

## DAS701

### High Speed Data Acquisition Solution



The DAS701 is a High Speed Data Acquisition Solution well suited for applications ranging from small sensor signal logging (process).

With CAT III safety class, it features a wide input range (1mV to 500V), **500GB internal SSD hard drive**.

The 200µs sampling interval in file mode lets you capture some transient events safely. In addition, its large built-in memory capacity allows for data recording for long periods.

Each channel can be easily configured in wide range of parameters to record different signals.

### ■ Features and benefits :

- Fast sampling rate: up to 5 kSa/s (200µs)
- 12 multiplexed channels
- Measure up to 50V DC voltage, temperature (thermocouple, Pt100, Pt200, Pt500, Pt1000 (2,3 and 4wires))
- 16 bit resolution
- 500GB SSD Internal memory
- 16 logic input channels with power supply (12V)
- Wide 15,6 inches touchscreen TFT display
- USB and LAN interfaces
- Battery option (up to 2 hours)
- Free software for control and analysis
- Carrying case included in standard

# DAS701

High Speed Data Acquisition Solution

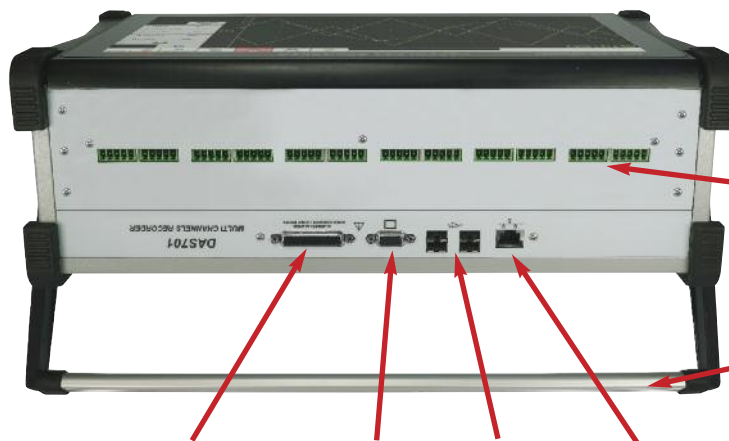
## ■ Front panel



Carry handle / stand

15,6 inch touchscreen

## ■ Top panel



Multiplexed board

Carry handle / stand

## ■ Back panel

Logic Inputs and alarms With power supply (12V)    VGA output    USB interface    Ethernet interface



CAN inputs when option is available (5-12V)

LIN inputs when option is available

Power button when battery option is available

Power Supply / ON / OFF Button

Earth terminal



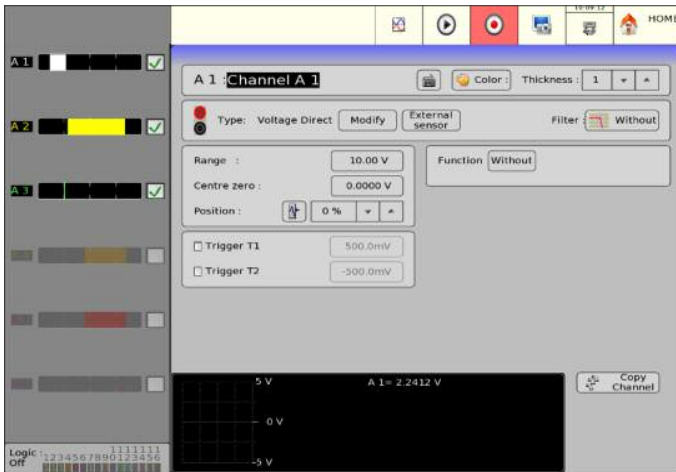
Follow us on:



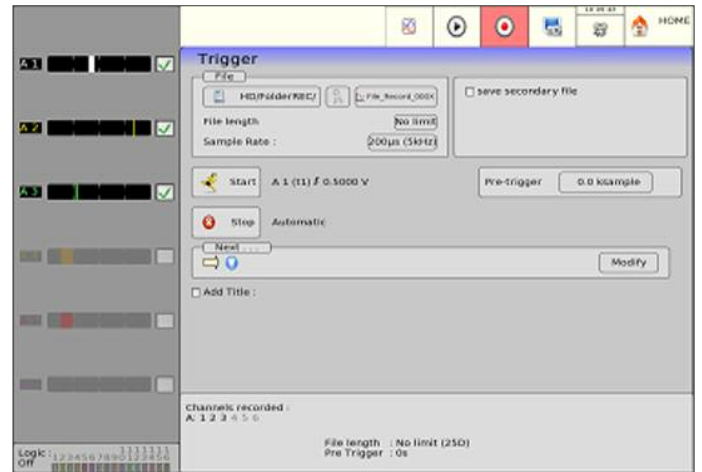
Visit our website: [www.sefram.com](http://www.sefram.com)

## High Speed Data Acquisition Solution

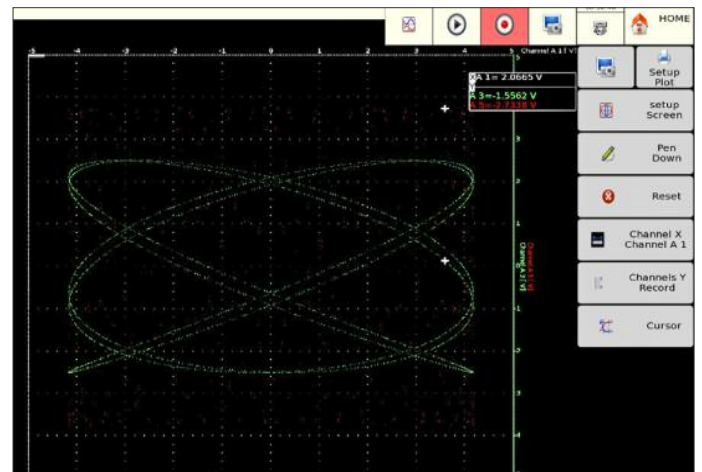
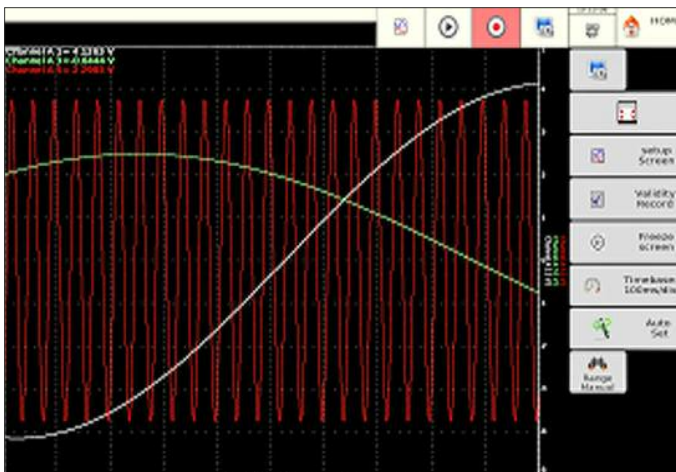
### ■ Operation highlights



In the same page each channel can be easily and simply prepared to record. Parameters like the type of signal to be recorded (voltage, temperature), set change unit (to convert a voltage to meters for example), the display range, shift the zero, add functions, choose the best layout for your graphics and define the trigger positions.



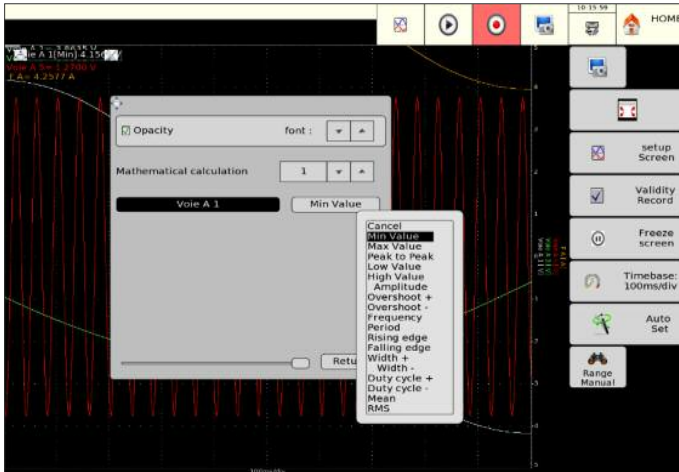
It is possible to set a trigger or combination of triggers to start and stop recording, for example, start your recording on a logical channel, after a delay, on an analogue channel with a threshold, on a combination of parameters.



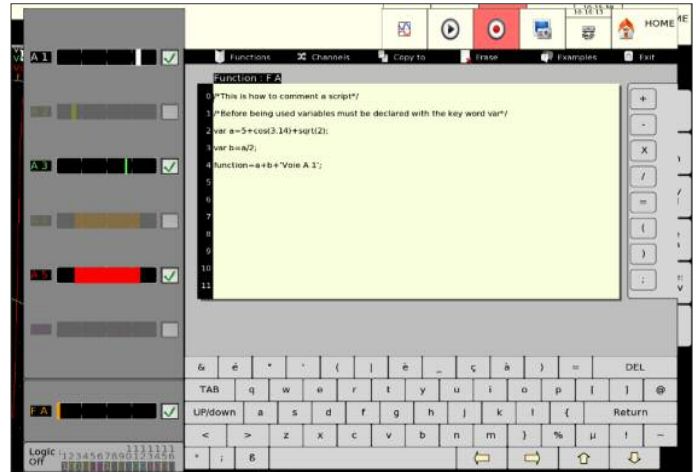
XY mode for plotting one varying signal versus another and F(t) mode like oscilloscope with 100 kHz bandwidth

## High Speed Data Acquisition Solution

### ■ Operation highlights



Benefit from up to 19 calculations on the recorded channels. View the values on your graphs.



The power of the DAS701 makes it possible to perform complex mathematical calculations between the channels. Use up to 24 channels functions. These channels are calculation channels and will not decrease the number of acquisition channels. For even more complex calculations, a function editor in the script syntax language is available.

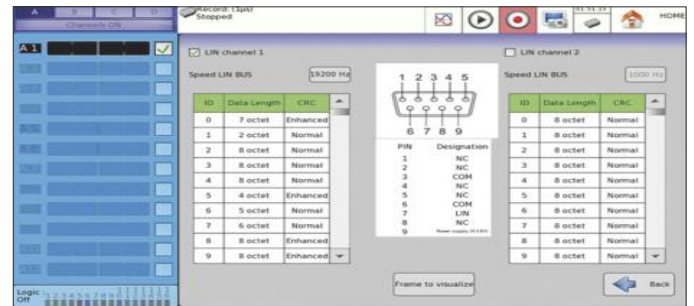
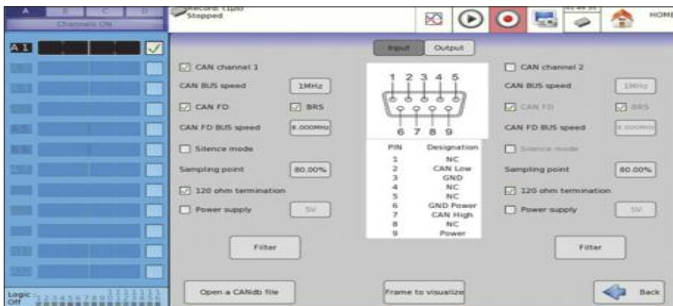
## High Speed Data Acquisition Solution

### CAN/LIN Mode

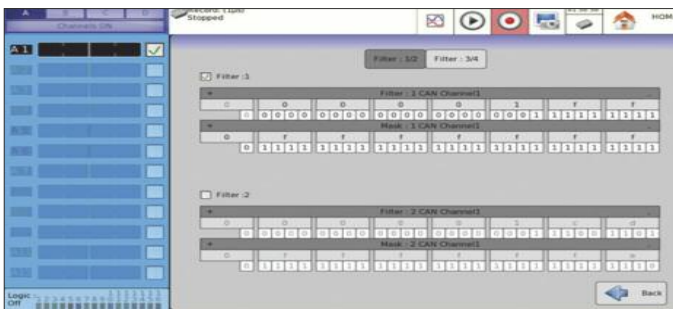
With this new feature, you can analyze the following buses:

- CAN 2.0 A / B
- CAN FD
- LIN 1.3 / 2.X

2 isolated LIN input and 2 isolated CAN channels are provided on the rear panel of the DAS701. An external 5-12V supply is available for users.



Easy and intuitive setup of all types of buses



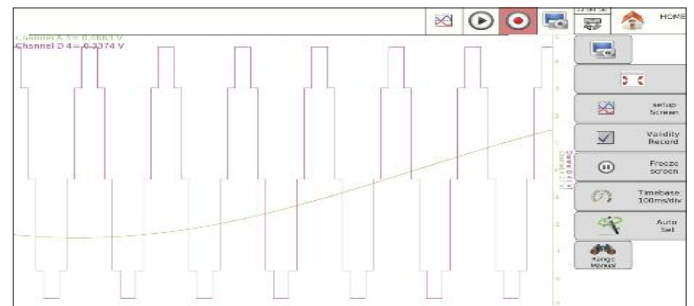
Hardware filtering of CAN frames



Display of complete frames of the selected bus

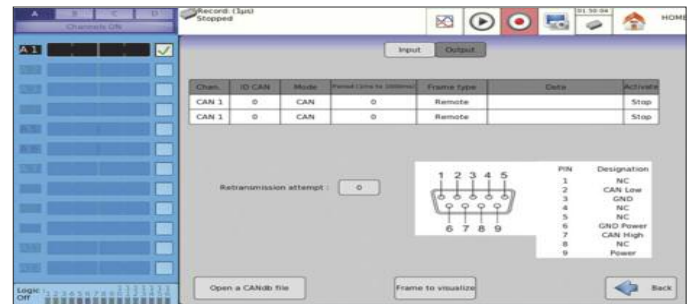


Graphical waveform conversion with analogue signal comparison



Channel	Time stamp	ID	DATA	Frame type	Errors
CAN 1	122551422	88888888	123456789a123456789e123456789e123456789f0123456789f	donnée	0
CAN 2	122551423	888	123456789a123456	donnée	0
CAN 1	122551424	99999999		remote	0
LIN 1	122551425	98	88	donnée	1
LIN 2	122551426	85	64	donnée	0

CAN frames recording in CSV format



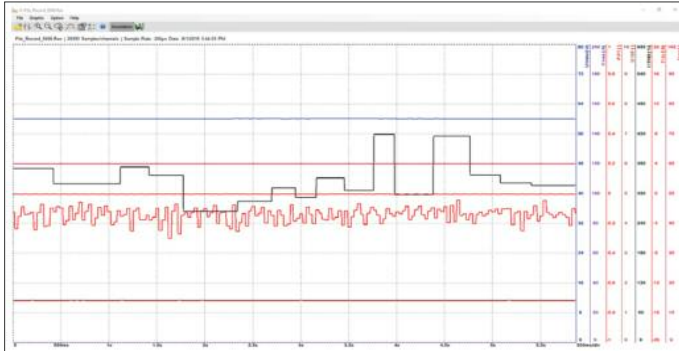
Periodic frames output on the CAN bus

## High Speed Data Acquisition Solution

### ■ A complete suite of software

Several software programs are available for free to remote control the device and analyze the recorded data.

### ■ Analyze the data recorded

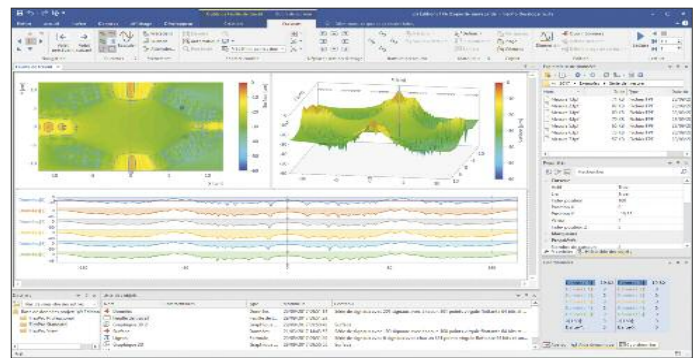


### ■ Sefram viewer

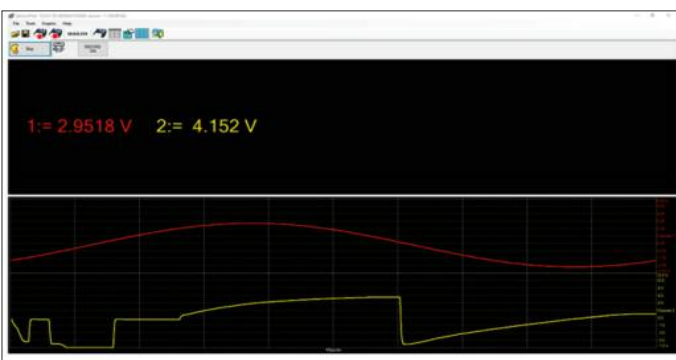
Use the free Sefram Viewer software to use and analyze all data stored on the device. Use the mathematical calculations available in the software to perform calculations after recording ( $y=ax+b$ ,  $y=\ln(x)+b$ ,  $y=\exp(cx)+b$ ,...). With the software, also convert data saved in Excel® format or in text format for your personal post analysis.

### ■ Flexpro (paid software)

Use the optional Flexpro software for powerful and advanced analysis of your recordings. Perform automatic analyzes, create test reports, use more than 100 functions of statistical and math analysis, display and visualize your data in 2D and 3D, convert your files into other formats, ...



### ■ Remote control your device



### ■ Pilot Sefram

Set up your device remotely with the free Pilot Sefram software. But that's not all ! Also, view in real-time the data recorded by the device, save the current setup of the device and download the recorded data via the built-in FTP browser.

### ■ VNC viewer

The recorder's built-in VNC provides a graphical desktop sharing system to remotely control the instrument from a computer with a full graphical interface that replicates the instrument's front panel using a mouse and keyboard.



## High Speed Data Acquisition Solution

### ■ Included accessories



**917007500** : Carrying case for DAS700



**917006010** : European Power Cord  
**917006020** : UK Power Cord  
**917006030** : US Power Cord

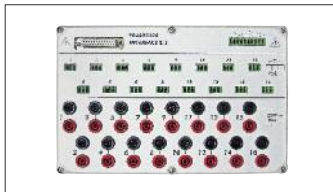


**917006050** : Logical connector



**984402100** : accessories for multiplexed board

### ■ Optional accessories



**984405500** : 16 channel isolated logic adapter



**984405000** : Special cord for logical input



**S0415** : Banana / BNC female adaptor



**902402000** : WiFi option for DAS701



**989007000** : 50 ohms shunt, 0.1%, 0.05A max



**910007100** : 0.01 ohm shunt, 1%, 3A max



**910007200** : 0.1 ohm shunt, 1%, 1A max



**912008000** : 10 ohms shunt, 0.1%, 0.15A max



**989006000** : 1 ohm shunt, 0.1%, 0.5A max



**207030500** : 0.001 ohm shunt, 0.5%, 50A max



**207030301** : 0.01 ohm shunt, 0.5%, 30A max



**A1587** : Flexible Current Clamp 3000A AC



**917004000** : Rackmount for DAS701

## High Speed Data Acquisition Solution

### ■ Aeronautic industry application



The DAS701 is used to test the behavior of the rotor motors. Thanks to his 1mV sensitivity, the records of pressure, vibration, RPM, temperature are done with an excellent accuracy. The DAS701 provides a complete test of physical and Electrical parameters which are integrated in the test report.

### ■ Automobile Industry



The DAS701 includes CAN BUS analysis which is the great solution for automobile application test. The user can combines CAN BUS signal analysis and physical parameters as well temperature. The large display offers the ability to display all parameters in the same time for better analysis.

### ■ Railway Industry application



For this application, the DAS701 is fixed in the train with his rack mounted kit. More than 12 channels are used to control and analyse the geometry of the track. The DAS701 can be connected to a printer for direct interpretation or the Sefram 8460 can be used with his thermal paper system fully integrated. The records are saved in the hard disk and or transfer by Ethernet to a computer.



# DAS701

## High Speed Data Acquisition Solution

### ■ Specifications

#### GENERAL FEATURES

Capacitive backlight touch screen 15,6"  
Screen resolution: 1366X768  
Internal hard disk memory: 500 GB SSD (up to 2 TB with option)  
Memory: 128 Mwords divisible by 128 blocks  
Weight: 8 kg  
Dimensions (WxHxD): 271 x 472 x 154mm  
Power Supply: 99 VAC to 264 VAC, 47 to 63 Hz  
Consumption: 80 VA max  
Operating temperature: 0 to 40°C (0 to 30°C with battery option or without fan)  
Storage temperature: -20 to 60°C  
Interfaces: 4 USB, 1 VGA, 1 Ethernet



#### MULTIPLEXED INPUT BOARD

##### VOLTAGE

Number of channels: 12 channels  
DC Voltage range: 1 mV to 50 V  
Maximum DC Voltage: 50V DC  
Voltage accuracy:  $\pm 0.1\%$  of range  $\pm 0.1 \mu\text{V} + 0.1\%$  of offset  
Input impedance: 1 M $\Omega$  for ranges  $> 2 \text{ V}$  / 10 M $\Omega$  for ranges  $< 2 \text{ V}$   
Input capacitance: 150 pF

##### TEMPERATURE

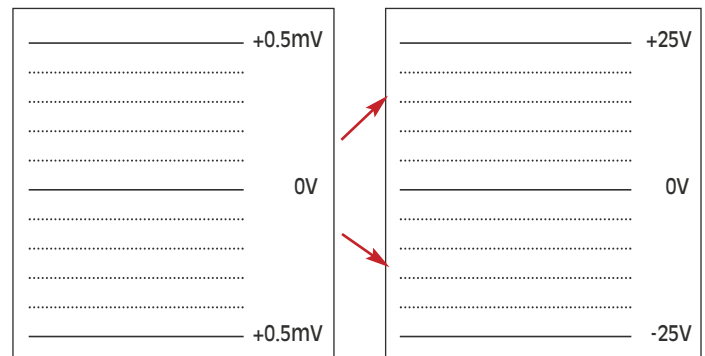
Thermocouple type: J, K, T, S, B, E, N, C, L: -250°C to 1760°C  
Pt100 / Pt200 / Pt500 / Pt1000 (2, 3 and 4 wires): -200 °C to 850 °C  
Cold junction compensation:  $\pm 1.25 \text{ }^\circ\text{C}$

##### SAMPLING

Vertical resolution: 16 bits  
Maximum direct voltage sampling rate: 5 kSa/s (200  $\mu\text{s}$ ) each channel  
Digital filters setting:  $< 100 \text{ Hz}$



#### Example with 1 mV and 50V range



Follow us on:



Visit our website: [www.sefram.com](http://www.sefram.com)

## High Speed Data Acquisition Solution

### ■ Ordering Informations

#### ■ Factory options

- 917003000: Battery option - with up to 2 hours of autonomy
- 917005000: IRIG option - internal clock synchronisation with an IRIG time
- 917005500: CAN / LIN Bus option
- 917009000: Without fan option for specific environments
- 917007000: 2TB memory extension
- 917005600: GPS option - internal clock synchronisation with an GPS time

For assistance and ordering

**Sefram**

32, rue Edouard Martel - BP55- 42009 - St Etienne - cedex 2  
Tél. +33 (0) 4.77.59.01.01 / Fax. +33 (0) 4.77.57.23.23  
Web : [www.sefram.com](http://www.sefram.com) - e-mail : [sales@sefram.com](mailto:sales@sefram.com)



Follow us on :



FT DAS701 A00- Specifications can be updated without notice

