

Model 3802S Compact Data Acquisition System

System Overview

The Model 3802S is the latest in the Link line of the 3800 Series Compact Data Acquisition systems. It uses a Windows Embedded software platform system and an internal solid state drive to provide superb, robust operation and additionally support a variety of new system features and enhancements.

The 3802S eliminates the requirement for a laptop computer during testing with the integration of an embedded computer. The 3802S is small and lightweight and simplifies the testing procedures, yet offers features that meet the needs of the most demanding tests. The compact size and simple operation make ideal for use with fleet vehicles and an asset for laboratory applications. This system also allows for ease of use when performing tests on multiple vehicles.

To begin a test, the 3802S is simply attached to the vehicle power supply or laboratory wall outlet and transducers. Data is collected throughout the course of the test. A simple LED interface displays the current status of the system. The results can be uploaded and analyzed at the end of each day or test using the Ethernet LAN cable or a USB memory drive.



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Applications

- Bench Tests
- Passenger Cars
- Off-Road Vehicles
- Motorcycles
- Commercial and Fleet Vehicles



3802S Key Features

A Compact Data Acquisition System for Vehicle and Laboratory Test Applications

Solid State Drive

The Model 3802S utilizes an internal solid state drive (SSD) for the operating memory and data storage. This is an industrial grade drive and is rated for operation over a wide temperature range. A 32 GB SSD is standard. This provides 1 GB operating memory with 31 GB data storage. If additional memory is required, a 64 GB drive is available as an upgrade providing 63 GB data storage.

Data Collection

The 3802S is capable of collecting 8 channels of analog or strain gage data, 8 channels of temperature data, input from 6 channels of pulse data, and has 4 inputs for digital triggers. Optional modules are available that would increase the system to a total of 16 analog channels and 32 temperature channels in addition to the pulse and digital inputs.

NVH Capability

The 6 channel NVH option provides the ability to collect FFT, waterfall, and time-based files. The time-based data is stored as a .wav or .mp3 file which can be played back later using Windows media player. This offers the user an opportunity to hear the actual noise event that occurred. Also, by collecting the time data it is possible to perform complex analysis such as order tracking as a post-processing task.

CAN Bus Capability

The CAN Bus option enables the 3802S to collect up to 45 channels of data using the vehicle's Controller Area Network and user-obtained DBC files. Channels are set up using simple drag and drop functionality and the Search Utility allows the user to search DBC files easily. The 3802S records CAN data seamlessly, alongside all other channel data.

Driver Feedback

When immediate feedback is required, a laptop or tablet computer can be connected to the Model 3802S and data reviewed in real time. The real time display gives the driver feedback in graphical or text format. Target bars can be set up aiding the driver to perform accurate tests. Data analysis tools (RevDataPlus and ReportAssist) are available to retrieve the data immediately after each event.

The 3802S can also support an optional display which can be configured by the user and can be output from the 3802S itself or a laptop.

Data Transfer

Collected data can be downloaded to a laptop or other computer via the supplied Ethernet cable or with one of the two provided USB drives.

System Support

Link provides 12 months of software support with each system purchased. This includes access to Link's secure website operating, data and reporting software as well as technical support from our test and software engineers.

Calibration

The 3802S is fully calibrated and a certificate of calibration accompanies the system. Link provides calibration service in its US and International facilities.



Standard Features—Base System

- 32 GB SSD drive
- 8 Analog Channels
- 8 Thermocouple Channels
- 6 Pulse Encoder Channels
- 4 Digital Input Channels
- 45 CAN Channels
- Selectable Sampling Rate to 500 Hz
- Global Slow Data Recording
- 2.0 USB transfer
- Integral Voltage Module
- Hand Pendant with Text Display for Driver Interface
- Configuration, Calibration, Analysis, and Reporting Software Included

Optional Features—Expanded System

- 64 GB SSD Drive
- 6 Channel NVH Measurement
- CAN Interface Cable and Connector
- Expansion Modules for Adding up to 32 Temp and 16 Analog Channels



Specifications

The 3802S provides the ability to acquire data in a compact, lightweight package with minimal time required for set up.

Overview	
Solid State Drive (1 GB system memory required)	32 GB (or 64 GB option)
Operating Temperature	-20° to 70° C
Storage Temperature	-20° to 85° C
Operating RH Range	20 to 80%
Storage RH Range	5 to 95%
Input Voltage	11.5 - 18 VDC (or 90—260VAC to 12 VDC with AC adapter)
Weight (lb / kg)	11.6 / 5.3
Size (inches / cm)	11.5 x 14.8 x 4.0 / 29.2 x 37.5 x 10.2
Analog	
Channels	8
Connector	Bendix
Overall Gain	1 - 1,000
Excitation	10 V
Sample Rate	1 - 500 Hz
Temperature	
Channels	8
Connector	Mini-T/C
Thermocouple Type	J or K
Sample Rate	20 Hz
Storage Rate	1 - 500 Hz
Pulse	
Channels	6
Connector	Bendix
Excitation	5 - 12 V
Max. Frequency	20 kHz
Sample Rate	1-500 Hz
CAN BUS (Optional)	
Channels	45
NVH (Optional)	
Channels	6
Connector	BNC
Sample Rate	52 kHz
T Module (Optional)	Add an additional 24 temperature channels
AT Module (Optional)	Adds an additional 24 temperature and 8 Analog channels



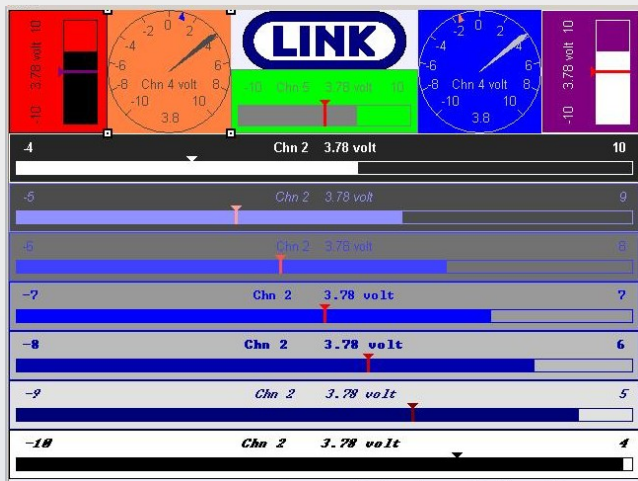
The 3802S Package

The Link 3802S is a complete data acquisition system. The following components are included with the system purchase.

- 3802S Compact DAS Unit
- 3802S CDAS Software Suite on CDROM
- Battery Connect Power Cable
- Accessory Plug Power Cable
- AC Power Supply
- Crossover Ethernet Cable
- Two, 8 GB Mini USB Drives
- Bendix Connector Set
- Carry Case
- Laptop Computer
- 12 Months of System Support for Software Upgrade and Technical Support
- Certificate of Calibration



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User Configurable Display

The 3802S system allows the User to configure a display to show a variety of channels during the test.

Channel data can be shown in the form of analog gages, target bars, or digital readout.

The customized display is configured during test setup. An optional display screen can be plugged into the 3802S and does not require a laptop.

Display settings can be saved and recalled for future use.

Link Engineering Company—Proven Test Equipment

Link Engineering's 75 years of experience developing highly-sophisticated test systems, coupled with its network of testing facilities and resources around the world, makes Link Engineering Company your preferred partner for test systems and independent testing services.

Whether it is product benchmarking, product library and technical specification development, formulation and process refinement, or product monitoring, the use of international standards allows a cost-effective and transparent process to simplify the total test cycle and enables repeatable and reliable engineering and business decisions.

With faster and higher-than-ever demands on product performance, durability, and comfort through the life of the product, and an emphasis on "total life cycle cost optimization," routine and standard laboratory testing provides the best approach for design, manufacturing, application, and sales engineers.

Transducer and Sensors

Link can supply transducers and sensors that are configured to work with the 3802S system. Partial list includes:

- NVH Microphones and Accelerometers
- Speed Sensors: GPS, Fifth Wheel, Non-contact and Wheel Encoders
- Force and Pressure Transducers
- Strain Gages
- Thermocouples
- Temperature and Humidity Sensors
- Slip Rings
- Torque Wheels and Wheel Load Transducers

For additional information on transducers and sensors available, please contact Link at sales@linkeng.com.

Worldwide Testing Resources

Link Engineering Company, with headquarters in Plymouth, MI and testing facilities in the United States, Korea, and Germany, designs, fabricates and operates automated test systems ranging from motorcycles to aircraft and from brake to transmission systems.

Regional sales and service offices in Brazil, China, Japan, and Europe, along with representatives in India and Korea extend our global operation to allow timely and direct discussion with the customer.



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734.453.0800 test systems U.S.

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