

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

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Full-service, independent repair center
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along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

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- In stock / Ready-to-ship
- Leasing / Rentals / Demos
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Expert team | Trust guarantee | 100% satisfaction

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Find the *AstroNova / Astro-Med AstroDock-TMX* at our website: *Click HERE*

AstroNova®
Test & Measurement

TMX®



Full Featured, Easy to Use, All-in-One Data Acquisition

Astro-Med® is now AstroNova®

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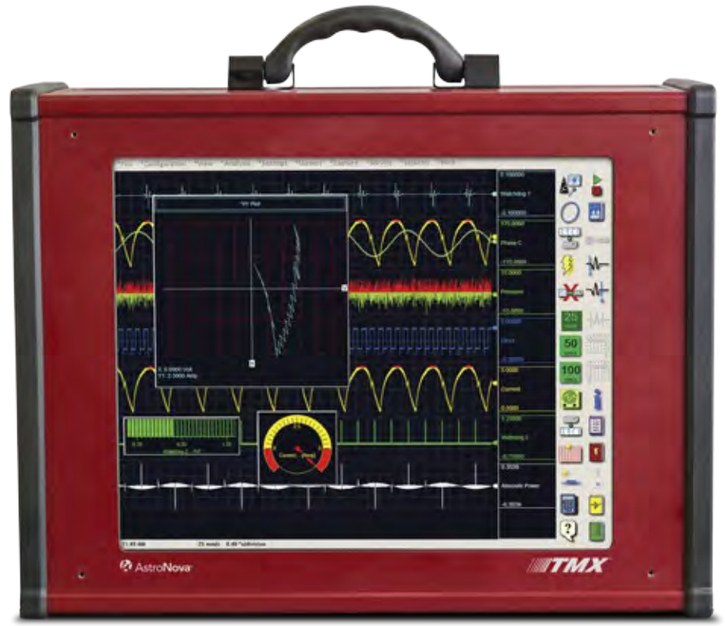
AstroNova Test & Measurement

Capture Critical Data Accurately & Reliably

Since 1969, AstroNova Test & Measurement has been a pioneer in the data acquisition industry. Building a strong legacy with our high quality, U.S. made products; our customers have come to rely on us for all their data recording requirements.

As engineers, we understand the importance of your data capture applications, which is why we design our products with both precision and user experience in mind. Through the years, we have developed a reputation for our accurate, turnkey products and unrivaled technical support engineers, known for providing expert support whenever it is needed.

Our company is committed to innovation and adaptation, ensuring we meet the ever-changing needs of our customers. Our customers know they can look to us for products that offer revolutionary solutions for data acquisition. Whatever our customers' data acquisition requirements, we offer the total solution for their tailored applications.



Product Overview

Rugged and easy-to-use, the TMX® all-in-one data acquisition system is a complete solution with everything you need to acquire, visualize, and analyze data quickly. All TMX models offer a modular and scalable architecture allowing systems to be set for your specific application. Operation of the TMX is quick and effortless with its intuitive user interface, 17" multi-touch display and variety of input modules.

The TMX and its user-friendly software have proven itself year after year, becoming a trusted and reliable solution for critical applications around the world. It is ideal for a variety of uses including maintenance and troubleshooting, R&D, verification and validation. Tested to MIL-STD-810F standards, it will withstand the rigors of field testing, production environments and lab work. The TMX has become a highly valued and trusted system for industry-leading companies who can rely on it for years without failure.

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- Take advantage of ready-to-use capabilities to acquire, visualize and analyze data quickly
- Review data and configure system on high-resolution 17” touch display
- Customize to your specific needs with a variety of input modules
- Eliminate additional hardware and simplify wiring with built-in signal conditioning
- Gain greater security with the latest Windows® 10 Operating System
- Easily exchange drives for recording of classified and non-classified data with removable hard drives
- Synchronize and timestamp acquired data based on IRIG or GPS inputs
- Acquire 60X faster sampling rates with optional 50MHz scope card
- Review historical data while acquiring new data
- Record audio and video synchronized with your data (optional)

Acquire

The modular architecture of TMX allows for customization for your specific application.

TMX offers a variety of changeable input modules for acquiring high-voltage, temperature, pressure, strain, digital input, and more at rates up to 800 KS/s synchronized with optional video and audio inputs.

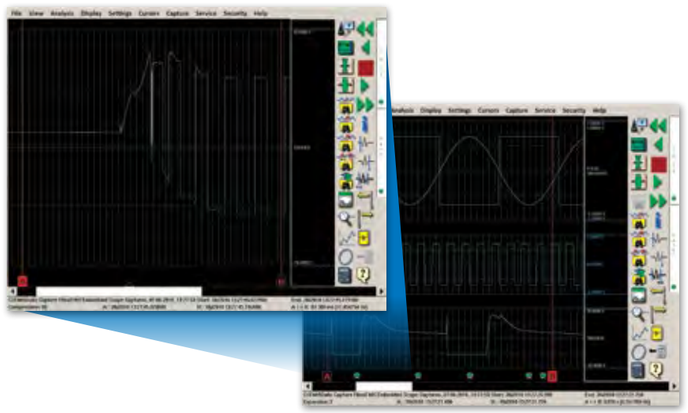
Built-in signal conditioning simplifies signal connections and eliminates the need for additional hardware. The optional CAN interface also allows you to display and record CAN data along with analog and digital signals.

TMX systems are available in multiple configurations and the number of channels can be increased up to 96 channels with the TMX-E expansion chassis.

With full featured software, TMX offers a wide array of advanced features. Setup is quick and effortless complete with icon and menu based software.

Features include:

- Advanced triggering capabilities to start and stop recording based on changes in your input signals. Use AND/OR operators to ensure that you trigger only on events needed
- Embedded scope mode with intelligent triggering allows for long term trending and simultaneous capture of high speed events. The 2 channel scope card also extends sampling rate to 50 MS/s for both channels
- Up to 4 independent sampling rates per channel to optimize file sizes by assigning higher sample rates to critical signals
- Circular data buffer allows you to set and record large amounts of pre-trigger data
- Advanced filtering options such as low pass, high pass, RMS, band pass and band stop filtering





Measure

The utility/DIO port provides an alarm output line that can be used to trigger an external process when user defined alarm conditions occur. With the DIOC-16 module, you can control up to 8 analog and 32 digital outputs.

Visualize

All TMX models come with a 17” touch display for viewing data. This allows data to be viewed as a scrolling chart or a variety of indicators such as analog gages, meters, bar graphs and digital readouts on a per-channel basis. Scope Mode allows you to view high speed data in a layout that is familiar to users of oscilloscopes.

Set your own alarms to provide a visual indicator when signals exceed user-specified limits and control digital and analog outputs based on alarms.

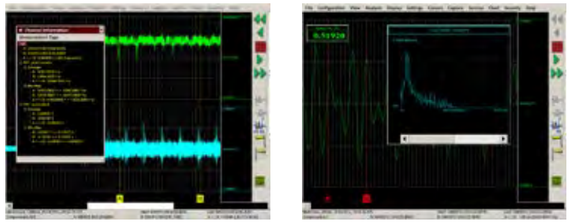
For data review, the TMX allows you to review or transfer previously acquired data without interrupting the current acquisition. Our QuickLook data compression technology allows you to scroll through GB of data in seconds.

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Analyze

The TMX platform provides powerful analysis capabilities that make it easy to analyze data anywhere.

Place cursors to automatically determine time between events and calculate average, Min/Max, RMS, Sum, Std. Deviation, and many other common statistics. You can also apply advanced filtering options or count user defined events.



Cursor measurements and an advanced analysis with FFT plot.

The derived channel feature minimizes the need for post processing by allowing for custom channel creation using advanced real-time math functions and built-in digital signal processing (DSP) technologies. These channels can be stored along with sensor data and are available for post-processing modification.

TMX makes transferring data easy through built-in Ethernet and USB 3.0. For sharing data with colleagues, each TMX includes free AstroView X software, which allows you to review and convert data into common formats.

With the TMX Offline software, you can also create setups, transfer files, review, and analyze data on your Windows® PC.

Store

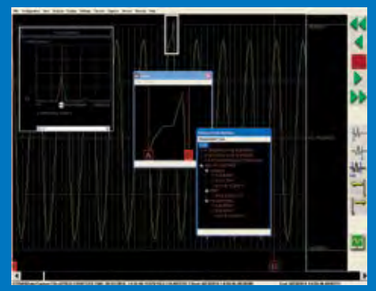
All TMX systems feature a dedicated 1 TByte removable drive (solid state optional) to record data. Removable drives provide enhanced security by allowing you to easily exchange drives for recording classified and non-classified data. Additional drives can be purchased for archiving data.

The optional AstroDock unit provides an easy way to connect TMX data drives to a Windows® PC.

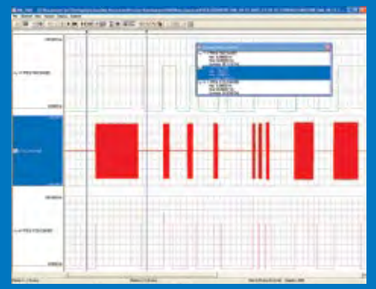




Easy touch screen navigation



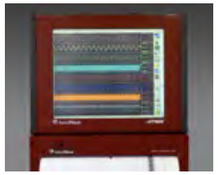
TMX Offline software



AstroView X

Print

Print screen captures of your data to a Windows®-compatible printer via USB 3.0. For applications requiring printed charts, AstroNova offers the Real-Chart Network Printer, RC-300, printing up to 32 channels on 16.3” wide format chart paper. The Real-Chart Network Printer prints annotations for permanent record.



The TMX with the Real-Chart Printer

Automate and Integrate

The TMX software supports Python® scripting for automating common tasks and increasing productivity. Available LabVIEW drivers make it easy to communicate with and control TMX systems for integrated test procedures and test cell applications.

Configure Your System

The TMX Portable Data Acquisition System is designed for on the go usage, containing 3 slots for TMX IO modules. The rugged packaging makes it ideal for testing in the field, production environments and labs.

The TMX-18 is a pre-configured TMX Portable Data Acquisition System with 3 UNIV-6 Universal Isolated Voltage Modules. TMX-18 allows you to measure 18 analog inputs, including voltage and DC bridges.

The TMX-R is a rack-mount version of the TMX with 6 slots for TMX I/O modules. The TMX-R installs easily in a standard 19” rack.

The TMX-E Expansion Box adds up to 3 additional I/O module slots to any TMX system for higher channel counts.



Shown left to right:
The TMX-18, TMX-R and TMX-E

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TMX® System Specifications

TMX Chassis	
Maximum Number of Modules	3 (TMX) or 6 with TMX-E 6 (TMX-R) or 9 with TMX-E
Event Inputs (TTL)	16
Color Display	
Type	Active matrix color LCD (TFT)
Viewing Area	13.3" H x 10.6" W Diagonal 17" (43.2 cm)
Resolution	1280px x 1024px
Touch	Full screen, resistive
Compliance / Environmental	
Operating Temp.	0°C to 40°C (32°F to 104°F)
Operating Humidity	10% to 90% non condensing
Storage Temp.	-20°C to 60°C (-4°F to 140°F)
Shock	MIL-STD-810F Method 516.5, Procedure I
Vibration	MIL-STD-810F Method 514.5, Procedure I
Safety	IEC 61010-1:2010 (3rd edition) IEC 61010-2-030:2010 EMC: IEC 61326-1 Ed. 2.0 (2012)

Physical	
Enclosure	Aluminum with armored end caps
Dimensions	14.5" H x 19" W x 7.5" D (36.8 cm x 48.3 cm x 19.1 cm) *without handle*
Weight	37 lbs. (16.78 kg) for TMX *including 3 modules*
Interface	
Ethernet	Gigabit Ethernet (10/100/1000 Base-T), RJ-45 connector
VGA	For displaying data on an external monitor
USB 3.0	For external peripherals and file export *4 ports per unit*
Expansion Port	For connection of optional TMX-E
System Power	
Input Voltage Range	102 to 264 VAC or 24 VDC at 11A
Frequency Range	47 Hz to 63 Hz
Power Consumption	300W



TMX® Input Module Specifications

UNIV-6 Universal Isolated Voltage Module With DC Bridge	
UNIV-6 General Specifications	
Channels (per module)	6
Maximum Sample Rate (per channel)	800 KS/s (400 KS/s with TMX-E)
Isolation	250 VRMS or DC, Cat II
UNIV-6 Isolated Single Ended Voltage Input	
Maximum Bandwidth	Up to 100 kHz
Input Type	Isolated, AC/DC coupled
Specified Ranges	200 mVFS to 800 VFS
UNIV-6 Isolated Differential Voltage Input/Bridge Measurements	
Maximum Bandwidth	50 kHz
Input Type	Differential, DC coupled
Specified Ranges	5 mVFS to 2 VFS
Excitation	Isolated up to 10 V at 30 mA
IHVM-6 Isolated High Voltage Module	
Channels (per module)	6
Maximum Sample Rate (per channel)	800 KS/s (400 KS/s with TMX-E)
Maximum Bandwidth	60 kHz
Input Type	Isolated Differential
Isolation	600 Vrms or 1000 VDC, Cat IV
IHVM-6B Isolated High Voltage Module, 10 MΩ Input Impedance	
Channels (per module)	6
Maximum Sample Rate (per channel)	800 KS/s (400 KS/s with TMX-E)
Maximum Bandwidth	50 kHz
Input Type	Isolated Differential
Isolation	600 Vrms or 1000 VDC, Cat IV
IBRM-6 Isolated Bridge Module	
Channels (per module)	6
Maximum Sample Rate (per channel)	800 KS/s (400 KS/s with TMX-E)
Maximum Bandwidth	70 kHz
Input Type	Isolated Differential
Isolation	250 Vrms or DC, Cat II
TEDS Capability	Yes

IEPE-6 Isolated Piezoelectric Sensor Module	
Channels (per module)	6
Maximum Sample Rate (per channel)	800 KS/s (400 KS/s with TMX-E)
Maximum Bandwidth	Up to 65 kHz
Input Type	Isolated with constant current
Isolation	250 Vrms or DC, Cat II
TEDS Capability	Yes
DIOC-16 Digital I/O, Analog Output, Counter And Relay Module	
Channels (per module)	16 (Counters or digital inputs)
Analog Outputs	4, up to ±10V, function & arbitrary waveform generation
Digital Outputs	16 (TTL)
Counters	Up to 16, 32 bit
Relay Outputs	2
NIDV-16 Non-Isolated Differential Voltage Module	
Channels (per module)	16
Maximum Sample Rate (per channel)	200 KS/s (100 KS/s with TMX-E)
Maximum Bandwidth	40 kHz
Input Type	Differential, non-isolated DC coupled
Maximum Rated Input	± 50 VDC (35 Vrms)
Specified Ranges	80 mVFS to 100 VFS
ITCU-12 Isolated Thermocouple Module	
Channels (per module)	12
Input Type	Type U miniature thermocouple with cold junction compensation (12 connectors)
Isolation	250 VRMS or DC, Cat II
Maximum Bandwidth	6 Hz update rate (TC sampled 3 Hz)
Thermocouple Types	J, K, E, T, N, B, R, S, C
IRTD-12 Isolated Prt Temperature/Resistance Module	
Channels (per module)	12
Isolation	150 Vrms or DC, Cat II
Input Types	Pt100(385), Pt100(3916), Pt100(3926), resistance 0 to 450Ω
TMX-SC Scope Module	
Channels (per module)	2
Maximum Bandwidth	25 MHz
Maximum Sample Rate	50 MS/s
Analog input resolution	12-bit
On-board memory storage	8 Mbyte per channel
Input Range	±40 mV to ±20 V

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Ordering Information

Part Number	Model	Description
Chassis		
42880030	TMX	TMX Data Acquisition System (Includes 3 module slots)
42880430	TMX-R	Rack-mount TMX Data Acquisition System (includes 6 module slots, fits standard 19" rack)
42885000	TMX-E	Expansion chassis (provides 3 additional module slots, requires TMX unit for operation)
Complete Systems		
42880530	TMX-18	18-Channel TMX Data Acquisition System (fully equipped with 3 UNIV-6 input modules)
Chart Printers		
407775300	Real-Chart RC-300R	Real-Chart Network Printer (Rack Mount)
407775310	Real-Chart RC-300B	Real-Chart Network Printer in Benchtop Enclosure
Input Modules		
32850000	UNIV-6	6-Channel Universal Module Voltage and DC Bridge
32850030	IHVM-6	6-Channel High Voltage Module
32850035	IHVM-6B	6-Channel High Voltage Module, 10 MΩ input impedance
32850040	IBRM-6	6-Channel Isolated DC Bridge Module with internal half-bridge completion
32850050	IEPE-6	6-Channel Isolated Piezoelectric Sensor Module (for ICP© type sensors)
32850060	DIOC-16	16-Channel Digital I/O, Analog Output, Counter and Relay Module
32850020	NIDV-16	16-Channel Non-isolated Differential Voltage Module (accepts up to 35 Vrms)
32850010	ITCU-12	12-Channel Isolated Thermocouple Module with Cold Junction Compensation in each input
32850070	IRTD-12	12-Channel RTD Module supports direct connections of Pt 100 RTD
Options		
41284004	DDX-SSD400	Solid-state drive option, 400GB for both system and capture drives
41284008	DDX-SSD800	Solid-state drive option, 800GB for both system and capture drives
42852500	TMX AstroDock®	PC Docking Station – use with TMX removable drives for data transfer
Advanced Options		
27300200	TMX-SC	TMX 50 MS/s 2-ch scope option
27300000	TMX-IR	IRIG Decoding Option supports IRIG A, B, E, G, NASA 36 time codes with GPS location and timing
14104110	TMX-TTLIRB	IRIG B TTL, provides IRIG B TTL time synchronization
14104300	TMX-CC	Compressed Capture for long-term recording with file size conservation while maintaining bandwidth
27300100	TMX-CB	CAN Bus interface to view and record CAN Bus data and other analog signals
42832500	AstroDock	PC Docking Station - use with TMX removable drives for data transfer. (drives and personal computer not included)
14104100	TMX-VA	Video/Audio Acquisition Upgrade provides 30 fps video and 44.1 kHz audio (camera not included)
26514001	TMX-M	Microphone/Headset for TMX-VA Audio Acquisition (requires TMX-VA option)
Software		
14004600	TMX-OS	TMX Offline Software (1 user)
14004601	TMX-OSSL	TMX Offline Software with Site License (5 users)
14180100	FDAS	FlexPro 9 Data Analysis Software (Standard Edition)
14180200	FDAS-PRO	FlexPro 9 Data Analysis Software (Professional Edition)
Cases		
HC-TMX	14710002	Hard Transport Case for TMX
SC-TMX	41047000	Soft Carry Case for TMX
Additional Drives		
26801570	TMX-SYS	Additional System Drive Enclosure (includes TMX Windows® 10 System in a removable cartridge)
26801350	TMX-DATA	Additional 1 TByte Data Capture Drive Enclosure (includes TMX data capture drive in a removable cartridge)
Service		
EW-TMX	Extended Warranty	Additional 12 months of warranty coverage

Leads, probes and adaptors are available upon request



Supported Throughout Your Equipment's Lifetime

Technical Support
Our worldwide Field Sales Engineer team is available to visit your facility for one-on-one consultation to review your specific application and recommend the correct set-up for your production needs.

Our dedicated Sales and Support Engineers are ready to answer any questions and provide 24/7 support through our intuitive paging system at our facility in the USA, ensuring a response around the clock. To help you get started, AstroNova includes easy-to-use quick start guides with each system. Onsite start-up assistance is also available upon request.

Repair
If needed, AstroNova is prepared to repair your equipment. Our return process makes repairs quick and simple. Upon arrival of your device, your feedback will be reviewed, device examined and a recommended course of action will be determined. During the repair process, a device can be loaned to keep you up and running.

Upgrade
AstroNova is continuously evolving. By innovating and enhancing devices, we allow you to do more and perform better. In doing so, we give you a chance to be a part of technology evolution and upgrade your equipment. Whether it is hardware or software, we will ensure your devices remain current to meet your ever-changing requirements.

Warranty
AstroNova Test & Measurement equipment is covered by a one-year warranty on all parts and labor. An extended warranty is also available for an additional fee.

Lease
Capital expense budget not available? We have you covered. AstroNova Test & Measurement collaborates with a leasing company allowing you to lease the devices you need to get started now. Get underway with a low down payment and reasonable monthly fee.

The TMX has been proven year after year as a steadfast and reliable system for critical applications around the world. Ideal for a variety of uses including maintenance and troubleshooting, R&D, Verification, and Validation, TMX is tested to MIL-STD-810F for ruggedness to withstand the abuse of field testing, production environments and lab work. TMX is highly valued and trusted by top companies who can rely on it for years of operation without failure.



"I could see almost any engineering testing lab using the TMX. It's super easy and extremely fast; it's very easy to get going, get your test running and get your data collected."

– Dane Jones,
Senior Laboratory Technician, Milwaukee School of Engineering

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AstroNova® Test & Measurement

Why Choose AstroNova Test & Measurement?

Innovative - AstroNova (formerly Astro-Med) has been developing innovative Test & Measurement products since 1969.

Easy-To-Use - Designed with the user in mind from firmware to software, our all-in-one data acquisition systems are easy to use, saving time and money.

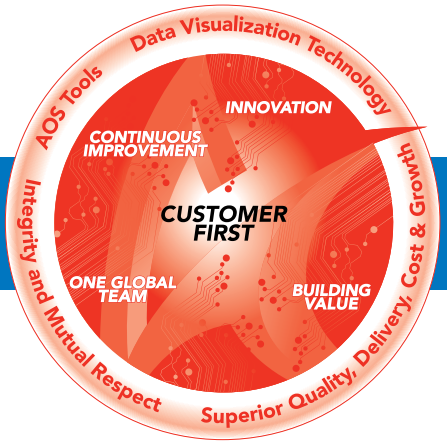
Reliability - Constructed for durability and portability, our products are rugged and ideal for mobile use over time.

Flexibility - Our systems support a wide variety of sensors. Universal input modules reduce the cost of testing by providing the flexibility to connect multiple sensor types to a single module.

Commitment - We value our customers and are committed to providing total satisfaction. Our technical support engineers are located at our facility in the USA and around the world with on-site training and startup assistance is available.

Collaboration - Our approach is partnering with our customers to understand their needs and propose solutions based on their unique challenges.

The AstroNova



Operating System

Other Data Acquisition Products Available from AstroNova



Real-Chart RC-300 provides high resolution, real time, wide format printed charts for up to 32 channels of data. Real-Chart works with TMX® or as a standalone network printer with digital data via ethernet.



Daxus® DX-100 is an ideal solution for distributed and rugged data acquisition with or without a PC. Multiple units can be stacked or networked for high channel count applications.



SmartCorder® DDX-100 is a compact and portable all-in-one data acquisition system with battery power. Ideal for field testing and troubleshooting.

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AstroNova is system certified to ISO9001.

TMB004 20180124

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Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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