Electrophysics

Getting up to speed with

Photonics

January 2006 Issue

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A NOTE FROM THE EDITOR

The March of Increasing Value

Over the past 20 years I have seen a profound change in the infrared camera industry as our market has matured. Today customers have more choices than ever, product cycles are shorter, prices are falling and product quality is fantastic. Today Electrophysics is launching our latest high-performance thermal imaging system, Silver. With each new generation of product the resolution is improved, the speed of cameras increases, the power of data acquisition grows by an order of magnitude and the power of post analysis software is built upon the last generation.

While news of lower price, medium performance, uncooled detector-based systems captures most of the headlines, the cost of ultra high-performance cameras are now within reach of most engineering departments. We encourage you to contact Electrophysics for a no obligation demonstration to see, first hand, the power of Silver.

Introducing the NEW Silver 420M

The Silver incorporates an ultra-sensitive, 320x256 InSb focal plane array that delivers sensitivity better than 20mK, while keeping an extraordinary dynamic range and high linearity across the 3 to 5µm mid-wave spectral range.

The Silver features a 25mm motorized focus and optional extenders for application-specific field of view requirements. The Silver also features factory and user-performed calibration software routines that provide fully-radiometric IR imagery at any selected integration setting between 10µs and 10ms.

FEATURES	BENEFITS
High QE cooled detector	High sensitivity
Snapshot mode integration	The ability to do "stop action" analysis
Variable integration setting	Adjust temperature dynamic range
Integrated primary optic	Remote focus and sealed body design
Optional lens extenders	Change field of view and focus range to suite applications
Optional filter wheel	Customize spectral response or temperature range
USB 2.0 digital output	No frame grabbers are required
Compact one-piece design	Plug-and-play ease of use
Smart Trigger	Time data acquisition to events

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Focus on Software

ALTAIR™ – Powerful Thermal Analysis Workstation

Record images in real-time (up to 100 frame per second) to generic PC hardware.

1. Control detector integration time, frame rate and filter wheel remotely
2. Perform complex analysis in real-time or during sequence playback
3. Radiometrically calibrate camera in the field
4. Smart Trigger
5. Integrated Planck calculator
6. Capture sequences with stepped integration time settings for extreme dynamic range experiments
7. Export sequences in standard video codecs for sharing and presentations

In order to exploit all the horsepower today's thermal imaging system deliver, rely on equally powerful software solutions to control the camera, collect real-time data and analyze your experiments.

Based on low-cost, PC-based hardware, ALTAIR™ delivers workstation power on your laptop.

WANT TO CREATE YOUR OWN SOFTWARE?

Electrophysics library of drivers is available to support your development. Available for Silver, Jade, Emerald and PV-320, we offer a range of drivers including C++, LabView™ and Visual Basic.

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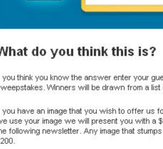
Electrophysics In The News

The Dugway Proving Ground, operated by the United States Army Test Command (TECOM), recently selected the Electrophysics Jade VLWIR for its chemical and biological weapons defense-testing center. The Jade camera will be used to analyze the spectral signatures of gas clouds and other airborne agents, ultimately providing US Government and Military personnel the ability detect and respond to a chemical or biological attack.



The Jade VLWIR will significantly improve Dugway's testing abilities due to the camera's MCT focal plane array's high quantum efficiency across the extended spectral response from 7.7µm to 11.0 µm. The Jade VLWIR incorporates state-of-the-art 14-bit digital electronics and can operate at frame rates up to 240 frames per second in full frame mode and 6000 frames per second in sub-windowing mode. The Jade systems are schedule replace Dugway's older mechanical scan based systems within the next year or two.

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What do you think this is?

If you think you know the answer enter your guess and you will be automatically entered into our Video IPOD sweepstakes. Winners will be drawn from a list of all entrants with the correct answer.

If you have an image that you wish to offer us for future "Guess the Image" contests please email those to us and if we use your image we will present you with a $50 iTunes gift receipt and acknowledgement of your submission in the following newsletter. Any image that stumps everyone will earn the submitter an iTunes gift card in the amount of $200.

Good Luck!

Guess now!

iPod® is a registered trademark of Apple Computer, Inc.

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Mark Your Calendar

Photonics WEST

JANUARY 21-26, 2006
SAN JOSE CONVENTION CENTER San Jose, California, USA

Electrophysics (Booth 1439) will be unveiling the Silver line of high-performance cameras at Photonics West, the World's Largest Optics and Photonics Technology Event.

Electrophysics offers the widest spectral response range of high QE cameras with solutions from 1 micron to 12 microns incorporating advance InSb and MCT focal plane array detectors.

We look forward to seeing you at the show.

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Other Links

Contact Us • See Us At Our Next Trade Show • Become a Dealer

Electrophysics Scientific Imaging Product Line

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