

Multi-Satellite System

Multiple Satellite Ingest, Data Processing, and Display System

Automated Sciences LLC

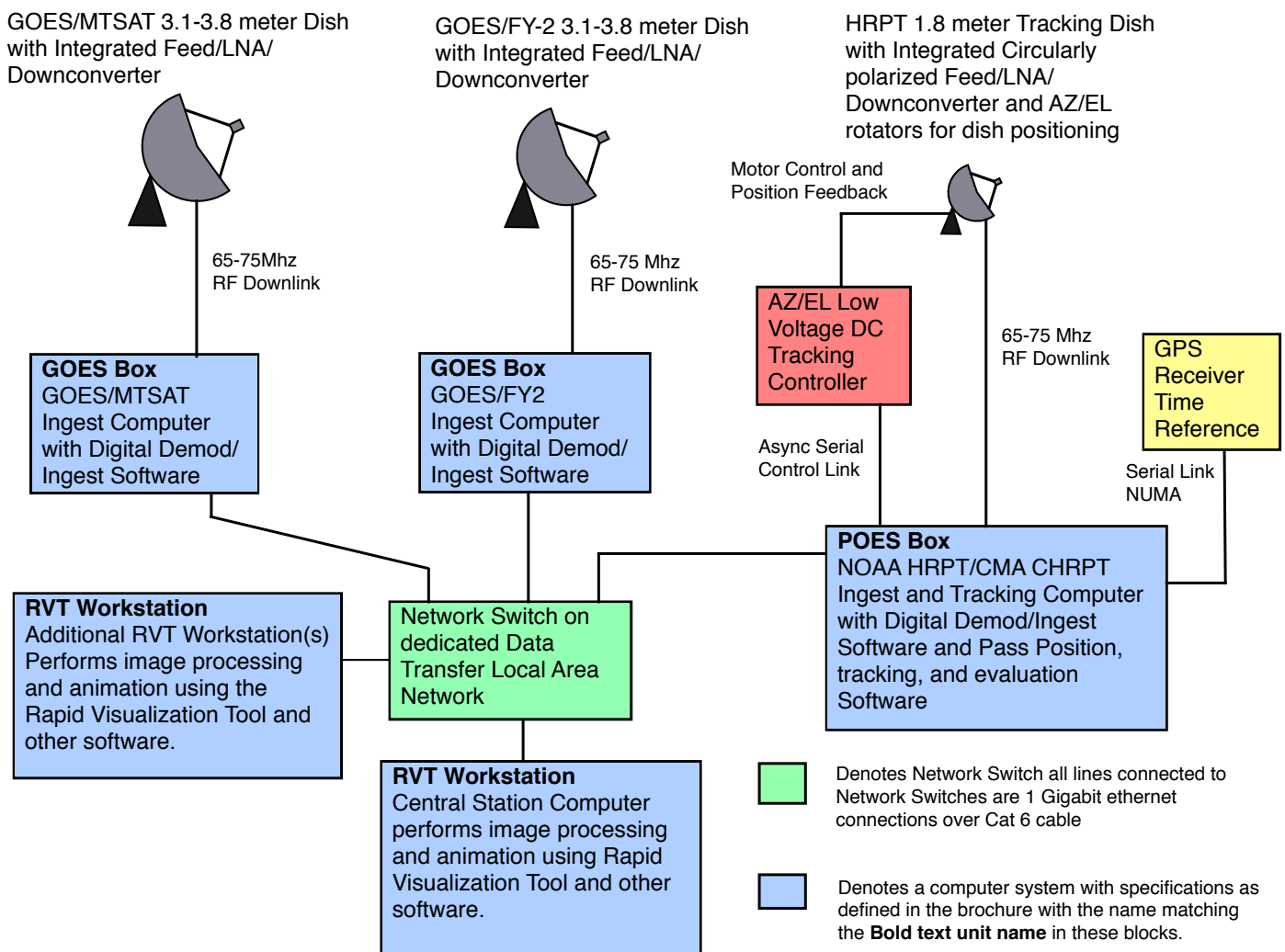
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The Automated Sciences Multi-Satellite System (MSS) is a composite of our various ingest and processing systems which when coupled together create an integrated system where data from multiple environmental imaging satellites can be brought together at a single powerful workstation. The MSS configuration allows for rapid real-time data analysis increasing the accuracy and lowering the latency of data based predictions and warnings.

The Multi-Satellite System has various configurations but in the most extensive configuration (depicted in the diagram below) it is ingesting and storing data simultaneously from any two Geostationary Weather Satellites. It is also tracking and ingesting the polar orbiter passes from both the U.S. and Chinese polar orbiting satellites. Data that is ingested is then be processed and displayed on one or more high end workstations capable of running our advanced image processing software. The table on the back of this brochure provides a basic description of each component. Separate brochures describing each of the components in greater detail are also available.

Multi Satellite System Diagram

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Automated Sciences LLC
74 River Rd
Preston, CT 06365 USA

Web: www.automatedsciences.com
Email: info@automatedsciences.com
Phone: (860) 886-8368

The Multi-Satellite System is a collection of several computer systems each with a dedicated purpose. They are connected via a high speed Gigabit LAN backbone. This system architecture provides optimal performance, component independence, and lends itself to easily being able to have hot spares.

Components of the Multi-Satellite System (MSS)	
Please See the separate component/system brochures for more information	
Component/System	Function
GOES Box	Ingests data from any of the supported (see GOES Box Brochure) Geostationary Orbital Environmental Satellites (GOES) and stores this data in preparation for network requests. It also runs a special server to provide dynamically sectored data to the SuperLooper image processing Tool
POES Box	Interfaces to a tracking controller and predicts time and location of Polar Orbiting Environmental Satellites (POES) and tracks these satellites during the pass. It also ingests and stores the data ready for network requests for it.
RVT Workstation	Is a powerful 64 bit dual processor workstation capable of dynamically requesting and processing the data ingested by the GOES Box(s) and by a POES Box. It can display this data with many software provided enhancement and analysis features in any of three different Automated Sciences image processing tools as appropriate for the data type and application. It also provides ways of combining the data from different satellites.
Rapid Visualization Tool	A powerful image processing and analysis tool that displays the data at its full resolution in a true 3D perspective. Allowing for rapid analysis. A number of meteorological/ environmental processing algorithms are implemented within it to provide greatly enhanced data analysis capability. In the Multi-Satellite System the RVT is capable of combining data from GOES East and GOES West or from MTSAT and FY-2.
SuperLooper	A powerful image processing and animation tool for working with data from geostationary satellites. It runs within common web browsers and can be run on the RVT Workstation or on existing modern personal computers. It can also be used remotely with proper network infrastructure support.

Multi-Satellite System (MSS)	
Basic Specifications	
For more detailed specifications refer to the specifications in individual component brochures	
The specifications shown here can vary depending on configuration	
Network	All computer components are connected on a Gigabit Ethernet back-bone
Equipment Form-Factor	The equipment designed for installation indoors fits in a standard 19" rack, depending on configuration 10-20U's are required. The Workstations can be either rackmount on a shelf or used as free standing tower. The outdoor equipment would consist of one or two dishes for GOES reception (3.1-3.8meter) and a tracking dish for POES reception (1.8 meter).
Power Requirements	Voltage: 110V/220V (factory configured), 50-60Hz AC, Power 1000-2000 Watts, 500W/ additional RVT Workstation
Operating System	SuSe Linux 9.1 or greater distribution based on Linux 2.6.X kernel on all computers
Included Software	Automated Sciences Rapid Visualization Tool, Gridded Data Viewer, SuperLooper, POES and GOES data ingest software, POES tracking software, Gridded Data Server, and other associated components. Wide range of Open Source software including The GIMP, Mozilla, Apache Web Server. Netscape browser, Adobe Acrobat, and other commercial software.
Warranty	A two year limited warranty, contact us for details

Pricing and Availability

The Multi-Satellite System is available now. Pricing varies depending on configuration . Please contact Automated Sciences for a price quote.