

# Airborne & Military Mobile Data Recording & Analysis System

The Data Recording and Analysis System (DRAS) is designed for airborne or mobile military environments.

The DRAS is available as a rugged Flight Worthy unit named RCS-1000, or as a Stand Alone software package.

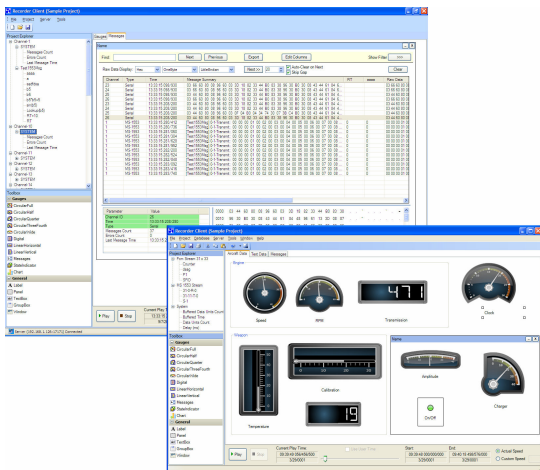
The recorded data is synchronized with IRIG B with time stamps of up to 1  $\mu$ Sec resolution. The DRAS is easily configured to various buses. It has a Client Server configuration for multiple concurrent clients, working with single data recorder. The system stores the recorded messages with time stamps, in a database per IRIG-B Chapter 9, 10.

## A typical configuration

- ◆ Up to 4 MIL-STD-1553 (A+B),
- ◆ Up to 16 x RS-422/232/485 (up to 1 Mbit per channel),
- ◆ Up to 20 discrete signals,
- ◆ Up to 2 Real time Ethernet (TCP/IP or AFDX).
- ◆ Easy integration of additional inputs (PCM, Video, Audio, ArinC-429, CAN Bus, ...).

## DRAS on RCS-1000 military Unit

- ◆ 18-36VDC per MIL-704E.
- ◆ 32-256GB Removable Flash Disk.
- ◆ Internal 100BaseT SWITCH.

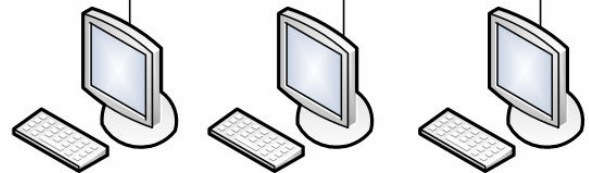


## Input Signals      Recording Server

Mil-STD-1553  
ARINC-429  
RS 422/232/485  
Ethernet  
Discrete



## LAN



## Administration & Analysis workstations

## Software (available as a stand alone package)

- ◆ Up to 1  $\mu$ Sec timestamp resolution.
- ◆ Real time and offline data analysis capabilities;
  - Real time data view local/remote.
  - Offline file/session view for historical recorded data (remote/local).
- ◆ Advanced soft panel capabilities
- ◆ Multiple display TABS;
  - User can design his own view for each TAB.
  - Message view option (WireShark like view)
  - Integrated Graphical display gauges and indicators .
- ◆ Client Server configuration , concurrent clients working with single data recorder.
- ◆ Serial Communication RS422, RS232, RS485.
  - Up to 1Mbit baud rate per channel.
  - Integrated protocol analysis capabilities.
- ◆ Easy integration with new data sources.
- ◆ Advanced search and filtering capabilities (integral rule base search using user defined or header data).
- ◆ Real time or offline Export as binary or CSV format.

BES Systems Ltd. 6B Tfuzot Israel St. Givatim Israel 53583 www.bes.co.il  
Tel: 972-3-571-4998 Fax: 972-3-571-5085 Email: asherlav@bes.co.il

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## RCS-1000 – DRAS on CMC-e Airworthy Computer



### **Environmental**

#### Temperature range

- ◆ Operating: -25°C to +65°C (with Flash disk).
- ◆ Non-operating: -40°C to +75°C

#### Relative humidity: Vibrations

Up to 95% relative humidity, non-condensing, MIL-STD-810F

#### Salt Fog

5% solution per MIL-STD-810F method 509.3

#### Vibration

MIL-STD-810F Method 514.5 Procedure I

#### Shock

MIL-STD-810F for flight equipment 40g, 11ms saw tooth

#### Altitude

With standard hard disks up to 16,000ft , operating and non-operating.  
With Flash disks up to 40,000ft (or the equivalent atmospheric pressure), operating and non-operating

Fungus, Sand and Dust  
MIL-STD-810F

### **EMI/RFI**

Per MIL-STD-461E

- ◆ CE102, conducted emissions, power leads, 10 kHz to 10 MHz.
- ◆ RE102, radiated emissions, electric field, 100 kHz to 1.0 GHz.
- ◆ RS103, radiated susceptibility, electric field, 2 MHz to 2.0 GHz.
- ◆ CS114, conducted susceptibility, DC cable injection, 10 kHz to 400MHz.

### Reliable and rugged

The RCS-1000 withstands severe environmental conditions. Compact and easy to install, the unit is self-cooled. It operates autonomously from a 18-36VDC power source. The RCS-1000 uses either solid-state or hard-drive recording media, with the storage capacity for many hours of continuous operation

### RCS-1000 Construction

The unit is designed and constructed in accordance with the general requirements of MIL-STD-454.

### Thermal Design

The cooling of the components on the CPU and Power Supply is accomplished by conduction through the aluminum enclosure of the unit . The cooling of the plug in boards is accomplished by circulated air.

### External Connectors

External connectors are used for interfacing with the subassemblies or equipment and are in accordance with requirement of MIL-STD-454.