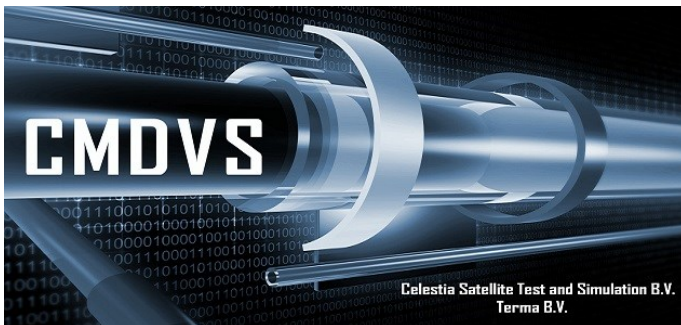


Control, Monitoring, Data processing and Visualisation Software (CMDVS)



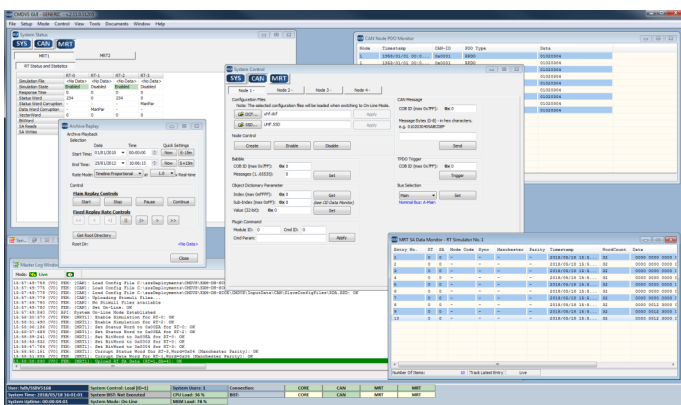
The Control, Monitoring, Data Processing and Visualisation Software (CMDVS) is an integrated software environment which allows for the implementation and operation of integrated simulation, test and monitoring & control systems for space (and other) applications.



CMDVS is specifically targeted to integrated and automated test systems at instrument, payload and subsystem level. For this purpose, CMDVS database formats are compatible with the ESA SCOS-2000 TM/TC database format.

CMDVS offers an “all-in-one” solution which allows the user to perform:

- **Control** over a Unit Under Test (UUT) or operational system. by means of directly controlling ground support equipment, test equipment, specialised front-ends and TTC / TM/TC baseband equipment as well as the preparation and transmission of (tele-)commands (TC) to control the UUT, remote system or the ground system itself;
- **Monitoring** of the real-time status of the UUT or operational system through the acquisition of data from ground support equipment, test equipment, specialised front-ends, TTC / TM/ TC Baseband equipment as well as through file/LAN based data streams. This can be data formatted in accordance with CCSDS / ECSS-PUS standards (e.g. ESA SCOS DB format) as well as user-defined data;
- **Data Processing** of real-time as well as previously recorded or simulated data. It includes functions for telemetry de-commutation, checking, distribution, archiving and displaying. API extensions are available to allow user-defined data processing and the use of external data processing plug-ins to perform level 0-2 data processing;
- **Visualisation** of (telemetry) data, represented in many different ways, using built-in tools for alphanumeric displays, as well as graphical charts, video/pixel data and synoptic displays;



Through the SCOS database compatibility and the provision of common data archive, processing and visualisation toolsets, CMDVS offers a migration path to other satellite level Central Checkout Systems (CCS) and Mission Control Systems (MCS).

CMDVS integrates with the complete range of hardware Front-Ends as available from C-STS, such as Power, MIL-STD-1553, CAN, TM/TC, Parallel LVDS, WizardLink and many more.

CMDVS runs on a range of Microsoft Windows™ operating systems (32/64 bit Windows 7, 10, and Server 2012/2016).

Technical Specifications and Features

General

- Modular Implementation
- Control and Monitoring through TM/TC data
- Control and Monitoring through direct API functions
- Test Sequence Control and Automation (tcl/tk and µTOPE)
- Test Session Configuration and Result Management
- Synoptic Editing, graphs and plots
- Advanced Graphical User Interface
- Real-time and off-line data visualization and filtering
- Data generation/simulation (raw or through database)
- Archive & Log (Store, View, Replay)
- Standalone or distributed deployment (Master-Client)
- Multi-client data subscription & distribution
- CCSDS/ECSS TM&TC processing and routing
- PUS Service Automation
- ESA SCOS-2000 TM/TC Database format (ASCII MIB)
- Third-Party extensions (MATLAB)
- Seamless integration with a wide range of C-STS products (e.g. Power, SpaceWire, Mil-1553B, CAN, TM/TC FE, etc.).

Protocol Extensions

- Echo Data Exchange Network (EDEN)
- Command & Control (C&C)
- Remote Procedure Call (RPC)
- Other custom/specific protocol(s)

System Requirements

Operating System	Windows 7 up to Server 2016
Memory	2 GB RAM
Hard disk	75 MB (core CMDVS) 200 MB (full CMDVS)
Display	1 Display 1920 x 1080 resolution 2 Displays is recommended
Processor	2.0 GHz, x86-bit or x64-bit

Experience

Building on over 30 years of experience in spacecraft EGSE systems; C-STS provides innovative high-tech solutions for ground-based systems in the domains of spacecraft simulation and testing as well as modem (spacecraft communication) and data processing systems. Supporting all phases of the spacecraft lifetime, from integration to flight and all phases in between.

The CMDVS system concept and implementation makes use of the combined know-how from Celestia-STS and TERMA Space, representing many years of experience in the field of Electrical Ground Support Equipment (EGSE) for Spacecraft Assembly, Integration and Testing (AIT).

Contact Details

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