

Q&A

EVOLUTION® 5000 SERIES THERMAL IMAGING CAMERA

Q. How many thermal imaging cameras (TICs) does MSA offer?

A. MSA's Evolution 5000 Series TICs consists of four models: the Evolution 5200, Evolution 5200HD², Evolution 5600, and the newest addition to the product family, the Evolution 5800.

Q. Which Evolution 5000 Series TIC model is right for my application?

A. Choice is the basis for having a family of TICs, so that each fire department can select the TIC model that best meets both their application requirements and their budget. Each camera model serves its own niche in firefighting applications:

- **Evolution 5200 TIC** is primarily designed as a structural fire fighting tool offering the fire service a large 55 degree field of view. The E5200 provides excellent image quality in Low and High Sensitivity modes from a Vanadium Oxide microbolometer that utilizes a 160 x 120 focal plane array sensor.

- **Evolution 5200HD² TIC** is a multi-purpose firefighting tool designed for search and rescue as well as structural fire fighting applications. The 36 degree field of view makes objects appear larger and closer, improving the image definition. The E5200HD² provides superior image in Low and High Sense modes from the Vanadium Oxide microbolometer that utilizes a 320 x 240 focal plane array sensor. A 2X digital zoom for image enlargement is an available feature.

- **Evolution 5600 TIC** is a balanced firefighting tool designed to maximize applications requiring a wide range of deployment and versatility of use. The E5600 features a value-design, offering the fire service a 41 degrees Field of View

with good image quality in Low and High Sense modes from the Vanadium Oxide microbolometer that utilizes a 120 x 120 focal plane array sensor.

- **Evolution 5800 TIC** is MSA's latest addition to the Evolution 5000 Series of TICs and incorporates advanced design concepts while maintaining the simplicity of use. The E5800 is a highly functional firefighting tool that offers unparalleled versatility in a multitude of applications like Size-up, Fire attack, Search and Rescue, Hazmat, Ventilation and Overhaul. The camera's Vanadium Oxide microbolometer based sensor offers unparallel imagery from its 320 x 240 focal plane array sensor. The E5800 features Image Detail Enhancement (IDE) that improves camera imagery in low contrast scenes, allowing the firefighter to see more image detail. The E5800 also features five user-selectable palettes, allowing the firefighter to select the palette that best suites their camera application.

Q. In the Evolution 5800, what are user-selectable palettes, and when are they used?

A. We offer 5 different color display choices within this Evolution model, so that firefighters may choose the palette best suited to each use. Matching the palette with the application each time the Evolution 5800 TIC is used allows firefighters instant customization, and the benefits of seeing each scene in the best way.

- **White hot** is the standard structural firefighting mode, where the scene's hottest items appear white and the coldest items appear black, with different shades of gray representing the temperature gradients in between.

- **Black hot** reverses that camera's polarity, turning the scene's hottest items black and coldest items white. This palette is an excellent tool for search-and-rescue around bodies of water.

- **Fire and Ice** assigns a red isotherm to the hottest images that the camera is seeing in the scene. This palette is an excellent tool for search-and-rescue, enhancing the image of an individual in a scene automatically, without having to adjust the camera's set-point.

- **Fusion** is a full-color palette that assigns a color to different temperatures that the sensor sees in the scene. Enhanced image contrast allows for the different temperature gradients to be more easily seen by the user.

- **Rainbow** functions similarly to the Fusion selection. It is a full-color palette that assigns a different array of colors to the displayed image, enhancing the user's ability to see image detail.

Q. What makes the Evolution 5000 Series TICs different from competitive thermal imaging cameras?

A. All MSA thermal imaging cameras incorporate advanced, commercial-based VOx microbolometer-sensor technology that allows the camera to provide higher quality imagery. MSA cameras provide High Sense imagery longer than competitive military-based sensors maintaining higher-image performance in Low Sense mode of temperatures above 320 degrees F. Military-based sensors lose image detail, switching from High to Low Sensitivity modes as low as 175 degrees F. All MSA Evolution TICs offer an enhanced, patented ergonomic form that's easy for firefighters to use.

Q. What is the Evolution Series of TIC's instantaneous scene dynamic range (ISDR)?

A. Instantaneous Scene Dynamic Range is the combined value of a sensor's sensitivity (down to 1/1000° mK) and its temperature range (in degrees °C). It is the way to determine the number of temperature differences a sensor can see at any given instant. The ISDR in all MSA TICs is calculated in the High Sense mode or temperatures up to 320 degrees F and in the Low Sense mode or temperatures up to 1100 degrees F. The camera's total ISDR is the addition of the values calculated in the Low and High Sensitivity modes. The higher the ISDR value, the better the camera's ability image. All of MSA's Evolution TICs, which are designed with commercial-based sensors, offer the highest ISDR value of 4,750.

Q. How do I know which mode my MSA TIC is in?

A. All MSA TICs operate in the same fashion. When the camera is in the High Sense mode, the temperature gauge on the display of the camera is green. When the camera shifts from High Sense to Low Sense, the temperature gauge symbol changes from green to blue. In addition to the change in color, the temperature scale of the bar graph switches from a maximum of 300 degrees F in the High Sensitivity mode to 1050 degrees F and an "L" is displayed in the lower left of the camera's display.

Q. Do all models of Evolution 5000 Series camera have Heat Seeker and Quick Temp as standard features?

A. All Evolution 5000 series TICs under the new ordering system have Heat Seeker and Quick Temp as standard features. Historically, these two features have been optional and over 97% of all Evolution Series Camera have been ordered with the Heat Seeker and Quick Temp features. In an effort to simplify the ordering process, these two features are now standard on every Evolution 5000 Series TIC model.

Q. Customers used to order thermal imaging cameras on an Assemble-To-Order matrix. Is this still in effect?

A. No. All MSA thermal imaging cameras must now be ordered using the new part numbering system that has been established. Each model of camera has its own dedicated ordering part number. This part number is only for the camera and its respective instruction manual.

Also, 2 new kits contain the most popular components previously ordered.

DESCRIPTION	P/N
Fire Station Kit - consists of two (2) rechargeable Lithium-Ion Batteries, Single-Unit AC Charger, Retractable Lanyard, Carabiner, Instruction CD, and a hard plastic carrying case.	10096887
Fire Truck Kit - consists of two (2) rechargeable Lithium-Ion Batteries, Universal Truck Charger, Retractable Lanyard, Carabiner, and Instruction CD.	10096886

The permanent part number TIC ordering system has been implemented to facilitate the product ordering process. Only two part numbers need to be ordered to place the Evolution Series of TIC into service. The streamlining of the ordering process will also help order fulfillment rates, with products being shipped directly from inventory instead of being built on an ATO basis.

Q. Does the MSA TIC warranty vary from Evolution TIC model to TIC model?

A. MSA offers our standard industry-leading Thermal Imaging Camera warranty on all four of our models of Evolution 5000 Series Thermal Imaging Cameras. MSA offers a two-year warranty on every Infrared-sensing engine used in our cameras. All other components feature a standard one-year warranty. MSA does offer an extended warranty on all models of Evolution 5000 series cameras at an extra cost.



Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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