MDP - MISSION AND DISPLAY PROCESSOR

THE HEART OF AVIONICS SYSTEMS

High Performance, Advanced Technology, Powerful and Modular

Astronautics Mission & Display Processor (MDP) is the heart of Avionics systems, performing mission processing, navigation calculations, weapon delivery computations, sensor slaving, stores management, video manipulation & graphics generation , moving map processing& graphics and more - all in a single, powerful LRU.

The key feature of Astronautics' MDP is modularity. The modular approach of MDP design allows Astronautics to easily tailor the MDP to any avionics system requirements.

The large variety of existing hardware modules allows us to configure the appropriate MDP for your requirements, cost-effectively and in short schedule.

The MDP features advanced symbology graphics engine supporting complex graphics generation, polygon fill and real-time display manipulation. The graphics engine features video and graphics overlays, transparent anti-aliasing over the real-time video, video formats conversion, video mixing and multiple sources multiplexing for efficient recording to a VTR.

The build in Digital Map processor option allows independent generation of a digital map, with fast and smooth moving map, including both 2-D and 3-D views of the terrain, map slaving to a sensor and vice versa. Our 3D map features "Highway-in-the-Sky" corridors, 3D threats presentation and more, up to a true situation awareness display.

A large variety of I/O interfaces is available - analog, discretes, synchro, MIL-STD-1553, RS-422,ARINC-429 and more. The MDP interfaces with cockpit Multi Function Color Displays (MFCDs),Head Up Display (HUD), Helmet Mounted Sight (HMS), UFCP, VTR and cockpit camera. Analog &digital video are both supported.

Astronautics MDP is installed in a large variety of flying platforms, such as: F-5, Mig-21, F-4, A-4, KTX-2, C-130 Gunship, T-38, MB339C/D, F-16 Mirage-III and others.
Astronautics MDP is the preferred solution of leading aircraft industries around the world.
Join the leaders, and select Astronautics MDP for your avionics application.
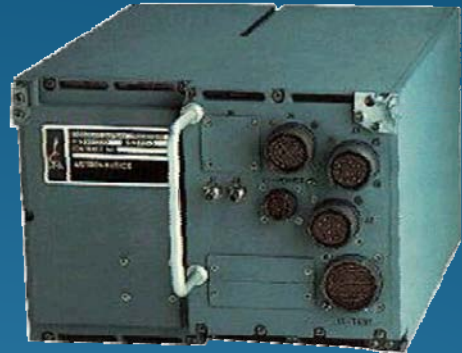
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Hardware Features
- High throughput CPU in multiprocessing architecture
- Analog Video Support: RS170, RS343, NTSC, Y/C
- Full Digital Video Internally. Featuring analog or digital video I/O
- Support stroke outputs to HUD & HMD
- Graphics engine supports up to 30 million pixels/sec. Per channel. Each output is supported by its own graphics hardware
- Full Anti-Aliasing graphics drawing, transparent to the application and to the user. Anti-Aliasing is provided in Real-Time, taking instantaneous video image into consideration.
- User selectable symbols & characters downloaded by the user
- Flexible, modular configuration of I/O boards, CPU and others - for immediate configuring of your computer
- Multiple MIL-STD-1553 interfaces support, each BC,RT and/or BM
- Ethernet support
- Multiple ARINC-429 interfaces support
- Flash memory for OFP storage
- Internal Mass-Memory support for data storage
- Embedded PC option, providing powerful and independent processor for algorithms run(image enhancement, image processing, target detection etc.)
- Digital Map module, powerful graphics, advanced2D & 3D functionality Hardware features
- Audio/Sound - advanced features, supporting synthetic voice & messages, tones, 3D audio warnings and more
- Datalink data-modem option
- Helmet sight system interface option

Software Features
- Modern, open software architecture
- WindRiver© Tornado development environment support as the standard integration environment for OFP development
- VxWorks© Real-Time operating system Interface to standard graphics generation tools(VAPS© or similar), or Astronautics specific
- Graphics Editor tool (GEX)
- Processor independent OFP development support:- C++ code- VxWorks© Operating System- Astronautics provided I/O drivers
- Basic Software package provided:-I/O Drivers-Graphics Drivers-Power On Startup software-Continuous BIT module-CPU services driver

General Features
- Design for high reliability & maintainability
- I-Level Test Equipment (T.E) support
- D-Level long term support at Astronautics. Optional D-Level setting at customer's facility is available.
- System integration support by Astronautics' avionics experts
- Long term technical support by Astronautics teams of experts, including maintenance, obsolete monitoring& handling, and more
- Full support for new generation upgrades of systems incorporating Astronautics MDP