)" on the next page, under consideration of the "[Safety Information](#)" on page 7, and for the purposes that are described in this document. ETAS GmbH cannot be made liable for damage which is caused by incorrect use and not adhering to the safety instructions.

1.2 Target Group

The Display App is designed for engineers working in the field of measurement and calibration. Experience with the ETAS software tools INCA and Drive Recorder Configurator is necessary. Additionally, you need knowledge of the ES820 Drive Recorder hardware.

Test drivers may use the Display App after instruction and under supervision of a responsible calibration engineer.

1.3 Further Information

In the following documents, you can find further information on the configuration of recording jobs and on the Drive Recorder hardware:

- Drive Recorder Configurator - Online Help
- INCA Online Help
- ES800 Measurement, Calibration, and Prototyping System - User's Guide

1.4 Classification of Safety Messages

The safety messages in this document warn of dangers that can lead to personal injury or damage to property:



DANGER

indicates a hazardous situation with a high risk of death or serious injury if not avoided.



WARNING

indicates a hazardous situation of medium risk which could result in death or serious injury if not avoided.



CAUTION

indicates a hazardous situation of low risk which may result in minor or moderate injury if not avoided.

NOTICE

indicates a situation which may result in damage to property if not avoided.

1.5 Safety Information


It is important that you look at the USB monitor only when it is safe to do so. If you are the driver of the vehicle, ETAS recommends that you operate the touch screen and change recording jobs only when the vehicle is stationary.

After wake-up of the Drive Recorder, the **Safety Advice** window is displayed on the USB monitor.

1. To select your preferred language, tap the flag button at the bottom left.
2. Scroll to read the complete Safety Advice.
3. Tap **I Agree**.

The **Recorder Status** window is displayed.

Additionally, observe the following safety message:

 **WARNING**

Risk of unexpected vehicle behavior

If the Drive Recorder is operated in combination with an ETK, an ECU reset is possible. An ECU reset can result in engine shutdown, which can cause unexpected vehicle behavior.

- Only modify the test setup when the vehicle is stationary.
- Only start recording jobs when the vehicle is stationary.
- Before driving, always wait until the **Recorder Status** window of the Display App shows green side bars.

1.6 Hardware Requirements

The Display App is designed for the ETAS ES820 Drive Recorder hardware. It is installed together with the Drive Recorder software from Drive Recorder V7.2.19.

To operate the DisplayApp, ETAS recommends the following XENARC® USB monitors and DIGITUS® adapter:

Recommended Hardware

Monitor	Adapter
Xenarc 709CNH	DIGITUS USB 3.0 to HDMI
Xenarc 1029CNH	DIGITUS USB 3.0 to HDMI

The USB monitor and the adapter are not in the scope of delivery and have to be purchased by the customer.

Cables

Together with the respective Xenarc monitor, you can order the following power supply cables at XENARC:

Power Supply:

- "AC Adapter (ACA-M12)" for use in the office or lab
- "Cigarette Lighter Car Adapter (CLA-M12)" for use in the vehicle

Multi Interface Cable:

- "5 Meter Cable": Cable with various connectors
optionally: "5 Meter HDMI & USB Only"

Drivers

For the installation of the drivers for the monitors and the USB to HDMI adapter, refer to the following PDF documentation in the `Manuals` folder, that is installed together with the Drive Recorder Configurator installation files:

- For Drive Recorder V7.2.19:
"ES820 V7.2.19 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide"
- For Drive Recorder V7.3:
"ES820 V7.3 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide"

2 Operating the Display App

The following sections describe the operation of the Display App by the touch screen of the USB monitor.

[2.1 Using the USB Security Key](#)

[2.2 Installing the Drivers and Connecting the USB Monitor](#)

[2.3 Confirming the Safety Advice](#)

[2.4 Getting to Know the Different Views](#)

[2.5 Setting the View to Basic or Advanced and Selecting the Language](#)

[2.6 Starting and Stopping a Recording Job](#)

[2.7 Transferring Data](#)

[2.8 Handling Errors](#)

2.1 Using the USB Security Key

To access the data of an encrypted Drive Recorder hard disk, you need the device-specific USB Security Key.

- Connect the USB Security Key to an appropriate USB port of the Drive Recorder.

You can insert the USB Security Key either before you connect or after you have connected to the Drive Recorder from your local PC. Now you can access the data on the encrypted Drive Recorder hard disk.



Note

The USB Security Key unlocks the Drive Recorder hard disk for one power-up period after wake-up. After wake-up, you can disconnect the USB Security Key. If the Drive Recorder is switched off or falls into the standby mode, you must insert the USB Security Key again to make the Drive Recorder hard disk accessible after the next wake-up.

For more information on hard disc encryption, see "Managing Data Security" in the Drive Recorder Configurator Online Help.

2.2 Installing the Drivers and Connecting the USB Monitor

For recommended USB monitors and adapters, see "[Hardware Requirements](#)" on page 8.

To install monitor and adapter drivers



Note

For a detailed description of the driver installations for the recommended hardware, follow the instructions in the respective installation guides, which are in the `Manuals` folder of the Drive Recorder Configurator installation files:

For Drive Recorder V7.2.19:

ES820 V7.2.19 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide

For Drive Recorder V7.3:

ES820 V7.3 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide

If you use the "[Recommended Hardware](#)" on page 8, use the documentation cited in the above note to install the drivers.

If you use monitors and drivers other than recommended, observe the following general steps for installation. These steps are valid for Drive Recorder V7.3 and Windows 10.

1. Via the Drive Recorder Configurator, enter the service mode.
2. On the Drive Recorder, disable the Intel graphics adapter as described in the "ES820 V7.3 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide".
3. Install the monitor driver and/or adapter driver on the Drive Recorder.
4. Connect the adapter and/or the monitor according to "[To connect the monitor](#)" on the next page.
5. On the Drive Recorder, enable the Intel graphics adapter as described in the "ES820 V7.3 Display App: XENARC® Monitor Setup with DIGITUS® HDMI to USB Adapter - Installation Guide".
6. Via the Drive Recorder Configurator, quit the service mode.
7. Via the Drive Recorder Configurator **Hardware Configuration** window, enable the Display App according to "[To enable the Display App](#)" on the next page.
8. In future, when connecting the monitor and/or adapter to the Drive Recorder, always use the USB ports that you used for driver installation and enabling.

To connect the monitor

If the driver installations are finished and the Drive Recorder is in the **Active Idle** state, you can connect the monitor to the Drive Recorder.

1. Connect the appropriate power supply cable.
2. To enable the touch function, insert the USB 2.0 connector of the monitor cable into any of the USB ports of your Drive Recorder.



3. Connect the HDMI-to-USB 3.0 adapter to the HDMI connector of the monitor cable.
4. Connect the USB 3.0 connector of the adapter to a USB 3.0 port of your Drive Recorder.

To enable the Display App

If the driver installations for the monitor and adapter are finished and the monitor cables are connected to the Drive Recorder, you can enable the Display App.

Note

Remember the USB 2.0 and USB 3.0 ports that you use on your Drive Recorder when you first enable the Display App. You must always use the same USB ports for the monitor connection in future.

1. In the Drive Recorder Configurator, click **File > Open from Device > Open Hardware Configuration from Device**.
2. Select **Device Options**.
3. In the section **Display App**, select **Enable Display App**.
4. Click **Apply to Drive Recorder**.

The Display App is now ready to use on the USB monitor.

5. Select your desired language for the **Display App**.

You can select the language for the Display App independently from the language setting of the Drive Recorder Configurator. You can also change the language for the Display App via the touch screen of the USB monitor.

**Note**

If you want to use a different monitor, read the user documentation of the respective monitor and contact the manufacturer for advice. Some monitors need additional calibration, which is not necessary for the recommended XENARC types.

To preserve the monitor settings, click **Tools > Enter Service Mode** before changing the monitor settings, and click **Tools > Quit Service Mode** after changing the monitor settings.

2.3 Confirming the Safety Advice

After wake-up of the Drive Recorder ,the **Safety Advice** window is displayed on the USB monitor.

To confirm the Safety Advice

1. To select your preferred language, tap the flag button at the bottom left.
2. Scroll to read the complete Safety Advice.
3. Tap **I Agree**.

The **Recorder Status** window is displayed.

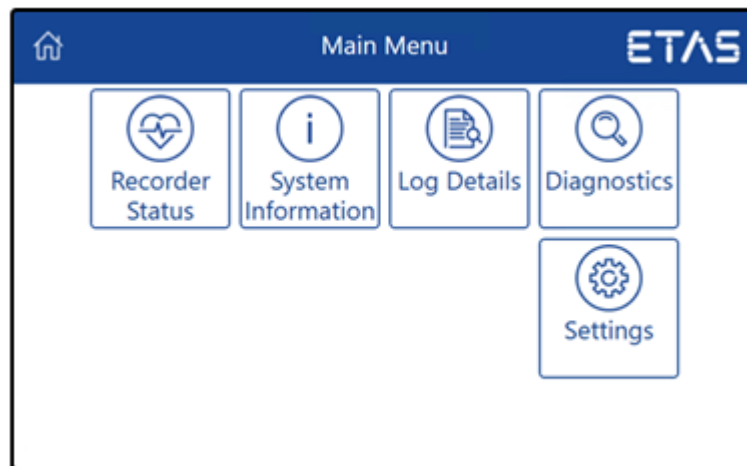
2.4 Getting to Know the Different Views

After confirming the Safety Advice, the **Recorder Status** window is displayed.

To display the main functions

1. Tap .

The **Main Menu** is displayed.



2. To access a specific function, tap the respective square.
A new window for the respective function opens.

The **Main Menu** contains the following information:

- **Recorder Status**

Displays information on the recording job and its progress. From this view, you can start and stop recordings. This is the preferable view during driving.

- **System Information**

Displays information about the operational state, the status of the experiment, CPU load, and available RAM.

To get information on **Storage Capacity** and **Power Management**, tap the corresponding button.

- The **Storage Capacity** window displays all available hard disks and USB drives.
- The **Power Management** window displays the settings as predefined by the Drive Recorder Configurator.

- **Log Details**

Displays the information from the log files. You can use this information in case of an error.

- **Diagnostics**

Displays diagnostic information. You can use this information in case of an error.

- **App Settings**



Allows changing the **Recorder Status** view between **Basic** and **Advanced**. You can also select the desired **Language**. See also "Setting the View to Basic or Advanced and Selecting the Language" below.

You can switch between the different functions without interrupting an ongoing recording job.

2.5 Setting the View to Basic or Advanced and Selecting the Language

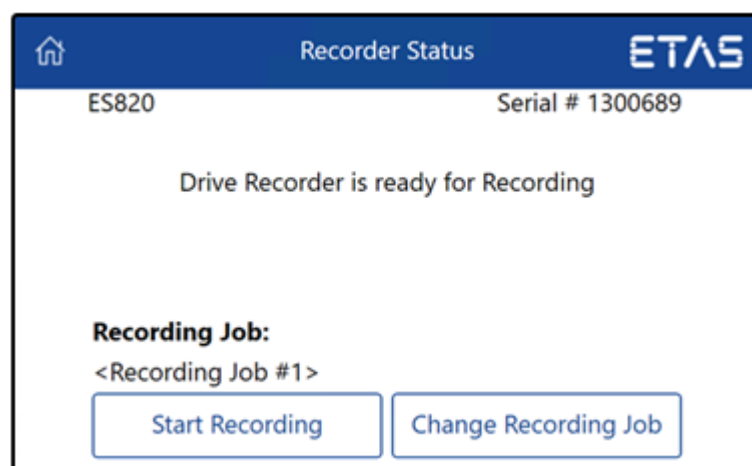
After confirming the Safety Advice, the Drive Recorder Display App displays the **Recorder Status** window.

To change the view between **Basic** and **Advanced** and to select the language

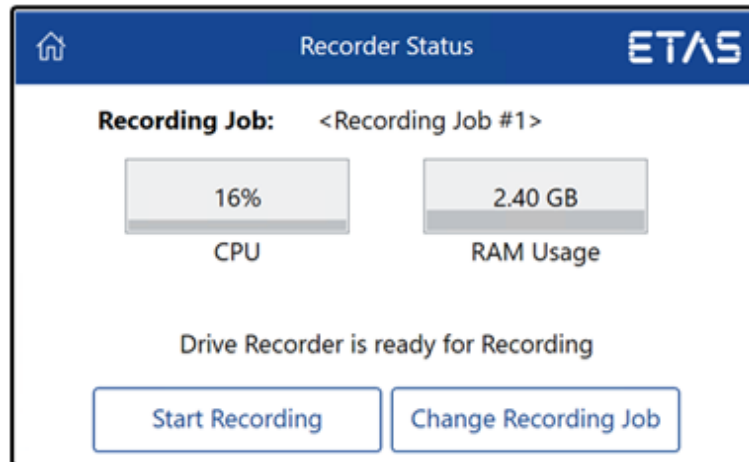
1. Tap  .
The **Main Menu** window is displayed.
2. Tap **Settings**.
The **Settings** window is displayed.
3. To enable or disable the **Advanced Mode**, tap the respective checkbox.
4. To select the language, tap the **Language** box and select your desired language from the drop-down menu.
5. To return to the **Recorder Status** window, tap .

In the idle state, the USB monitor shows the following information:

Basic View



Advanced View




Additionally to the recording job, the advanced view displays the following information:

- **CPU** usage in [%]
- **RAM Usage** in [GB]

2.6 Starting and Stopping a Recording Job

After confirming the Safety Advice, the Drive Recorder Display App displays the **Recorder Status** window.



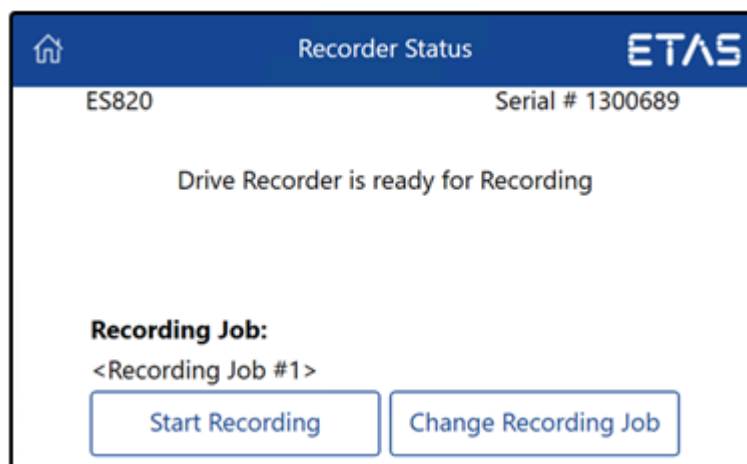
WARNING

Risk of unexpected vehicle behavior

If the Drive Recorder is operated in combination with an ETK, an ECU reset is possible. An ECU reset can result in engine shutdown, which can cause unexpected vehicle behavior.

- Only modify the test setup when the vehicle is stationary.
- Only start recording jobs when the vehicle is stationary.
- Before driving, always wait until the **Recorder Status** window of the Display App shows green side bars.

In the idle state, you can select a recording job and start the selected recording job.

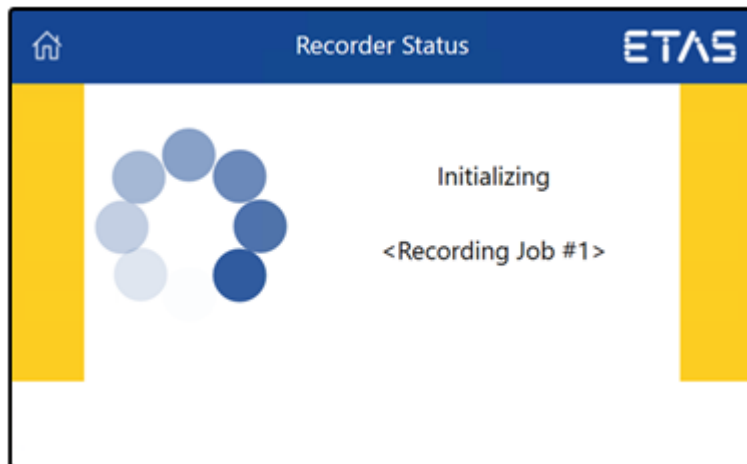


To select a recording job

1. Tap **Change Recording Job**.
A list of the available recording jobs is displayed.
2. Tap the desired recording job.
The Recorder Status window displays the selected recording job.

To start the recording job

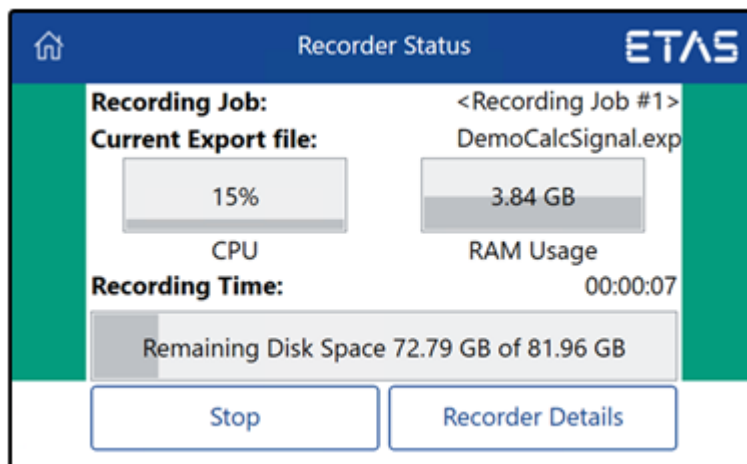
1. To start the recording job that is displayed on the **Recorder Status** window, tap **Start Recording**.
The side bars of the Recorder Status window turn yellow.



Depending on the progress, the status changes from **preparing** to **loading** to **initializing**.

- When the side bars of the **Recorder Status** window turn green, the recording has started.

Now you can start driving.



Additionally to the name of the recording job, information on the estimated recording time and the remaining disk space is displayed.

To stop the recording job

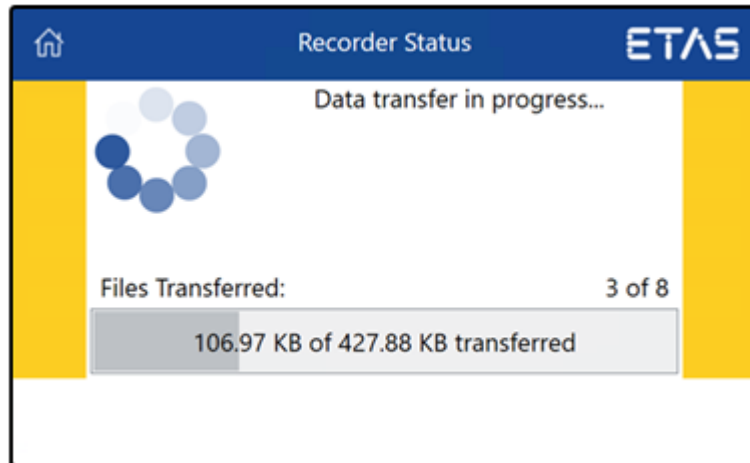
- In the **Recorder Status** window, tap **Stop Recording**.

The recording stops. The measurement data is automatically transferred to the pre-defined location.

See "Transferring Data" on the next page.

2.7 Transferring Data

When the recorder job is finished and automatic data transfer is preconfigured by the Drive Recorder Configurator, the measurement data is automatically transferred according to the file transfer settings. The data transfer is indicated by the following window:

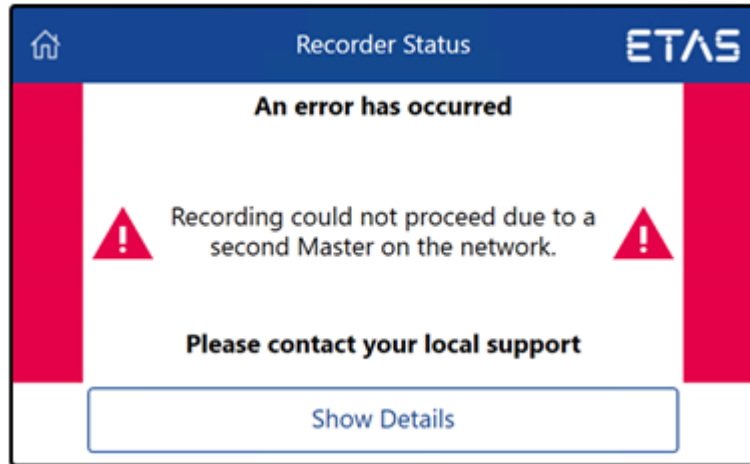


When the data transfer is finished, the **Recorder Status** window displays the idle view.

You can now start a new recording job. To do this, start again from "[To start the recording job](#)" on page 17.

2.8 Handling Errors

If an error occurs during recording, the **Recorder Status** window displays an error message.



To solve the error

Do one of the following:

- Contact your local support or your supervisor.
From them, you get further advice.

or

- Tap **Show Details**.


More information on the cause of the error is displayed.

i. Solve the error by eliminating the cause.


ii. Tap .

The **Recorder Status** window returns to the green state.

Recording continues.

iii. For more information, tap . Then, tap **Log Details** or **Diagnostics**.

You can look for **Log Details**, **Diagnostics**, and **System Information** without interrupting the recording.

iv. Tap .

The **Recorder Status** window displays green side bars and the status of the ongoing recording job.

3 Supported Applications

Drive Recorder Remote Control Solution

From a remote site, the responsible engineer can make a request for remote calibration by using the Drive Recorder Remote Control Solution. In the vehicle at the driver's end, the Drive Recorder Remote Control Solution user interface is then displayed on the USB monitor instead of the Display App. The driver can respond to the request of the engineer. After the task of the Remote Control Solution is finished, the Display App is displayed again.



For more details and safety information, read the Drive Recorder Remote Control Solution - User Guide and use the "Contact Information" on page 24 to ask ETAS for support.

4 Limitations

It is not possible to use the recording functionality of the Drive Recorder while an INCA instance is open on any PC connected to the Drive Recorder.

If this case occurs, an error message is displayed on the USB monitor.

 **Note**

As opposed to the limitations above, using the Drive Recorder Configurator and the Display App at the same time is supported.

5 **Contact Information**

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