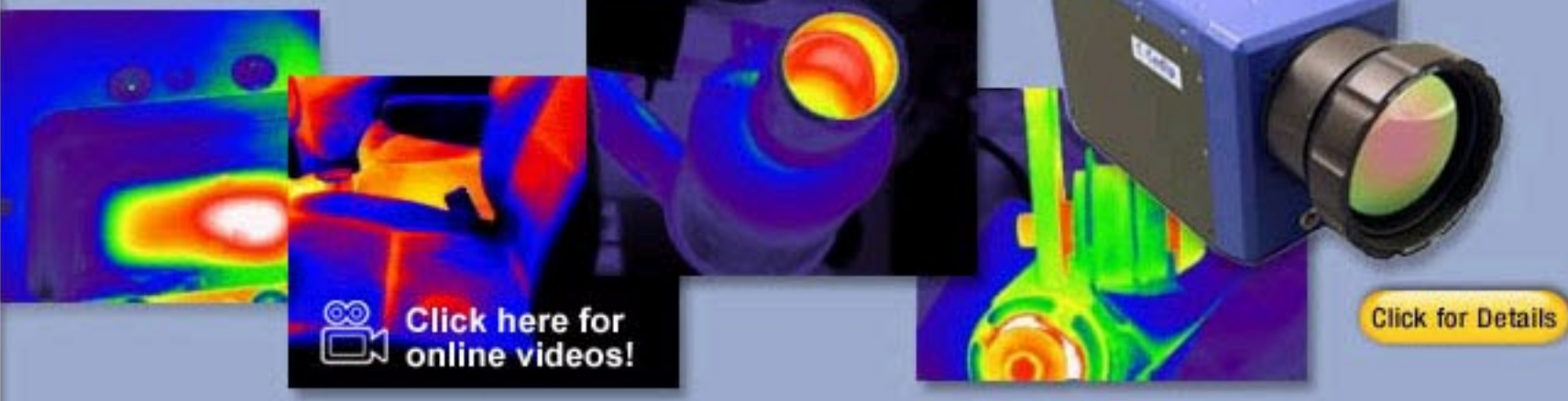


IR Imaging for Design, Testing and Manufacturing

Titanium 560M!



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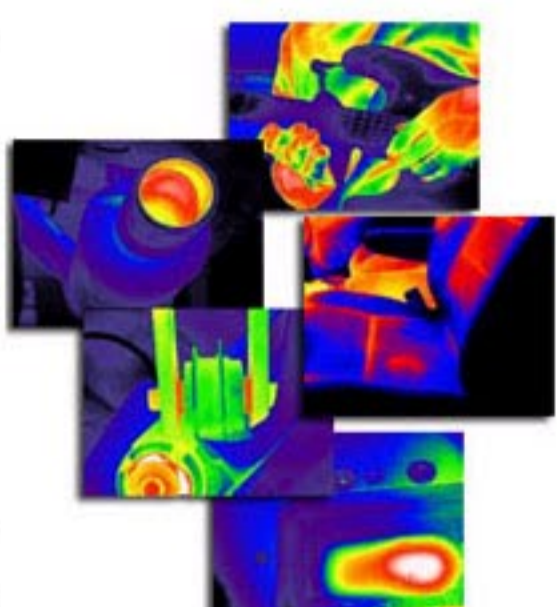
Thermal Imaging Applications

IR Imaging finds Numerous Uses for Design, Test and Manufacturing

Automotive Industry is a Microcosm for Significant Uses

Thermal imaging has become an extremely valuable technology in many industries not only as an R&D instrument but also as a test and predictive maintenance tool. Automotive manufacturing is an excellent example of an industry that has an enormously diverse selection of thermal imaging applications. According to Scotiabank's Global Auto Report 2007, 50 million autos are expected to be sold in 2007. In consideration of the large number of electronic and electromechanical components that are used in the production of each automobile, and the push toward improved reliability, it's understandable that infrared imaging plays such an important role in worldwide production of automobiles.

[Click here to see videos of these applications!](#)



Thermography has been proven to aid the auto manufacturing industry immensely when used in product R&D, quality assurance, and in the manufacturing process. The use of thermography is not new....

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FROM THE EDITOR

How's your ownership experience been like lately?

It seems to me that recently we've been inundated with marketing clichés about excellent "ownership experience" as one of many justifications for purchasing a company's product. "Ownership experience" used to be called Customer Satisfaction, and while many companies preach about that, it seems that only a few deliver on their promises. It's not because they're purposely misleading you, but rather their company's culture doesn't value it or measure it to the extent that motivates the people responsible for assuring it. Only by prioritizing customer satisfaction can an organization effectively deliver this promise.

Culture is the single most important element in creating the ownership experience and it's up to everyone, from the receptionist to the CEO, to embrace this culture when dealing with its current and future customers. Insist on quality first but make sure you know the culture of the organization you'll be investing your company's money in if you want to have a great "Ownership Experience".

PRODUCT FEATURE

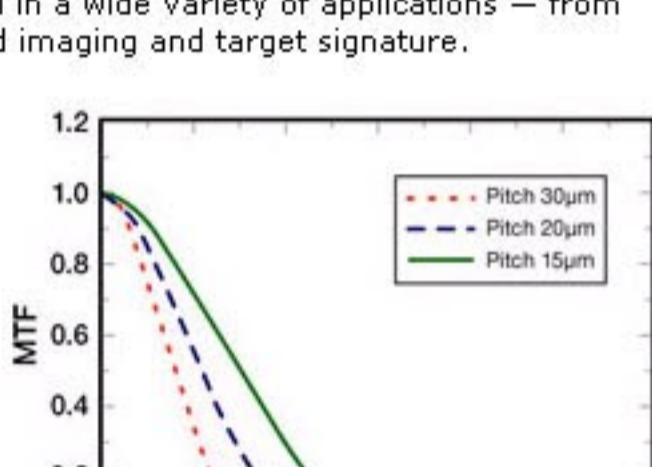


The Titanium 560 Delivers State-of-the-art Infrared Imaging Performance In a Highly Configurable Platform

- APPLICATIONS**
- R&D Thermography
 - Target Signature
 - Multi-spectral Analysis
 - Electronics Thermal Inspection

With the introduction of the Titanium 560 MWIR Camera, state-of-the-art thermal imaging performance can now be achieved in a camera platform that has the flexibility of both an open optical interface as well as the power of a high speed image acquisition interface. As such, the camera is ideal in a wide variety of applications — from infrared microscopy and electronics inspection, to high-speed infrared imaging and target signature.

At the heart of the Titanium 560 cameras is a state-of-the-art 640x512 large format Indium Antimonide (InSb) focal plane array. This InSb sensor delivers excellent sensitivity (20mK NETD typical) and resolution. In addition, because of its 15µm pixel pitch, the 560 camera exhibits magnification that is 40% higher than traditional 25µm pitch systems when compared with the same focal length objective lenses resulting in an IFOV that is 40% smaller.



Alternatively, because of the small pixel pitch, a camera can be configured with smaller, less expensive optics, yet perform better, extremely valuable for those applications that require very long focal length lenses, such as tracking. For infrared microscopy applications, the smaller pixel pitch can yield a 5µm image spot size (when using the available 3X lens).

The Titanium Family



The Titanium 560 Camera is a member of the entirely new Titanium family of cameras that include both mid-format and large format systems incorporating SW, MW and LWIR sensor technology. The Titanium IR systems are available with a broad range of detectors, including InSb, MCT (mercury cadmium telluride) and QWIP (quantum-well infrared photo detector) FPAs. These cameras achieve outstanding sensitivity (<18 mK) even at the highest frame rates in both the MWIR and LWIR bands. All cameras feature the same highly configurable platform as the 560 with the same universal optical interface and high speed image acquisition interface. The Titanium family offer the perfect solution for a camera that reliably delivers the highest sensitivity, accuracy, spatial resolution and speed at an affordable price.

TITANIUM CAMERA MODELS			
	BB	MW	LW
Mid Format	520BB 550BB	520M 550M	530L 590VL
Large Format	560BB	560M 580M	570L

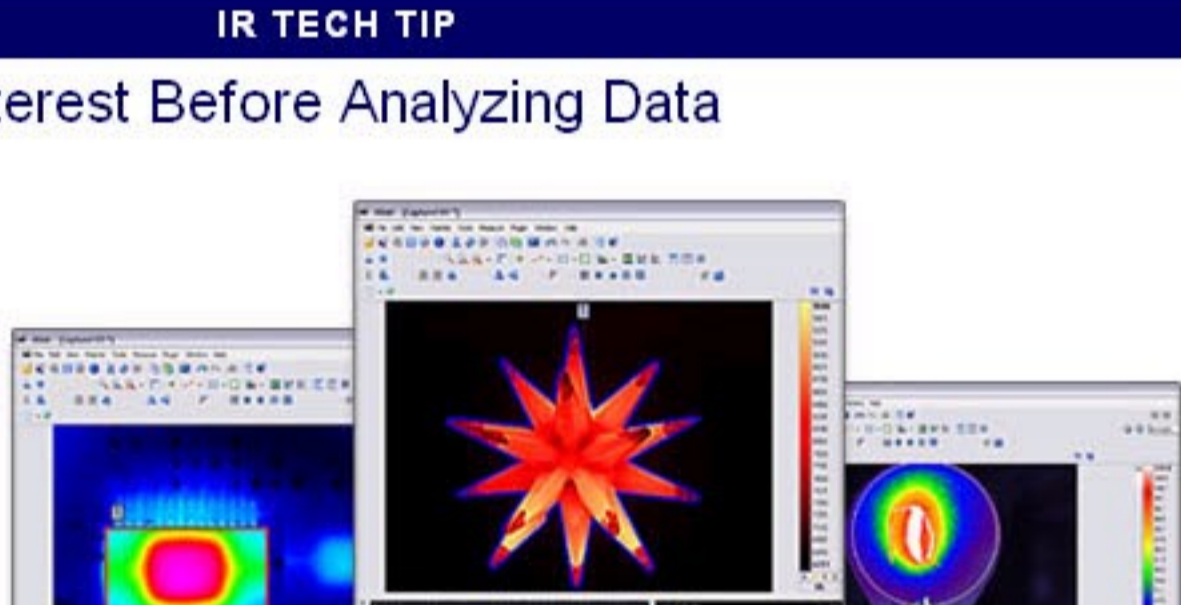
Camera Link™ is a registered trademark of the AIA.

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IR TECH TIP

Identify Region of Interest Before Analyzing Data

Infrared analysis software is commonly used to determine temperatures and profiles of objects under test. Temperature distributions including max/min/avg values, histograms and profiles are inevitably of particular interest. However, very often analyzing objects in an otherwise cluttered background can be problematic and result in skewed temperature distributions.



Label	Min (°C)	Max (°C)	Avg (°C)	Std Dev.	Area	Surface
1	29.5	36.5	35.5	2.1	1.00	0000

That's where Altair's Region of Interest (ROI) tool can be effective. With Altair, up to 25 separate ROIs can be added to both live and static images. Rectangular and elliptical ROI tools are quite useful for regularly-shaped objects. For arbitrarily-shaped objects, the polyline ROI tool permits virtually any shape to be identified for further analysis. In the spreadsheet-style data panel, Altair displays the maximum, minimum, average, and standard of deviation (along with other parameters) for the identified region of interest. In addition, many other features are available to the user for

analyzing the region of interest, including Timing Graphs, Area Zoom as well as Auto Gain Control.

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UPCOMING TRADE SHOWS AND EVENTS

August 26-30, 2007
San Diego Convention Center
San Diego, California

Come See Us!

Attend the San Diego conference and exhibition where optical engineering meets emerging technologies of nanotechnology and science, photonic devices and solar energy and their applications.

For more information and to register [click here.](#)

Come join us!



INFRARED FUNDAMENTALS FOR R&D AND TESTING

OCTOBER 1-4, 2007 FAIRFIELD, NEW JERSEY

This 4-day, 32-hour course provides an excellent opportunity to learn and explore all of the issues related to using infrared thermography for solving new and unique research, design, development and test applications. An extensive variety of topics will be covered.



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APPLICATIONS GALLERY

[Click here to visit our Gallery Page](#) to browse our video clips and still application images.



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