AstroNova™
Test & Measurement

Everest X Specifications

Color Display	
Type	Active matrix color LCD (TFT)
Viewing Area	18.1-inch (diagonal)
Resolution	1280 x 1024
Touch Screen Type	Resistive (resolution <1mm)
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 (16.3 in)
Resolution	12 dpm (300 dpi)
Print Speed	1 mm/min to 100 mm/sec at 12 dpm; 101 mm/sec to 200 mm/sec at 6 dpm
Speed Accuracy	± 2%
Dual Speed	Automatic speed change with trigger or time
Remote Start/Stop	TTL level, switch closure or computer interface
External Speed	Speed synchronized to TTL source
Maximum Waveform Size	170 mm
Amplitude Grids	32 independent up to 170 mm wide. Auto or manual grid design and placement
Time Marking	Tri-state (x1, x10, x100) mark on either chart edge. Selectable mark (0.02 to 1 second or external) with Grid Synchronization
Annotation	System Log printed automatically (time, date, speed); Each grid associated with a line of text (128 ASCII characters); An On-

	demand text buffer is available (128 characters)
Signal Conditioner	Auto annotation using grid buffers; Top and bottom grid values labeled
Channel ID	Each channel labeled with channel number
Trace Thickness	User adjustable
Paper	Z-fold pack (400 sheets) or roll available; Each is 397 ft
Remote Start/Stop	TTL level, switch closure, or computer interface
Computer Interface	
Host Control	10/100 Base T Ethernet, RS-232, GPIB (optional)
Digital Data	10/100 Base T Ethernet
Power Specifications	
Input Voltage Range	102 Vrms - 130 Vrms; 200 Vrms - 250 Vrms
Frequency Range	47 Hz to 63 Hz
Input Power Consumption	300 Watts (typical) - 500 Watts (maximum)
Leakage Current	0.75mA maximum
Safety	UL3101-1
Emissions	FCC Part 15 Class A, EN55011
Power Harmonics	IEC 1000-3-2
Physical Specifications	
Mounting	Benchtop or 19" rack
Dimensions	21"H x 19"W x 14.5"D (Rack)
Weight	62 lbs.
Operating Humidity	10% to 95% non-condensing
Operating Temperature	5 to 40°C (40 to 105°F)

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Alarm Specifications	
Indications	Waveform color change on display
Test Types	Window; All active signals monitored simultaneously
Output	2 TTL outputs, user Definable
Trigger Specifications	
Window	High and low thresholds, inside and outside
Slope/Level	Rising, Falling or either
Slew	Time periods from 0.01 to 10 seconds
Event	Binary combination of active events
Other Sources	Manual and external inputs
Worst Case Latency	1 millisecond
Output	TTL, net of trigger conditions
Waveform Channels	
Modules	Maximum of four modules (DM1 Series or SM2 Series) can be installed for up to 32 waveform channels
Utility Port	
Functions	Trigger In, Alarm Out A or B, Remote Arm, Security, Remote Abort, Chart Mark, Trigger Out, External Motor Clock, External Run/Halt, Programmable Input (can be set to cause on-demand buffer, channel ID or channel labeling), and TTL 5V
Connector	15-pin "D" shell
Other Connectors	
Printer Port	PC Parallel Port (25-pin "D" shell)
Mouse, Keyboard	PS/2
Video	15-pin "D" shell
Waveform History Specifications	

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Method	Saves full bandwidth line segments
Media	SRAM with archive to disk
Time Base Resolution	Better than 1 millisecond at 100 mm/sec
Record Size	10,000 line segments (over 800 mm of chart)
Circular Buffer	Saves time period leading up to and including stimulus
Stimulus	Touch Panel or trigger
Content	Waveforms, events, grid and time marks, alarms and highlights
Review	Split screen while recording
Archive	Save to hard drive or to removable media
External Time Code	
Formats	IRIG A, IRIG B, IRIG H, NASA 36; Amplitude Modulated or TTL
Amplitude Modulated Input Voltage Limits	0.5Vp-p to 10Vp-p
Maximum Safe Input	+10V or -10V
Time Base Variations	x1/2, x1, x2
IRIG On Time Mark Accuracy	±1msec or 1 chart segment (whichever is greatest); 1/12 mm on the chart
Multicard Reader	
Format	PC Format
Media	USB 2.0, CompactFlash (CF), Memory Stick (MS), Secure Digital (SD), Micro Secure Digital (Micro SD), Multi Media Card (MMC), SmartMedia (SM), XD-Picture Card (XD)
Functions	Setup files, software upgrades, and data transfer/archive
Realtime Recording Formats	
User Defined Formats	The user can design unique charts using standard menus. These formats can be saved to the hard drive or to removable media

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Data Logger	Numeric reporting of waveform data in engineering units
Dual Speed	System toggles between any two chart speeds based on time inteval or trigger
Constant Chart Speed	Constant chart output regardless of display speed choice
Highlight (chart delay)	Delays printing of the chart by one screen in order for user comments to be entered on the touchscreen.
Annotation	
System Log Channel	Prints time, date, speed, time base and function on the left chart edge
Waveform ID	An identification code printed next to each waveform
Waveform Buffers	32 annotation buffers. Standard buffers are128 characters long
On-the-fly buffer	One additional 128 character annotation buffer, which can be positioned anywhere across the chart and printed with a keystroke
Signal Conditioner Buffer	Internal gain and zero position settings are automatically printed as the last 40 characters of the waveform text buffers
Highlight Comments	User definable, touch screen activated comments are printed on the chart while in highlight mode
Standard Event Markers	
System Event (Chart Mark)	Standard with glitch capture. Operates from front panel key or external input (TTL or switch closure)
Tri-level Time	x1, x10, x100 based on user choice of reference
Tri-level Reference	Internal: 0.01, 0.02, 0.04, 0.1, 0.2, 0.4, 1.0, 3.6, 6 sec; External: any available time code start pulse
Tri-level Location	Either right edge, left edge or both, selectable
Additional Markers	8 per SM2 Series Module
Platforms Available	
Everest-HSR	High Security, Rackmount. Base platform Everest with all non-volatile media being removable

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Everest-HS	High Security Everest in bench-top case
Virtual Chart (optional)	
Recording Method	Internal 73 Gbyte hard drive
Data Presentation	Play data back to Everest display and/or chart; Archive to PC for review
Signal Module Specifications (SM2)	
Waveform Inputs	8 on module
Waveform Type	Single-ended voltage
Input Coupling	DC
Connector	BNC
Max. Rated Input	±50V
Specified Measurement Ranges	4 to40Vfs; 0.5 to 5Vfs
Available Ranges	1 to 40 Vfs; 0.1 to 5 Vfs
Voltage Accuracy	±0.5% of the attenuator
Net Bandwidth	15 kHz (-3dB)
Minimum Input Impedance	>150 kOhms
Intrinsic Noise	0.5% of the attenuator
Baseline Drift with Temperature	0.05% of the attenuator per °C
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
RMS Time Constant	Selectable from 0.02 to 2 seconds
Automatic Calibration	To internal or external signal source (DAC cal)
User Engineering Units	Yes, with automatic scaling
Waveform Testing	All active waveform channels monitored simulataneously

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Event Inputs	8 per module
Event Types	TTL with pull ups (0 to 5V)
Event Response	20 Microseconds minimum duration
Data Capture (optional)	Up to 400,000 samples per channel; 120 kSamples per second per channel; includes glitch capture to ensure bandwidth
Signal Module Specifications (SM2D)	
Waveform Inputs	8 on module
Waveform Type	Differential voltage
Input Coupling	DC
Connector	D-shell (25 pin)
Max. Rated Input	±50V
Specified Measurement Ranges	4 to40Vfs; 0.5 to 5Vfs
Available Ranges	1 to 40 Vfs; 0.1 to 5 Vfs
Voltage Accuracy	±0.5% of the attenuator
Net Bandwidth	15 kHz (-3dB)
Minimum Input Impedance	>150 kOhms
Intrinsic Noise	0.5% of the attenuator
Baseline Drift with Temperature	0.05% of the attenuator per °C
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
RMS Time Constant	Selectable from 0.02 to 2 seconds
Automatic Calibration	To internal or external signal source (DAC cal)
User Engineering Units	Yes, with automatic scaling
Waveform Testing	All active waveform channels monitored simulataneously

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000

Event Inputs	8 per module
Event Types	TTL with pull ups (0 to 5V)
Event Response	20 Microseconds minimum duration
Data Capture (optional)	Up to 400,000 samples per channel; 120 kSamples per second per channel; includes glitch capture to ensure bandwidth
Signal Module Specification (DM1)	
Number of Signals	8 waveform and 8 event per module
Input Type	Parallel, long line (RS-485 differential)
Connector	50-pin Centronix style
Interface Bandwidth	500 kHz
Maximum Channel Rate	50,000 samples/second
Filter Choices	Low Pass with stops from 1 Hz to 10000 Hz; High Pass with starts from 0.1 Hz to 100 Hz; Notch with 50 or 60 Hz center
RMS Time Constant	Selectable from 0.02 to 2 seconds
User Engineering Units	Yes
Data Capture Option	Up to 400,000 samples per channel and 120 kSamples/second/channel

Specifications are subject to change. Registered trademarks belong to their respective companies.

600 East Greenwich Ave., West Warwick, RI 02893
O: +1.401.828.4000