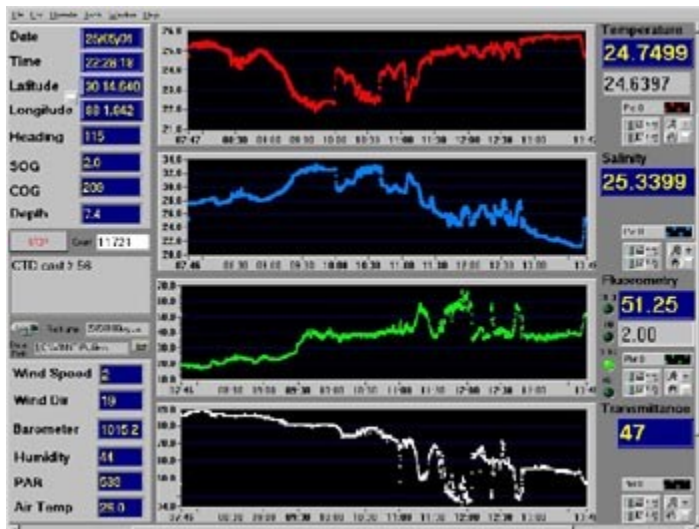


MIDAS



Is a PC based Multiple Instrument Data Acquisition System (MIDAS) controlled by a rack mounted dual processor Digital Server 3000R with 21" monitor, and 10 gigabyte hard drive. A National Instruments 16 port serial expansion board allows modular integration of instrumentation, rapid sampling rates, and the maintenance of a real-time data display. Analog sensor signals are converted to a serial format for output to the host PC using using R.M. Young A/D devices. The controlling software was developed using National Instruments LabVIEW, to allow accessibility and ease of modification.

A real time graphical display provides charting and data display to the ships two labs as well as anywhere else on the ships network. Navigational data is acquired from a Starlink differential GPS or a Trimble GPS with a Micronet Receiver Station. The Micronet Receiver Station is a land based differential system privately maintained (provided for LUMCON's use by Doug Chocrane Technologies, Lafayette, Louisiana), with sub 5-meter accuracy and available out to 300 miles in the Gulf of Mexico. A sea water flow-through system provides sea surface temperature, conductivity, chlorophyll fluorescence, and transmissometry data using: a Sea-bird Electronics SBE 21 Thermosalinograph; a Sea-Bird Electronics SBE 38 Remote Digital Immersion Thermometer; Turner Designs Model 10 Series Fluorometers; and a WETLabs 10 centimeter or 25.0-centimeter path length transmissometer. MIDAS also integrates the data from the ships meteorological suite into the data set and display. The meteorological suite consists of a R.M. Young 05103 Wind Monitor, a R.M. Young model 61201 Barometric Pressure sensor, a R.M. Young TS05327 Temperature and Relative Humidity sensor and photo synthetically active radiation (PAR) is measured with a LI-COR LI-190SZ Quantum Senso