# DATAMAX II

## Instrumentation Recorder

# Specifications

### System

| | |
|---|---|
| Operating System : | Windows 2000 |
| CPU : | Pentium III 3 GHz |
| Data Storage Drive : | 67 GBytes[1] |
| Disk Array Option : | 67, 140, 280, or 420 GBytes[1] |
| Program Capacity : | 4 GByte[1] |
| Data Archive : | DVD Multi-Drive |
| Monitor : | Internal or External (consult factory) |
| Record Time : | Up to 3,800 Hours (consult factory) |
| Max. Data Rate : | 4.8 MSamples/sec (DTX-3P)<br>8.0 MSamples/sec (all others) |
| Input Power : | Portable: 90-240 VAC<br>Rackmount: 110/220 VAC Switchable |
| File Conversion : | ASCII, Binary, DADiSP, MATLAB, SDRC-IDEAS (ATI) |
| Signal to Noise Ratio : | >90 dB[2] |
| Absolute Accuracy : | 0.05%[2] |
| Linearity : | 0.03% |
| Input CMMR : | > 90 dB(typ) at 60 Hz |
| Crosstalk : | < 84 dB |
| Phase Match : | ±0.5 degrees |
| Ethernet Connection : | 100 Mb/sec |

### Analog Input

| | |
|---|---|
| Number of Channels : | 8 to 48, Portable Configuration<br>8 to 120, Rackmount Configuration |
| Type : | Differential BNC |
| Impedance : | 1 MΩ, 40 pF(typ) |
| Common Mode Rejection : | 90 dB(typ) at 60 Hz |
| Common Mode Voltage : | ±40V |
| Input Protection : | ±250V |
| Interface : | BNC Cable |

### Anti Alias Filters

| | |
|---|---|
| Type : | Linear Phase Delay, Programmable |
| Cutoff Frequency $f_c$ : | Selectable from 40 Hz to 90 kHz |
| Rolloff : | -180 dB/Octave |
| Stopband Rejection : | -96 dB at 1.25 $f_c$ |
| Passband : | Flat DC to 0.9 $f_c$ |
| Passband Ripple : | 0.01 dB (DC to 40 kHz) |

### Amplifier

| | |
|---|---|
| Input Voltage Range : | ±1V, ±4V, ±10V, ±40V |
| Control : | Software Selectable |
| Frequency Response : | Flat to 90 kHz |
| S/N Ratio : | >90 dB[2] |
| Crosstalk : | <84 dB (DC to 40 kHz) |
| Phase Diff Between Channels : | ±0.5 Degree (DC to 40 kHz) |
| Temperature Coefficient : | 50 ppm/ °C (75ppm with ICP®) |
| Zero Offset Drift : | 120 µV/ °C (150µV with ICP) |

### A/D

| | |
|---|---|
| Resolution : | 16 Bit |
| Conversion Rate : | 100 to 200,000 samples/sec |
| Over-Sample : | 2.5x, 5x, 10x |
| Dynamic Range : | 96 dB |
| Sampling : | Simultaneous |
| Linearity : | 0.03% |

### Multi-Recorder Sync [3]

| | |
|---|---|
| Maximum Number of Channels : | 1680 |
| Interrecorder Time Sync : | ±40nsec |
| Interrecorder Phase Match : | ±0.5 degrees (40 kHz bandwidth) |
| Fiber Optic Link : | 300 nm HCS |

### ICP Input [3]

| | |
|---|---|
| Compliance Voltage : | 28V |
| Coupling : | AC (0.2 Hz passband) |
| ICP High Current : | 10 mA(typ) |
| ICP Low Current : | 4 mA(typ) |

### Environmental

| | |
|---|---|
| Operating Temperature Range : | 0 to 50 °C (Portable configuration) |
| : | 10 to 40 °C (Rackmount config.) |
| Storage Temperature Range : | -20 to 70 °C (Portable config.) |
| : | -15 to 65 °C (Rackmount config.) |
| Operating Shock Range : | 15G at 11ms, ½ Sine |
| Non-Operating Shock Range : | 30G at 11 ms, ½ Sine |

### Physical

| | | |
|---|---|---|
| **DTX-15R**: | Dimensions : | 19" x 10.5" x 18" (WxHxD) (6U) |
| | Weight : | 58 lbs(typ) |
| **DTX-9R**: | Dimensions : | 19" x 7.0" x 18.8" (WxHxD) (4U) |
| | Weight : | 43 lbs(typ) |
| **DTX-6P**: | Dimensions : | 14.5" x 8.4" x 20.4" (WxHxD) |
| | Weight : | 28 lbs(typ) |
| **DTX-3P**: | Dimensions : | 15.8" x 10.18" x 6.72" (WxHxD) |
| | Weight : | 19 lbs(typ) |

### Optional Accessories

Remote Gated Acquisition Control (TTL)
Analog Output
Simultaneous Video Capture
Tape Backup Drives
Transportation Case
IRIG Time Code Card
DC or Redundant Power Supplies
External Calibration Input
Digital Output Card

[1] Larger capacities available, please consult factory
[2] ±10V scale, 40kHz bandwidth at ambient (20-25°C)
[3] Optional accessory

DATAMAX II Data Acquisition System





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