



## News Release

### Imperx Introduces “Cool” Cameras for Low-Noise Applications

**BOCA RATON, FL - March 20, 2007** - Imperx, Inc. a leading provider of state-of-the-art digital cameras and frame grabbers, today announced its TEC family of cameras for applications requiring the lowest possible thermal noise. The cameras are equipped with thermo-electric cooling of the image sensor and provide a housing designed to maximize heat removal. Resolutions of 4-, 11-, and 16-Megapixel are available in standard housing 100mm on a side.

Many scientific and low light-level applications face challenges from thermal noise in the CCD sensor. Controlling this noise allows cameras to operate with long exposure times and provide greater pixel-by-pixel accuracy. Because thermal noise decreased by 3 dB for every 6C drop in temperature, the best way to control thermal noise is to cool the image sensor as much as possible.

The TEC series cameras use thermo-electric cooling elements attached to the sensor and are housed in a larger-than-average enclosure with integral heat-sink to help dissipate thermal energy efficiently. In addition, the housing encloses the sensor in a sealed chamber equipped with a fill/purge valve. This allows the sensor area to be filled with dry nitrogen to prevent condensation. Working with natural convection, the cameras are able to maintain the sensor from 5C to 10C below ambient, depending on the sensor used. Forced-air cooling can keep the sensor from 15C to 17C below ambient. The cameras are rated for operation at ambient temperatures between 0C and 50C.

As with other cameras from Imperx, the TEC series cameras are available in either monochrome or color configurations, offering 8-, 10-, or 12-bit pixel data under software configuration control. Electronic shutter control offers features such as pre-exposure and double exposure and speeds as fast as 1/12000 of a second to as long as 10 seconds. The shutters can be triggered under software control or use external trigger signals in addition to providing programmed exposure times. Automatic iris control is optionally available.

Users can also control the image output, resolution, frame rate, analog or digital sensor gain and offset, and image area-of-interest using an intuitive graphical user interface or simple ASCII commands. In addition, the cameras provide defective-pixel mapping and built-in gamma correction, also allowing users to define their own look-up tables (LUT).

Software support includes Windows and Linux drivers, development kits for C++ and Visual Basic, and support for a variety of instrument control packages, including LabView, MIL, Image Pro, Halcon, and Video Savant. Software tools for data acquisition and

display, camera configuration, and triggering waveform generation are built in. For command and data communications, the cameras are available with an RS-232 port and either a CameraLink® or a Gigabit Ethernet connection. The Ethernet connection allows network-controlled installations using the Internet Protocol (IP).

Price and Availability

Ordering information for the TEC camera family can be obtained by contacting [sales@imperx.com](mailto:sales@imperx.com).

### **About Imperx, Inc.**

Imperx, Inc. designs, develops and manufactures advanced imaging products used in the machine vision, medical, defense, surveillance and astronomy markets, and wherever there is a need to capture high-resolution digital color or black/white images for both still and full-rate motion processing. Imperx' manufacturing facilities are certified for ISO 9002 compliance.

For more information, visit the Imperx, Inc. website at [www.imperx.com](http://www.imperx.com).

CameraLink® is a registered trademark of the Automated Imaging Association, Ann Arbor, Mich.

### **Editorial Contact:**

James Liolin  
Lion Advertising  
550 Mamaroneck Avenue  
Harrison, NY 10528  
ph. 914-670-0138  
fax. 914-670-0596  
email: [jliolin@lionadv.com](mailto:jliolin@lionadv.com)

### **Company Contact:**

Petko Dinev, Ph.D.  
President, Chief Executive Officer  
Imperx, Inc.  
6421 Congress Avenue  
Suite 204  
Boca Raton, Fla. 33487 U.S.A.  
Toll free: 1-866-849-1662  
Phone: 1-561-989-0006  
Fax: 1-561-989-0045  
email: [info@imperx.com](mailto:info@imperx.com)  
URL: [www.imperx.com](http://www.imperx.com)