

# DASH 8HF

## 8 CHANNEL HIGH FREQUENCY DATA RECORDER

- 2 MHz sample rate per channel directly to hard drive
- 200 kHz bandwidth for each channel
- Dedicated 250 GByte hard drive for capturing data
- Gbit Ethernet, USB 2.0 and DVD for exporting data to your PC
- Compact, portable design
- Link ports for synchronizing data capture between systems



**Astro-Med, Inc.**

TEST & MEASUREMENT PRODUCT GROUP

*Measurement has never been this easy*

# DASH 8HF

## High Speed Data Recorder

*Easy to work with...Hard to work without!*

THE DASH 8HF IS A POWERFUL AND PORTABLE DATA ACQUISITION RECORDER ENGINEERED SPECIFICALLY FOR CAPTURING HIGH FREQUENCY DATA AND TRANSIENT SIGNALS.

This versatile system provides eight isolated analog inputs and eight event inputs streaming directly to a dedicated 250 GByte hard drive. Data is sampled at user selectable rates up to 2 MHz with a bandwidth of 200 kHz per channel.

#### INTELLIGENT, VERSATILE DATA CAPTURE

The Dash 8HF has a 250 GByte hard drive dedicated exclusively for capturing data. Sample rates can be varied from 2 MHz per channel to 100 Hz per channel, optimizing hard drive usage. The Dash 8HF is the first system of its kind that lets you capture trend data at slower sample rates while embedding higher sample rate scope captures at the same time!

#### POWERFUL INPUTS AND FILTERING

Unlike other data acquisition systems, the Dash 8HF has a true continuous sample rate of 2 MHz per channel to hard drive. No special conditions are required to attain this sample rate!

A 200 kHz bandwidth per channel lets you see critical high frequency and transient data, while dedicated 16-bit A/D converters for each channel gives you precise, high resolution data with no multiplexing.

#### GO ANYWHERE SYSTEM

The Dash 8HF is a compact, portable system designed to go anywhere your testing sends you. It's tough, metal case and small package lets you bring it on the production floor in a metal or paper mill, or out to a remote site.



#### HIGH SECURITY VERSION WITH REMOVABLE DRIVES

The Dash 8HF-HS is a high security version of the Dash 8HF, with removable system and data capture drives – perfect for aerospace and defense applications where securing classified data is critical.

#### PC CONNECTION

The Dash 8HF has integral GBit Ethernet, letting you quickly and easily export data to your PC for further analysis. An integral DVD+R drive makes it easier than ever to archive your data for later review.

#### TOUCH-SCREEN DISPLAY

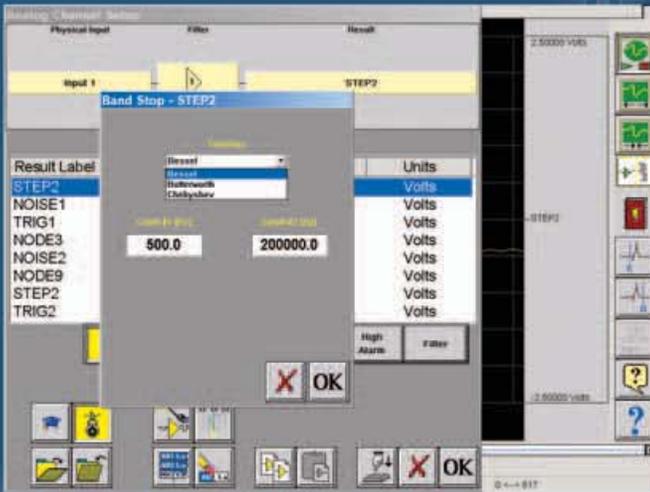
The Dash 8HF's large 15-inch display gives you a clear color display of all of your waveform data. The intuitive touch-screen interface means that you will spend less time setting the system up and more time gathering data.

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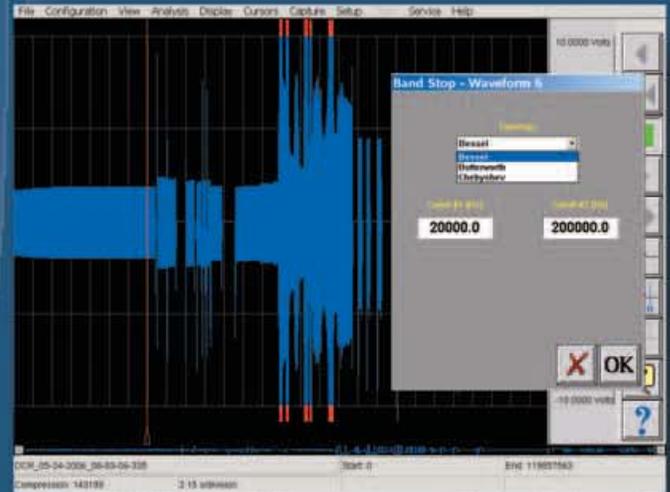
# Powerful, Functional and Easy to Operate!

## POWERFUL FILTERING

The Dash 8HF provides the most flexible data filtering options available. The raw unfiltered data is stored to the hard drive, allowing you the choice of pre or post data acquisition filtering. You can even filter real-time data while capturing raw data to the hard drive. The integrated filtering provides Bessel, Butterworth and Chebyshev filter topologies. With the Dash 8HF you can view, record and analyze only the data you want!



Choose from hundreds of different filter combinations!



Custom filtering lets you see only the data that you want.

## Functional and Versatile FEATURES!

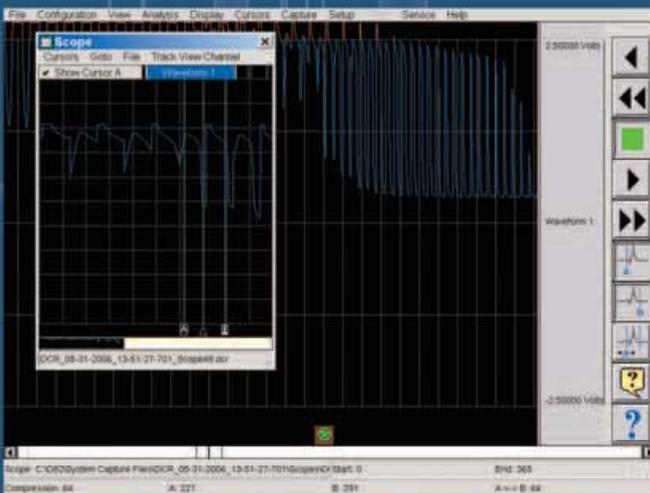
### TREND RECORDING

High frequency scope captures can be embedded in standard data captures, allowing you to see detailed transients and trend data in the same record.

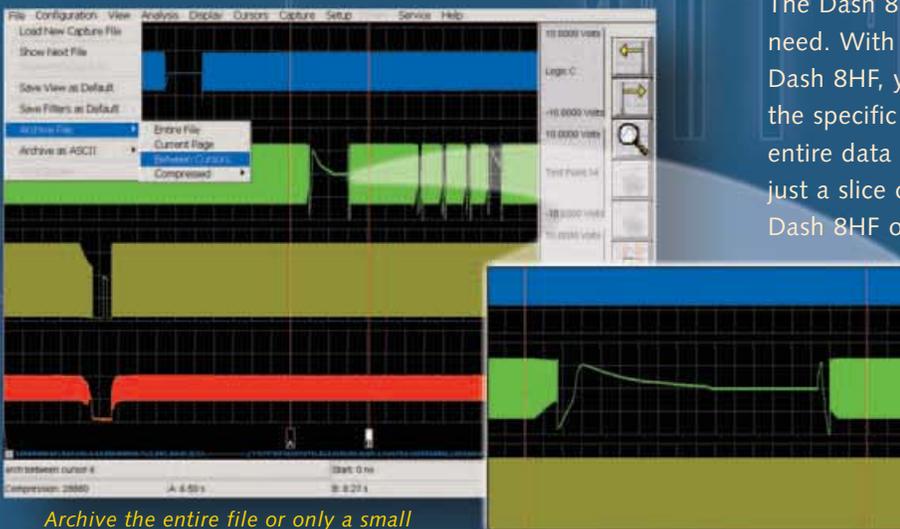
### EASY DATA EXTRACTION

With a dedicated 250 GByte hard drive for data capture, the Dash 8HF allows you to record more data than you have before!

The Dash 8HF allows you to export only the data that you need. With the versatile data handling features of the Dash 8HF, you can export much smaller files that contain the specific information you need. You can archive an entire data capture file, a particular screen of interest or just a slice of your data. The data can be kept on the Dash 8HF or saved to the DVD drive, optional USB flash and hard drives, or even a network drive.



Scope captures with cursor measurements give you immediate information about your data.



Zoom windows let you see incredible waveform detail.

# Data Review and Analysis at your fingertips!

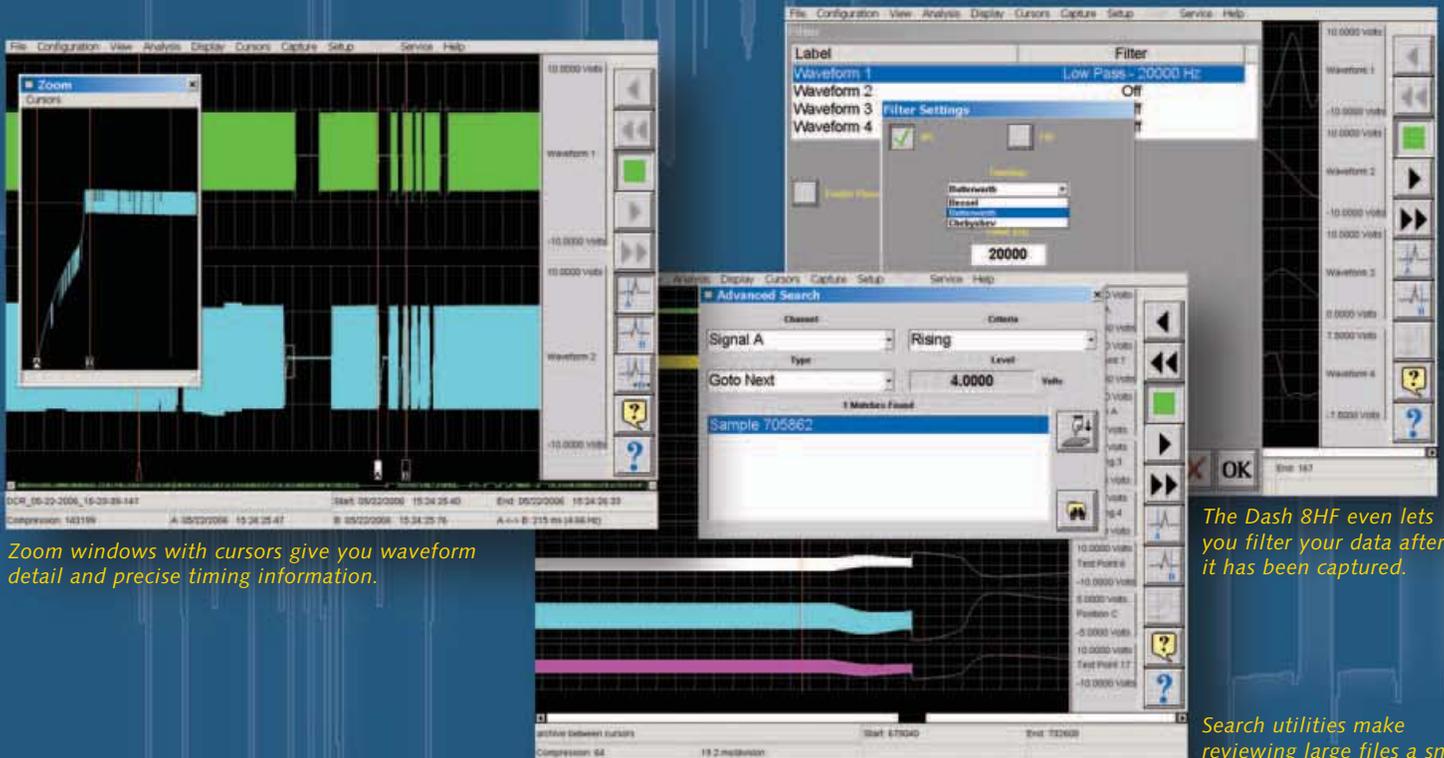
## DATA REVIEW

The Dash 8HF gives you complete control of viewing & analyzing your data with its simple touch-screen interface. From changing settings to making data measurements, it's as easy as touching the screen.

## SCROLL, SEARCH AND ZOOM

Once your high speed data has been captured, the Dash 8HF makes it easier than ever to review large amounts of data. View an entire capture on one screen, or use the Dash 8HF's scroll function to move back and forth through your data. You can also use the Advanced Search feature that lets you to go right to events of interest. Searches can be performed on all channels, and can be based on rising or falling levels on any channel.

When you see data of interest, you can select a zoom window for close up review, and use on-screen cursors to give you precise measurements. Use the post data capture filters to view your signals without any unwanted noise.



Zoom windows with cursors give you waveform detail and precise timing information.

The Dash 8HF even lets you filter your data after it has been captured.

Search utilities make reviewing large files a snap!

## DATA ANALYSIS

The Dash 8HF review capability includes both FFT and XY plot functions, giving you access to your data in the frequency domain and spectral plotting among up to three channels.



# State-of-the-Art System for your High-Speed Data Applications!

## INNOVATIVE ARCHITECTURE ASSURES PRECISE DATA FOR YOUR HIGH SPEED APPLICATIONS

The Astro-Med, Inc. Test and Measurement Product Group has always been on the leading edge when providing solutions for your data acquisition needs.

The Dash 8HF was developed specifically for applications requiring wide bandwidth (200 kHz per channel) and high sample rates (2 MHz per channel). A wide range of frequencies can be recorded with the highest resolution.

Whether monitoring the switching frequencies of a power supply or recording high speed explosive testing, the Dash 8HF captures everything.

## Accessories for your Dash 8HF



### AVAILABLE ACCESSORIES

Astro-Med, Inc. offers many accessories to compliment your Dash 8HF.

- Thermal array chart recorder for strip chart printouts
- Current clamps and flexible probes (0-3000A)
- Voltage leads and patch cables
- Current loop adaptors and shunts
- Soft and hard shell carry cases
- AND MORE!!!

*Please consult Astro-Med for more information on available accessories.*

# Taking your Data Offline has Never been easier!

## DATA EXPORT

The Dash 8HF offers a number of ways to archive and export captured data. Data can be exported in our packed binary format – minimizing file size – or a generic ASCII format, which is compatible with most analysis packages.

The built-in DVD drive provides archiving to CD or DVD. For applications requiring transportable media, the Dash 8HF provides two USB 2.0 ports that open up a world of possibilities. Connect an external hard drive or USB Flash Drive, and archive GBytes of data at once. You can also connect a USB 2.0 Windows printer for printing screen shots from the Dash 8HF.

The Dash 8HF has integral 10/100BaseT and 1000BaseT Ethernet ports to make exporting data to your PC as easy as ever. Simply connect your Dash 8HF to a network and upload only the data of interest.

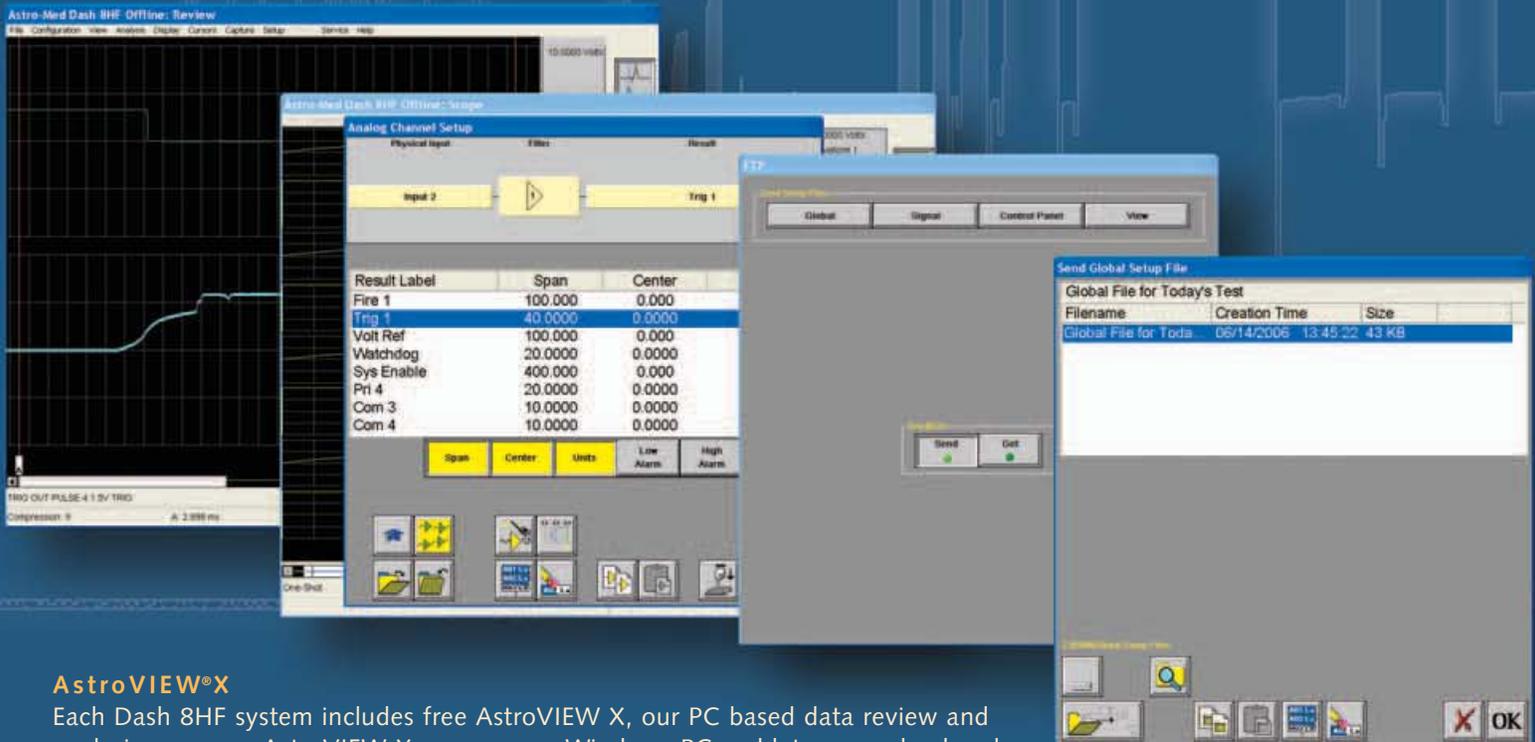


Integral 10/100/1000BaseT for exporting data.

Internal DVD drive for data archive.

## DASH 8HF OFFLINE

The Dash 8HF Offline software emulates the Dash 8HF system software on your own PC. For complete offline setup of the Dash 8HF, optional Dash 8HF Offline software runs on any PC running Windows 2000 or XP. It lets you quickly and easily set up your Dash 8HF on your PC, and transfer the setup file to the system via Ethernet, USB Flash Card or DVD drive.



## AstroVIEW®X

Each Dash 8HF system includes free AstroVIEW X, our PC based data review and analysis program. AstroVIEW X runs on any Windows PC and lets you upload and review data captured with your Dash 8HF. AstroVIEW X has built-in analysis and easily converts data into ASCII, Excel™, MathCAD™, DADiSP™ and other popular formats.

# S P E C I F I C A T I O N S

## Color Display

Type	Active matrix color LCD (TFT)
Viewing Area	15.0 inch (diagonal)
Resolution	1024 x 768
Touch	Full screen, resistive

## A/D Modules

Maximum Waveforms	8
Event inputs	8
User Engineering Units Calibration	yes
	Semi-automated to external reference
Pre and Post-capture Filter	Advanced lowpass, highpass, band pass and bandstop filtering
A/D	16 bit SAR per channel

## Isolated Input Module

Connector	Guarded banana jack
Bandwidth	200 KHz
Maximum Rated Input	+/- 250 Vrms
Maximum Transient Input	+/- 800 V
Isolation	250 Vrms, channel to channel, channel to chassis
Specified Ranges	100 mVFS to 800 VFS (0V offset for 800 VFS range)
Attenuator Ranges	1, 10, 50, 200 and 400 Volt
Anti-Aliasing Filter	200 kHz 4 pole Bessel
Accuracy (25°C)	+/- 0.07% of attenuator
Intrinsic Noise (pk-pk)	<0.2% of attenuator
Minimum Input Impedance	1 Megohm
Frequency Counter	Yes, on channels 1 & 5
Frequency Accuracy	+/- 0.005% of measurement

## Recording

Operational Modes	Scope, Review, Real-time (strip-chart)
Recording Method	Internal 250 GByte disk drive, optionally removable (HS version)
Maximum Sample Rate	2,000,000 samples/second per channel (2 MHz per channel)
Minimum Sample Rate	100 samples/second per channel (100 Hz per channel)
Total Capacity	Over 100 billion samples
Maximum Record Data Stored	Up to the drive capacity (250 GByte) Raw (unfiltered) data is saved to the drive when the data capture filters are disabled

Time Stamp	Time and Date automatically saved with data
Header	Information on units, range, sample rates, etc, saved with data
Data Filtering	Post capture filtering changes can be made in Review Mode
Events	Stored with data
Trigger Point	Amount of pre and post trigger data is user adjustable (0-100%)
Auto Re-Arm	Automatic stacking of captures

## Interface

Ethernet	10/100/1000BaseT
DVD	Supports archive of data to CD-R, CD-RW, DVD-R, DVD+R & DVD+RW
VGA	For displaying data on external monitor
Link Ports	For synchronizing data capture for multiple systems
USB 2.0	For connecting external hard drives, Flash Drives, etc.
Recorder	For interfacing to optional strip chart recorder

## Power

Input Voltage Range	102 to 264 VAC
Frequency Range	47 Hz to 63 Hz
Power Factor	0.99

## Physical

Enclosure	Aluminum, with armored endcaps
Dimensions	12.1" H x 16.0" W x 6.6" D (not including handle)
Weight	22.5 lbs.

## Environmental

Operating Temperature	5 to 40°C (40 to 105°F)
Operating Humidity	10% to 90% non condensing

## Compliance

Safety	EN 61010-1:2001, UL 61010A-1, CSA C22.2 No. 1010.1-92
EMC	FCC Part 15, Subpart B, Class A, EN 61326
Power Harmonics	IEC1000-3-2

## OTHER EXCITING PRODUCTS AVAILABLE FROM ASTRO-MED



**Dash 18X:** Features 18 channels of universal inputs, data acquisition to internal hard drive at 100 kHz sample rate per channel.



**Dash 8Xe:** Features 8 channels of modular inputs, data acquisition to internal hard drive at 200 kHz sample rate per channel.



**Dash 8XPM:** Features the capabilities of a three phase power monitor and high end data acquisition recorder in one useful tool!

**AM** <sup>®</sup> **Astro-Med, Inc**  
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