

# BUYER'S **guide**

## Portable Data Gathering Devices



With extremely competitive pricing, robust features, and a strong curriculum base, there is no excuse for middle and high school science classrooms to be without at least one portable datalogger.

A critical part of a complete probe-aware system, portable dataloggers are capable of taking science out of the classroom and into the environment. Most can perform double duty by directly connecting to your classroom computers and serving as probe interfaces. All of the dataloggers in our buyer's guide will work with dozens of probes and sensors provided by the manufacturer; many will also accept probes from competitors.

To be included, the datalogger must be truly portable and capable of stand-alone operation. Most of the companies listed here also make probe and sensor interfaces that require another device (graphing calculator, Palm or PocketPC, or laptop computer) to function. Although not included in our survey, these "stripped down" devices can be very cost effective if your school already has invested in portable computing equipment.

Although not a requirement, most of these dataloggers either incorporate graphing calculator features or will connect to advanced calculator models for in-the-field charting and analysis.

With prices for even the most advanced systems less than \$350, it's time to sample the offerings and probe the budget for the datalogger that's right for your classroom.

Company	Casio	CMA Science
Product	Multi-Data Collector EA200 	ULab 
Input	4 analog, 3 built-in (temperature, light, voltage)	4 analog bt, 2 digital
Onboard RAM	256 K (120,000 data points)	512 K (250,000 data points)
Output	7 serial connections to Casio Graphing calculators	LCD Screen with real time graphing
Computer Connection	None (under development)	USB, Serial
OS Supported	N/A	Windows
Power	4 AA batteries/AC	Rechargeable battery/AC
Sampling	12-bit, 50 kHz	12-bit, 100 kHz, onboard clock
Size	Not available at press time	189 × 105 × 50 mm, weight 420 g
Software	N/A	Coach for Students
URL	<a href="http://www.casio.com">http://www.casio.com</a>	<a href="http://www.cma.science.uva.nl">http://www.cma.science.uva.nl</a>
Suggested Price	\$299	\$336
Notes	Built-in microphone and speaker	

DataHarvest	Fourier Systems	Pasco	Vernier
<b>EasySense Advanced</b>	<b>MultiLogPro</b>	<b>Xplorer GLX</b>	<b>LabPro</b>
			
6 (analog/digital)	8 analog, 2 digital	4 universal, 4 built-in	4 analog, 2 digital
128 K (~50,000 data points)	256 K (104,000 data points)	10 MB (millions of data points)	24 K (12,000 data points)
6 digital, text LCD	LCD screen with real time graphing	LCD screen with real time graphing	1 channel
Serial, USB optional	Serial, USB optional	USB	USB, Serial
Windows or Macintosh versions available	Win/Mac	Win/Mac	Win/Mac
Rechargeable battery/AC	Rechargeable battery/AC	Rechargeable battery/AC	4 AA batteries, AC
12-bit, onboard clock	12-bit, 20.8 kHz, onboard clock	12-bit, 50 kHz, onboard clock	12-bit, 50 kHz
7 × 4 × 1.5 inches, weight 400 g	185 × 100 × 32 mm, weight 450 g	230 × 110 × 50 mm, weight 532 g	214 × 84 × 31 mm, weight 280 g (w/o batteries)
Sensing Science Laboratory	MultiLab	DataStudio Lite	Optional
<a href="http://www.dataharvest.com">http://www.dataharvest.com</a>	<a href="http://www.fourier-sys.com">http://www.fourier-sys.com</a>	<a href="http://www.pasco.com">http://www.pasco.com</a>	<a href="http://www.vernier.com">http://www.vernier.com</a>
\$349	\$199	\$299	\$220
	Connects to TI graphing calculators	Built-in audio, graphing calculator, optional IUSB mouse and keyboard, direct HP printing	Graphlink for connecting to TI graphics calculators and Palm OS devices