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.

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 steered 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!

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 transmission 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 VDI 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.

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.
## OVERVIEW SPECIFICATIONS

### COLOR DISPLAY
- **Type**: Active matrix color LCD (TFT)
- **Viewing Area**: 18.1” / 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 user comments with touch-panel

### CHART RECORDER
- **Recording Method**: Direct Thermal
- **Chart Width**: 414 mm (16.2”)
- **Resolution**: 12 dpi (300 dpi)
- **Chart Speed**: 1 mm/min to 260 mm/sec
- **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**: 2-fold pack

### TRIGGER SOURCES
- **Basic**: All active signals monitored simultaneously
- **Trigger Types**: Window, Slope, Level, Slew and Event pattern, Manual and Basic
- **All active signals monitored simultaneously.

### SIGNAL MODULES
- **Maximum Modules**: 4
- **Maximum Waveforms**: 32
- **Maximum Events**: 32

### ANALOG SIGNAL CONDITIONER INPUT MODULE (SM2 / SM2D)
- **Number of Waveforms**: 8
- **Input Type (SM2D)**: Single Ended, DC coupled
- **Input Connector (SM2)**: 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 kΩ
- **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 start 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 µs 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**: 9-pin Centronics style
- **Interface Bandwidth**: 500 kHz
- **Maximum Channel Rate**: 50,000 samples/sec

### WAVEFORM HISTORY
- **Method**: Saves full bandwidth line segments
- **Time Base Resolution**: Better than 1 ms at 100 mm/sec
- **Record Size**: 6000 line segments (600 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
- **Recording Method (Optional for SM2, SM2D and DM1)**: High speed I/O with auto-archive to harddrive
- **Capacity**: 16 MByte
- **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 GByte standard
- **Card Reader**: Supports: Compact Flash I (8 MByte - 4 GByte)
  Compact Flash II (8 MByte - 4 GByte)
  Smart Media Card (8 MByte - 128 MByte)
  Multi Media Card (8 MByte - 4 GByte)
  Secure Digital Card (16 MByte - 4 GByte)
  IBM Microdrive (240 MByte - 1 GByte)
  Memory stick Card (4 MByte - 256 MByte)
  Memory stick PRO Card (256 MByte - 512 MByte)
  Memory stick PRO DUO Card (256 MByte - 2 GByte)

### POWER
- **Input Voltage Range**: 100 to 250 VAC
- **Frequency Range**: 47 Hz to 63 Hz
- **Power Consumption**: 300 W (typical) 500 W (maximum)

### COMPLIANCE / ENVIRONMENTAL
- **EMC**: FCC Part 15, Subpart B, Class A, EN 55022:1998 Class A
- **Power Harmonics**: IEC1000-3-2
- **Operating Temp**: 40 to 105 °F (5 to 40 °C)
- **Operating Humidity**: 10 % to 95 % non condensing

### PHYSICAL
- **Dimensions (rackmount unit)**: 36.83 cm (D) x 53.34 cm (H) x 19" (36.83 cm) D
- **Weight**: 62 lbs (28.12 kg)

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**OTHER TELEMETRY PRODUCTS AVAILABLE FROM ASTRO-MED, INC.**

**VDIS VISUAL DISPLAY SOFTWARE**
- Real-time display of up to 32 channels
- 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.

**REAL-CHART NETWORK PRINTER**
- Real-time or post mission print capability
- Discrete, overlap or custom grid formats
- Adds wide format printing to any system
- 16.3-inch chart width
- Print up to 32 channels at one time
- 300 dpi resolution

The Real-Chart NP now supports wide format printing from VDIS along with the TMX high speed data recorders.

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**FACTORY SALES AND SERVICE CENTERS**
- CANADA: Tel. (450) 619-9973 / Fax (450) 619-9978
- Toll-Free Phone (Canada only): (800) 610-28368-0 / Fax +450 (450) 606-771121
- UNITED KINGDOM: Tel. +44 (01628) 668836 / Fax: +44 (01628) 664994
- FRANCE: Tel. +33 (1) 34 82 09 00 / Fax +33 (1) 34 82 05 71
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