



Software

X'SPARE

TEST ENGINEERING

TEST SYSTEMS

SOFTWARE

CONSULTING

PROJECT MANAGEMENT

SYSTEM COMPLIANCE

TESTS

TRAINING

RETROFIT

X'SPARE is SDI's advanced standard software suite developed to meet the needs of control, command, acquisition and analysis of data for all types of test systems. From research and development laboratories to production lines, X'SPARE naturally fits into your solution to manage your test sequences and analyze their results.



Standard Software Solution For Your Tests

Dedicated to your tests

X'SPARE is a software suite that suits all types of endurance or characterization test systems. Its user friendliness makes it easily adaptable by any type of user.

SDI's software suite is based on a real-time kernel that lies in the heart of the Microsoft Windows operating system. X'SPARE ensures the reaction time needed for precise control and regulation as well as for critical surveillance of the equipment and of your specimens.

X'SPARE is fully configurable and requires no programming skills.

Integrated Test Sequencer

Defining test sequences and controlling the numerous variables is done without effort thanks to X'SPARE, SDI's testing software suite. With its powerful integrated test sequencer, X'SPARE offers unmatched flexibility to its users when it comes to configuring cycles.

By integrating complex control commands to its real-time kernel, X'SPARE allows precise and efficient piloting of all of the system's actuators.

Total traceability

Before each new test, a customized product sheet loads specimens information, parameters as well as data storage directories.

All events associated with the product being

tested, such software mode changes, system and specimens alarms as well as errors are recorded in a logbook.

Offline Configuration and Analysis

Stop wasting time by waiting for your test system to be available for configuration of the next tests or analysis of past results.

If you have to configure a new standard, integrate new developments or analyze results of a previous test sequence, X'SPARE software suite allows you to work offline from your workstation.

Results Analysis Tools

X'SPARE has a powerful and convenient tool to analyze data and conduct manual or automatic test reports. A graphic analysis module allows you to precisely study the different curves recorded but also to generate calculated channels, to apply filters, to insert markers with comments, to print your results on a metric scale and to information on your favorite spreadsheet.

Generate your customized test reports using the Microsoft VBScript engine natively integrated into X'SPARE. This solution enables you to create a direct connection between the acquired or calculated data and your office suite such as Microsoft Excel, Word. A set of macro commands ready for use is provided by SDI.



TEST ENGINEERING,
MECHATRONICS AND
EMBEDDED SYSTEMS

Technical Characteristics

Test Configuration

- Unlimited possibilities of configurations
- Measure channels and setpoint channels
- Real-time calculated channels (logical or mathematical)
- Sensor Database
- Piloting module with actuator configuration, safety conditions and control rules
- Configuration of all types of actuators
- Definition of safety conditions and operating conditions

Test sequences and norms

- Programming is set in a conversational mode
- Unlimited number of sequences and phases
- Cycle setting by values, variables or logical and mathematical expression
- Programmable interaction with the test operator through dialogue boxes
- Choice of action to execute based on the type of phase (Repetitions, GoTos, calls to sub-programs, triggers, delays, assignment, drive, automatic test log generation, etc.)
- Drive and regulation: sine, trapeze, triangle, ramps,

mixed signals, clouds of points, etc.

- Setup of acquisition and surveillance rules

Control & Command

- Automatic, Manual and Setup operating modes
- The real-time kernel runs mathematical and logical expressions
- Cycles are resumed after power shortage (even inside nested sub-programs)
- Real-time graphical visualization adjustable to running cycle
- Intelligent surveillance of alarms and errors with rollback management in case of surveillance errors
- Automatic generation of products « logbooks »
- Management of digital control rules and commutation of phase lock loops condition for each actuator (position, velocity, force, torque, etc.)
- Up to 15 actuators driven in parallel in a same cycle
- Customizable display screen for operators
- Backup file configuration
- Automatic generation of test reports

They trust X'SPARE

With 18 years of experience SDI has implemented over 500 test systems in the automotive, aerospace and defense industries and most of our clients have adopted X'SPARE:

ROBERT BOSCH - PSA -
HUTCHINSON - VALEO -
FAURECIA - RENAULT - EADS
- MESSIER BUGATTI -
WESTAFLEX - TRELLEBORG ...

Contact us for more information on XSPARE !

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Additional Specifications

Operating System	Windows 2000, XP
Minimum Configuration	Celeron 600 MHz or Pentium, 256 Mo RAM, 80 Go HDD
Processor Management	HyperThread and mutli-processor
Real-Time Kernel	RTX Venturcom Adjustable from 1 to 10 kHz
Maximum Number of Input/Output Channels	256 channels (physical, calculated or logical)
Number of Drive Modules	15 actuator modules with control rules set
Sampling Frequency for Calculated Channels	From 1 kHz to 10 kHz
Sampling Frequency	
D.M.A Mode	Up to the maximum frequency used by peripherals
Software Sampling Mode	Adjustable from 1 to 10 kHz
Hardware Drivers	National Instruments E Series, M Series, DI/O, CTI/O, ADLink
Communication Protocols	Modbus, CAN, Adam 4000 series
Measure Channels Type	Analog, incremental coder, SSI coder, PWM (MLI), frequency, digital
Setpoint Channels Type	Analog, PWM (MLI), frequency, digital
Real-Time Calculated Channels Type	Filters, derivatives, integrals, polynomial laws, RMS values, mathematical and logical expressions
Software Variables	256 integers of 32 bits — 256 real of 64 bits — 256 Booleans

SDI is a test engineering company offering reliable and innovative solutions in test systems, mechatronics and embedded system.

Our solutions include the provisions of test systems, software and services ranging from your needs' definition to the installation and the analysis of the test's results. We are here to help you conceive products that precisely answer norms, quality and reliability constraints set by your clients. SDI complies with the ISO - 9001 : 2000 norm.

SDI is also committed to sustainable development. The company is an active member of the Environmental Managers Network and has put in place ISO 14001 environmental measures.



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