

# **EVERESTX** Telemetry Recorder-Workstation

- Color, touch-screen display with pen tip simulation for real-time data viewing
- 32 analog or digital inputs for connection to any decomm system
- Virtual Chart<sup>™</sup> hard drive for storing an entire mission in one file
- Look-back capability for reviewing data during recording
- Ethernet interface for command and control
- High Resolution, high speed, real-time strip chart recorder



The Everest X is a powerful recording platform that bridges the gap between today's and tomorrow's needs. With features such as a built-in waveform display, moving pen tip simulation and strip chart recorder for real-time data printing, it addresses the unique requirements of pen recorder users.

At the same time, innovations such as a touch-panel user interface and Virtual Chart data storage system make it ideal for the next generation telemetry room.

In fact, the Everest X is so much more than a recorder, we call it a Telemetry Recorder-Workstation.



# Real-time Data Display

If you need to view critical data in real-time, the built-in display of the Everest X is designed for you. Data can be displayed in any format, and channels can even be displayed in 16 different colors so you can easily track an important event. The unique highlight feature allows data to be quickly marked with a note by a touch of the screen.

# High Resolution Chart

With 300 dot per inch print resolution, you can be confident that the Everest X will print your data in the clearest, most readable presentation. Our patented thermal array printing process prints grids and annotation with your data, eliminating paper skew and making post-mission data processing simple.



This chart shows sixteen waveform channels with sixteen lines of annotation. Created with the Chart Setup Wizard, it also illustrates the use of the on-demand annotation buffers. The system log prints the time, chart speed and time scale for the chart. Additionally, the tri-level timing marks allow you to quickly make timing measurements.



This chart illustrates the flexibility of the chart output. A total of seven waveform channels are shown with annotation showing grid values. Waveforms are overlapped on some grids and event markers are placed on the chart. A unique ID is placed on each waveform for instant identification.

# Virtual Chart

The Virtual Chart option lets you record hours, days, or weeks of data to a dedicated 73 GByte hard drive. Virtual Chart data can be replayed to the screen, used for waveform measurements or archived to your PC. Virtual Chart data can be stored along with or in place of real-time chart recording. At the end of a test, users can have a digital data file, a chart printout, or both!



The Virtual Chart option saves over 350 pages of chart paper to a single 256 MByte CompactFlash Card!



The EV-HS removable cartridge makes securing your classified data easier and safer than ever.

# Remove and Secure your Data

The Everest X was designed to keep your data secure. All non-volatile memory, including data and setup information, is easily removed from the base unit. Easily accessible from the front panel, these compact cartridges are ideal for storage in a secure area. If you record classified and non-classified data, cartridges can be easily exchanged.

# An Analog or Digital Input for Every Application

We understand that no two telemetry rooms are the same. That's why inputs on the Everest X were designed to be versatile enough to handle all of your needs, no matter what they are.

For traditional analog inputs, the Everest offers the option of up to 32 channels of differential voltage inputs. To simplify connection your DACs, built-in auto-ranging allows the Everest X to automatically scale your input signal. And if you need to filter unwanted noise or other signals, Digital Signal Processors can be programmed for almost any filter.

If you're like most facilities, you have considered going directly digital for your telemetry recording. The DI-EV Ethernet Digital Input Option for the Everest X, with its compressed data transmittal format, makes transferring digital data simple. Imagine never having to worry about analog data again! Any code developed using the Everest X digital data protocol can be leveraged for use with our Real-Chart Network Printer and VDiS Visual Display Software.

## Data Transfer

To make transferring information between your computer and the Everest X as efficient as possible, a 100 BaseT Ethernet interface is standard with the Everest X. You can download setup files to the Everest X and upload waveform and setup files, and set the display format of your data. For real-time control, use the same Ethernet interface to change speeds and scaling, run or halt the chart, and set the display format of your data. You can even change your annotation on the fly!



### **OVERVIEW SPECIFICATIONS**

CULUR DISPLAT	
Туре	Active matrix color LCD (TFT)
Viewing Area	18.1 inch / 49.97 cm ( diagonal )
Resolution	1280 x 1024
Touch	Full screen, resistive
Functions	User interface with touch-based icons and menus; Waveform monitoring to full speed; Review previous waveform histories while recording; Overlay numeric values in Engineering Units; Pen style indicators for point of real-time; Overlay usercomments with touch-panel
CHART RECORDER	
Recording Method	Direct Thermal
Recording Method	414 mm ( 16.3 in )
Resolution	12 dpm ( 300 dpi )
Chart Speed	1 mm/m to 200 mm/s
Remote Stop/Start	TTL level, switch closure or computer interface
External Speed	Speed synchronized to TTL source
Max Waveform Size	170 mm
Grids	32 independent grids up to 170 mm wide
	Grid placement can be automatic or user determined
Time Marking	Tri-state ( x1, x10, x100 ) mark on either chart edge; Grid time lines can be synchronized to time mark; Selectable time mark reference ( 0.02 to 1 sec or external )
Annotation	System Log printed automatically ( time, date, speed ); Each grid associated with a line of text ( 128 characters ); On-Demand text buffer ( 128 characters )
Channel ID	Each channel labeled with channel number; Top and bottom grid values can be annotated
Trace Thickness	User adjustable
Data Logger	Numerical printout up to 1 line/sec
Paper	Z-fold pack
TRIGGER SOURCES	
Basic	All active signals monitored simultaneously.
Trigger Types	Window, Slope, Level, Slew and Event pattern, Manual and External
SIGNAL MODULES	
Maximum Modules	4
Maximum Waveforms	32
Maximum Events	32
ANALOG SIGNAL CONDITIONEI	R INPUT MODULE (SM2 / SM2D)
Number of Waveforms	8
Input Type (SM2)	Single Ended, DC coupled
Input Connector (SM2)	BNC
Input Type (SM2D)	Differential, DC coupled
Input Connector (SM2D)	D shell (25 pin)
Measurement Ranges	4 to 40 VFS: 0.5 to 5 VFS
Max Rated Input	+ 50 V
Min Input Impedance	> 150 kQ
Bandwidth	15 kHz (-3db)
Intrinsic Noise	+0.5 % of attenuator
Filter Choices	Low pass with stops from 10 to 10,000 Hz; High pass with starts from 0.1 to 100 Hz; Notch with 50 or 60 Hz Center
User Engineering Units	Yes
Events	8 TTL with pull ups, 0 to 5 V
Event Response	20 microseconds minimum duration

DIGITAL SIGNAL CONDITIONER	INPUT MODULE (DM1)
Number of Channels	8
Number of Events	8
Input Type	Parallel, long line (RS-485 differential)
Input Connector	50-pin Centronix style
Interface Bandwidth	500 kHz
Maximum Channel Rate	50,000 samples/second
WAVEFORM HISTORY	
Method	Saves full bandwidth line segments
Media	DRAM with archive to disk
Time Base Resolution	Better than 1 millisecond at 100 mm/s
Record Size	6000 line segments ( 500 mm )
Circular Buffer	Saves pre and post trigger data
Content	Waveforms, events, grid and time marks, alarms and highlights
Review	Split screen review while continuing real-time recording
Archive	Histories can be saved to the system hard drive or through the card reader
DATA CAPTURE ( Optional for S	M2, SM2D and DM1 )
Recording Method	High speed RAM with auto-archive to harddrive
Capacity	16 MB
Sample Rates	120 Hz to 120 kHz
Effective Chart Speeds	10 mm/sec to 10,000 mm/sec
Capture Format	Min/Max pairs for glitch capture and bandwidth preservation
Trigger Point	Pre-and post-trigger percentage user adjustable
Time-Stamp	Time and date automatically saved with data
Auto Re-Arm	Automatic stacking of captures
File Information	Information on units, measurement range and sample rate saved with data
STORAGE MEDIA	
Internal Hard Drive	Minimum of 73 GB standard
Card Reader	Supports: Compact Flash I ( 8 MB - 4 GB ) Compact Flash II ( 8 MB - 4 GB ) Smart Media Card ( 8 MB - 128 MB ) Multi Media Card ( 8 MB - 4 GB ) Secure Digital Card ( 16 MB - 4 GB ) IBM Microdrive ( 340 MB - 4 GB ) Memory stick Card ( 4 MB - 256 MB ) Memory stick PRO Card ( 256 MB - 4 GB ) Memory stick PRO DUO Card ( 256 MB - 2 GB )
POWER	
Input Voltage Range	100 to 250 VAC
Frequency Range	47 Hz to 63 Hz
Power Consumption	300 W ( typical ) 500 W ( maximum )
COMPLIANCE / ENVIRONMENT	AL
Safety	EN 61010-1, 2nd Edition (2001), UL 61010-1:2004, 2nd Edition CAN/CSA C22 2 No 61010-1:2004 2nd Edition
FMC	FCC Part 15, Subpart B, Class A, FN 61326 1998 Class A
Power Harmonics	IFC1000-3-2
Operating Temp	40 to 105 °F ( 5 to 40 °C )
Operating Humidity	10 % to 95 % non condensing
PHYSICAI	
Mounting	Benchton or 19-inch rack
Dimensions ( rackmount unit )	21" (53 34 cm) H x 19" (48 26 cm) W x 14 5" (36 83 cm) D
Weight	62 lbs ( 28 12 kg )
Weight	02 103 ( 20. 12 Kg )

# Other telemetry products available from Astro-Med, Inc.

# VDIS Visual Display Software

- Real-time display of up to 32 channels
   Numeric datalogger and X X plot display
  - Numeric datalogger and X-Y plot displays
    Discrete, overlap or custom grid formats
  - Customizable user interface
  - Compatible with third-party telemetry systems

Use the *Real-Chart NP* with our *VDIS* software to provide both a virtual and hard copy record of your telemetry data.

# BO® Astro-Med® Inc TEST & MEASUREMENT PRODUCT GROUP

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# Discrete, overlap or custom grid formats Adds wide format printing to any system

**Real-Chart Network Printer** 

- 16.3-inch chart width
- Print up to 32 channels at one time

• Real-time or post mission print capability

300 dpi resolution

The *Real-Chart NP* now supports wide format printing from VDiS along with the *Dash 20HF* and *Dash 32HF* high speed data recorders.

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#### FACTORY SALES AND SERVICE CENTERS

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Astro-Med is system certified to ISO9001. 072109