

**LEADER**<sup>®</sup>

● *Fighting for performance*




# **THERMAL IMAGING CAMERAS**

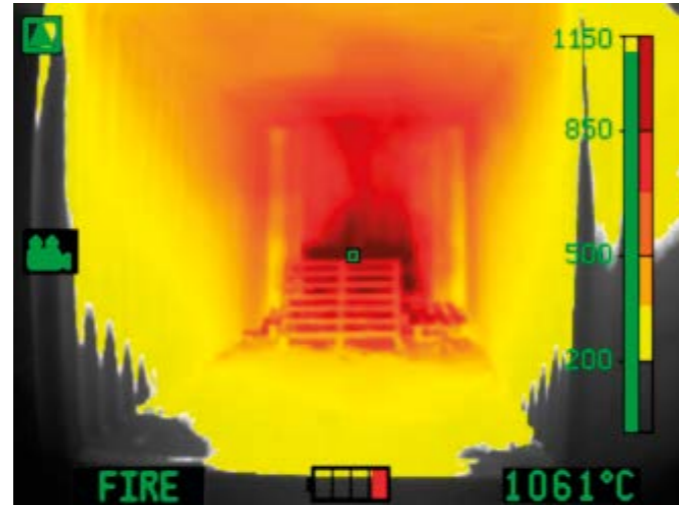
**RESPONSE EQUIPMENT**

OCT. 2022

**FIREFIGHTING CAMERAS | LONG RANGE CAMERAS**

**THERMAL IMAGING CAMERAS  
FOR FIRE**

P. 6 



**THERMAL IMAGING CAMERAS  
FOR SEARCH AND RESCUE**

P. 16 




**CONTENTS**

THERMAL IMAGING  
CAMERAS FOR  
FIRE RESPONSE,  
RESCUE OPERATION,  
SURVEILLANCE AND  
MONITORING

**OUR THERMAL IMAGING CAMERA TECHNOLOGY** P. 4 


**THERMAL CAMERAS FOR FIRE**

P. 6 

- Hand held TICs

P. 8


**THERMAL CAMERAS FOR SEARCH AND RESCUE**

P. 16 

- Hand held long range TICs

P. 18

**ABOUT LEADER COMPANY**

P. 26 

# LEADER THERMAL IMAGING CAMERA TECHNOLOGY

## HERITAGE THE MERGE OF EXPERTISE

Based in Austria, Active Photonics (now LEADER Photonics) started in 2000 developing and selling thermal imagers to Austrian market. In parallel of the hand held cameras range, the company was the one to develop innovative hands free system still active in main Austrian and German Fire Brigades.

The company is expert in the Infra-Red domain applied to fire and rescue.

## OUR COMMITMENT PROCESS AND CERTIFICATIONS FOR QUALITY

The work of our R&D and production teams lead to thermal cameras of highest quality. The whole LEADER range is manufactured in our plant in Austria, where it is subject to the strictest quality processes. As a confirmation, LEADER TICs receive a 5 years warranty on the camera, 6 years for the batteries and 10 years for the sensor!

## LEADER EQUIPMENT THE BEST PERFORMANCE FOR YOU

Our thermal cameras are specifically designed for Fire and Rescue to understand fire behavior, locate casualties and protect firefighters in hostile environments. With performance technology unique to LEADER Photonics, the LEADER TIC cameras provide firefighters and rescuers with

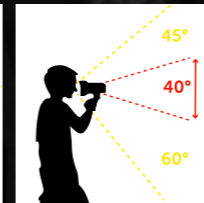
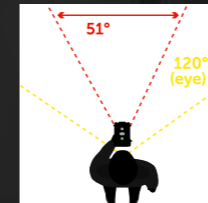
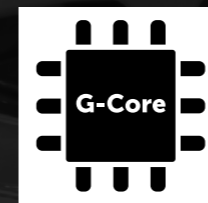
Since LEADER acquired Active Photonics in 2016, bringing complementary R&D support to IR expertise, the range of cameras has been totally redesigned for even better performances on the fire ground.

The LEADER GROUP now promotes the thermal imaging cameras worldwide and is proud to be recognized as one of the main firefighting and rescue TIC manufacturers!

LEADER Photonics has now reached NFPA1801 standard. Our engineers continually strive to improve quality and efficiency of our products. This is why the LEADER TICs are considered very reliable.

the ultimate combination of situational awareness, lightweight design and compliance to TIC standards. The superior image quality enables firefighters to fully interpret a fire scene for making the best tactical decisions. It also allows rescuers to search for a victim through smoke or at long distance.

## OUR CHOICES WHY CHOOSING LEADER TICs ?



### ■ BRAND NEW CORE

The LEADER Photonics team is proud to announce the achievement of the new own advanced thermal engine for high image quality! The G-Core 384x288 is born! Using a European micro-bolometer, the R&D team developed the whole electronics and software as well as the brand new shutter that makes the job with the highest level.

### ■ SPECIFIC LENS FOR FIRE OPS

Our lens offers the largest FOV (H51° / V40°) on the market. This allows the widest view on display for maximum efficiency when scanning areas where you look for Fire information or Victims location.

### ■ GERMANIUM WINDOW

An effective protection in all situations for fire operations. It guarantees the protection of the sensor and the inside lens. This is an essential part that will prevent the camera from heat effects and all external aggressions.

### ■ -40 TO +1150°C: THE WIDEST HEAT DETECTION RANGE FOR FIRE OPS

LEADER cameras offer of the widest detection range on the market: -40°C to +1150°C. This is a must to avoid saturation at display when facing high temperatures. During fire attack, firefighters must rely on an imager that shows critical views:

- 500°C is the common limit temp of their fire suits outer layer protection,
- 675°C is the starting point for triggering thermal phenomena,
- 850°C is the stability limit of steel structures...

### ■ AUTOMATIC SENSITIVITY SWITCH

LEADER TICs software integrates 3 sensitivity modes with automatic switch according to the observed scene. This allows temperature range with:

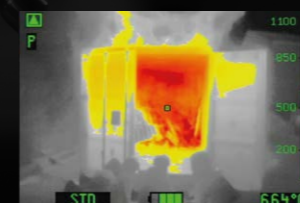
- High sensitivity: -40 +150°C
- Medium sensitivity: -40 +500°C or 650°C depending on model
- Low sensitivity: -40 +1150°C

### ■ NON EXPLOSIVE BATTERIES - 5000 CHARGING CYCLES

LiFePO4 (Lithium Iron Phosphate) batteries are non flammable for use during high temperature operations. They offer a very long lifespan guarantee with 5000 charging cycles and a 6 year warranty.

### ■ ERGONOMIC HOUSING

LEADER Photonics engineers are also focused on how the thermal cameras are being used on the field. This is a critical point taken into account daily to bring the easiest and the most intuitive ergonomic design cameras on the market.





## **FIRE THERMAL IMAGING CAMERAS**

OUR ENGINEERS HAVE OVERCOME  
MANY OBSTACLES  
SO THAT NOTHING STOPS YOU!

### **THE LEADER TIC RANGE HAS BEEN DESIGNED WITH AND FOR FIREFIGHTERS.**

The thermal cameras offer up to 8 hours running time. They are lightweight, robust, IP67 water and dust proof and dedicated to tough environments! Our innovations are always specifically designed with user safety in mind, whether it is the safest LiFePO4 battery technology, the application of 5 color modes or the highest dynamic temperature of 1150°C available.

#### **HAND HELD TIC**

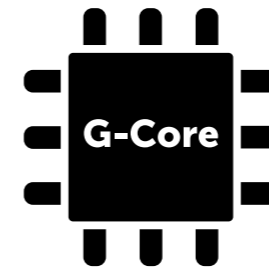
- ✓ Robust fire attack camera
- ✓ High temperature range
- ✓ Various colour modes

P. 8





## FEATURES AND BENEFITS



### Image quality

Our engineers designed G-Core that provides high quality image displayed at 320x240px.



### Wireless video transmission

For live video streaming to a tablet, computer or mobile. Very useful for training purpose or during ladder operation or Hazmat situation while colleagues follow at distance in a safe area!

# LEADER TIC: HAND HELD THERMAL IMAGING CAMERAS THE MOST POPULAR

The LEADER TIC range has been designed with and for firefighters. The range of hand held TICs offers LEADER TIC 3.1 / TIC 3.3 / TIC 4.1 and TIC 4.3.

The thermal cameras have up to 8 hours running time, are lightweight, robust, IP67 and dedicated to tough environments! The wide range of temperature measurement brings situation awareness and also a clear view of fire behavior up to 1150°C.

#### Applications:

- Identify hot spots during reconnaissance
- See in the dark and through smokes
- Detect and display fire temperature even in larger, hotter fires
- Locate the origin of the fire
- Understand the spread of the fire
- Move safe during Search and Rescue responses



### Fully ergonomic and intuitive

Large glove-friendly buttons for ease of use.

No menu to click.

2 models:

- TIC 3.1 and 4.1 with 1 button - Simple and easy to use in stressful operations,
- TIC 3.3 and 4.3 with 3 buttons - A maximum of functions for various uses (Color modes, Freeze, Zoom, Photo, Video, Gallery, Laser pointer).

### Long last and safe batteries

- Eco-Boost-System allows up to 8h running time with 2 batteries. Camera imager comes with 2 batteries. One can be removed while 2nd keeps the camera running ON.
- Batteries are LiFePO4 (Lithium Iron Phosphate) which is non explosive for use during high temp operations.
- They offer 6 year warranty with 5000 charging cycles life time.



LEADER TIC  
3.5" DISPLAY

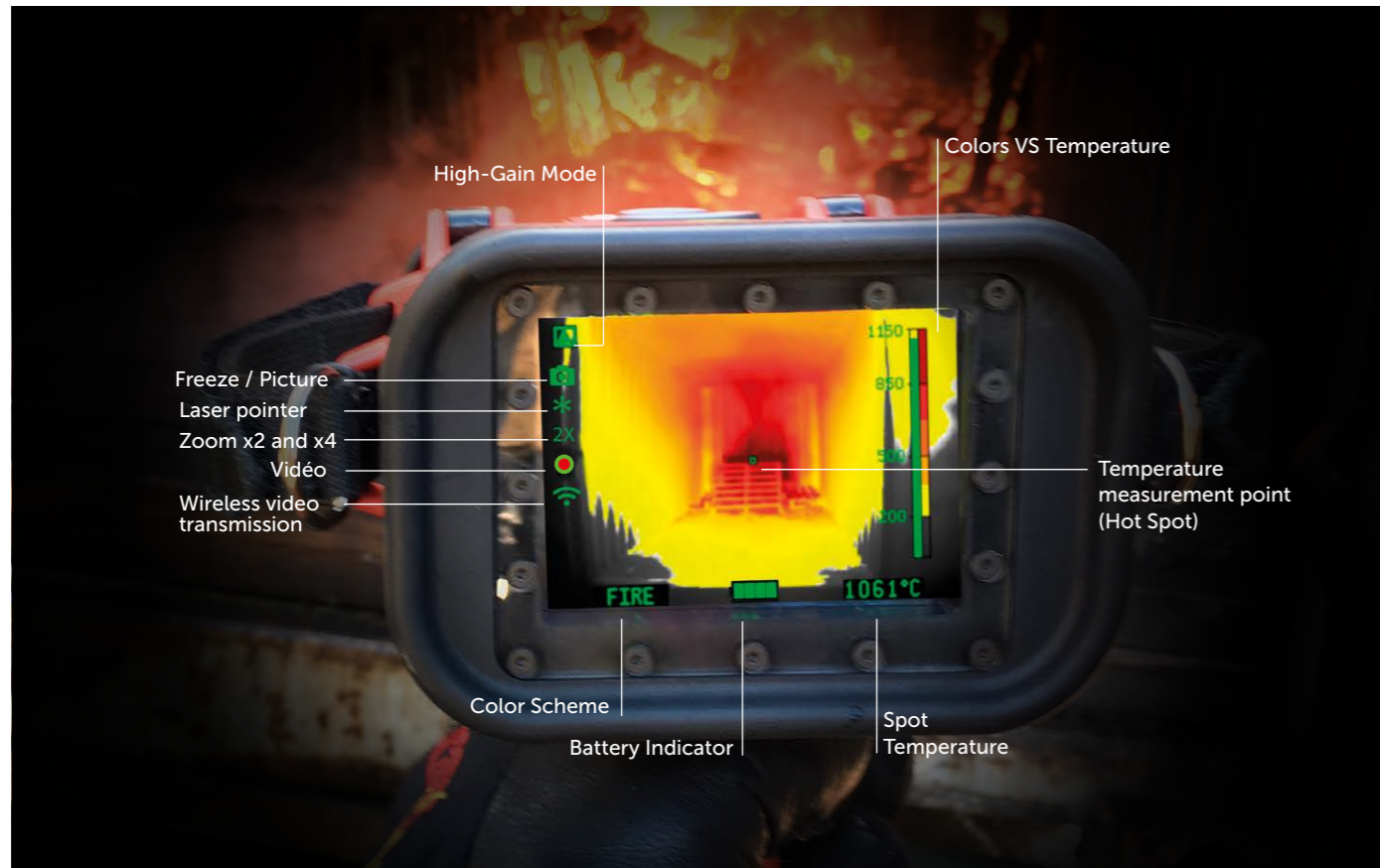
LEADER TIC  
4" DISPLAY







|  |  |
|--|--|
| <p><b>STD / FIRE</b><br/>Dark Red &gt; 850°C<br/>Red &gt; 675°<br/>Orange &gt; 500°C<br/>Dark Yellow &gt; 350°C<br/>Yellow &gt; 200°C<br/>White = Hot<br/>Black = Cold</p> | <p><b>SEARCH</b><br/>2 hottest % colored in Red and the 5 following hottest % in Yellow-Orange.</p>                |
| <p><b>COLD Finder:</b><br/>Blue color for coldest areas</p>  | <p><b>INVERSE:</b><br/>Same as Fire scheme but White and Black are inverted :<br/>White = Cold<br/>Black = Hot</p> |
| <p><b>MULTI-COLOR:</b><br/>For industrial applications.</p>  |  |







### Up to 5 color schemes

According to the chosen model (1 or 3 buttons), LEADER TIC cameras give access to up to 5 color schemes: Fire, Search, Cold, Inverse and Multicolor. One button camera shows Fire mode as standard with optional Search mode. Three buttons camera offers Fire, Search and Inverse schemes with Cold and Multicolor as options.

# AVAILABLE FUNCTIONS WITHIN YOUR LEADER TIC



-  **High-Gain Mode**  
Camera automatically adjusts temperature sensitivity levels (Low, Medium, High). High-Gain mode displays this icon in Medium and Upper temp ranges for better quality image management on the most extended temperature range.
-  **Freeze / Picture**  
Freeze / Picture capture (1000 records): For analysis in operation or post operation or for training purpose without exposing to danger.
-  **Laser pointer**  
Optional integrated laser pointer allows pointing object for better communication with colleagues during operation.
-  **Zoom x2 and x4**
-  **Video**  
Video capture (8 hours record): For analysis in operation or post operation or for training purpose without exposing to danger.
-  **Wireless video transmission**  
For live video streaming to a tablet, computer or mobile.

-  **Color Scheme indicator**  
According to TIC model; you can switch Fire mode to Search, Inverse, Cold or Multicolor modes (check previous page)
-  **Battery level indicator**
-  **Spot Temperature**  
Temperature at measurement point (Hot Spot) in center of display (°C / °F swappable).
-  **Colors VS Temperature**  
Reference temperature bar with color gradients for easy understanding of heat hazard.
-  **Picture and Video gallery**  
Simply access to recorded pictures and videos in the Gallery to display them on the camera. For displaying on a computer; no software needed for downloading files. Simply plug the camera to computer.
-  **Overheat alarm**  
Blinking overheat warning appears when infrared sensor reaches upper limit of internal temperature. Camera remains working so that user has time to run out.

## FOR SYSTEM Fast Object Recognition

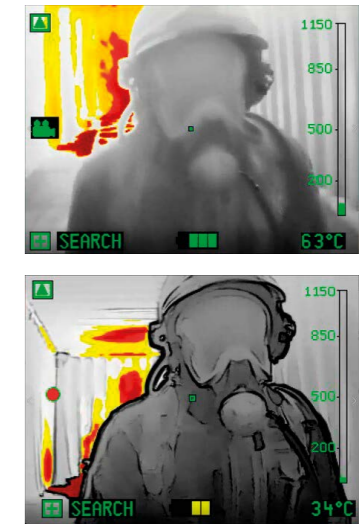
The new proprietary **G-CORE infrared module is the heart of the LEADER TIC cameras.**

It is the main component that detects and translates all infrared waves into visible colors on the camera screen.

**G-CORE module comes with FOR system (Fast Object Recognition):**





- The image is more contrasted with a lighter background for a more distinct image.
- Objects or people in the image are surrounded by a distinct black outline that allows a faster recognition of the scene.

The FOR system is activated by default on all color schemes with automatic deactivation in FIRE and INVERSE schemes above 150°C. This is made to avoid disturbing the color gradients at high temperatures where image analysis is important.



|   | Fire scheme         | Search scheme | Inv. scheme         | Cold scheme   | Multicolor    |
|---|---------------------|---------------|---------------------|---------------|---------------|
| <b>FOR system (Fast Object Recognition)</b> | Active only < 150°C | Always active | Active only < 150°C | Always active | Always active |

## FUNCTIONS PER MODEL

|   | Quick code | Ref.       | Disp. | COLOR SCHEMES: |        |         |      |             | FUNCTIONS: |       |       |         |      |
|---|------------|------------|-------|----------------|--------|---------|------|-------------|------------|-------|-------|---------|------|
|   |            |            |       | Fire           | Search | Inverse | Cold | Multi-Color | Freeze     | Video | Photo | Gallery | Zoom |
| <b>REGULAR RANGE</b>  |            |            |       |                |        |         |      |             |            |       |       |         |      |
|  | 3.1 1CSF   | A10.00.317 | 3.5"  | ■              | -      | -       | -    | -           | ■          | -     | -     | -       | -    |
|   | 3.1 2CS    | A10.00.318 | 3.5"  | ■              | ■      | -       | -    | -           | -          | -     | -     | -       | -    |
|   | 3.1 P      | A10.00.314 | 3.5"  | ■              | -      | -       | -    | -           | ■          | -     | ■     | -       | -    |
|   | 3.1 V      | A10.00.315 | 3.5"  | ■              | -      | -       | -    | -           | ■          | ■     | ■     | -       | -    |
|  | 3.3        | A10.00.330 | 3.5"  | ■              | ■      | ■       | -    | -           | ■          | -     | -     | -       | ■    |
|   | 3.3 L      | A10.00.332 | 3.5"  | ■              | ■      | ■       | -    | -           | ■          | -     | -     | -       | ■    |
|   | 3.3 V      | A10.00.331 | 3.5"  | ■              | ■      | ■       | -    | -           | ■          | ■     | ■     | ■       | -    |
|   | 3.3 VL     | A10.00.333 | 3.5"  | ■              | ■      | ■       | -    | -           | ■          | ■     | ■     | ■       | ■    |
|   | 3.3 5CS    | A10.00.336 | 3.5"  | ■              | ■      | ■       | ■    | ■           | ■          | -     | -     | -       | ■    |
|   | 3.3 L5CS   | A10.00.337 | 3.5"  | ■              | ■      | ■       | ■    | ■           | ■          | -     | -     | -       | ■    |
|  | 4.1 1CSF   | A10.00.417 | 4"    | ■              | -      | -       | -    | -           | ■          | -     | -     | -       | -    |
|   | 4.1 2CS    | A10.00.418 | 4"    | ■              | ■      | -       | -    | -           | -          | -     | -     | -       | -    |
|   | 4.1 P      | A10.00.414 | 4"    | ■              | -      | -       | -    | -           | ■          | -     | ■     | -       | -    |
|   | 4.1 V      | A10.00.415 | 4"    | ■              | -      | -       | -    | -           | ■          | ■     | ■     | -       | -    |
|  | 4.3        | A10.00.430 | 4"    | ■              | ■      | ■       | -    | -           | ■          | -     | -     | -       | ■    |
|   | 4.3 L      | A10.00.432 | 4"    | ■              | ■      | ■       | -    | -           | ■          | -     | -     | -       | ■    |
|   | 4.3 V      | A10.00.431 | 4"    | ■              | ■      | ■       | -    | -           | ■          | ■     | ■     | ■       | -    |
|   | 4.3 VL     | A10.00.433 | 4"    | ■              | ■      | ■       | -    | -           | ■          | ■     | ■     | ■       | ■    |
|   | 4.3 5CS    | A10.00.436 | 4"    | ■              | ■      | ■       | ■    | ■           | ■          | -     | -     | -       | ■    |
|   | 4.3 L5CS   | A10.00.437 | 4"    | ■              | ■      | ■       | ■    | ■           | ■          | -     | -     | -       | ■    |
| 4.3 V5CS  | A10.00.438 | 4"         | ■     | ■              | ■      | ■       | ■    | ■           | ■          | ■     | ■     | -       |      |
| 4.3 VL5CS   | A10.00.439 | 4"         | ■     | ■              | ■      | ■       | ■    | ■           | ■          | ■     | ■     | ■       |      |

### LEGEND

- CS : Color Scheme
- F : Freeze
- P : Picture
- V : Video + Picture
- L : Laser
- As standard
- Not applicable

## FEW TECHNICAL CHARACTERISTICS OF LEADER TIC



### LEADER TIC 3.1

3.5" display, 1 button simple camera  
910g incl. batteries



### LEADER TIC 4.1

4" display, 1 button simple camera  
990g incl. batteries



### LEADER TIC 3.3

3.5" display, 3 buttons versatile camera  
910g incl. batteries



### LEADER TIC 4.3

4" display, 3 buttons versatile camera  
990g incl. batteries



### 3.5" or 4" display

According to users' expectations, the range proposes compact design cameras with 3.5" display, and also 4" display for better scene visibility.

### PERFORMANCE AND TECHNICAL CHARACTERISTICS

|   |   |
|---|---|
| IP67 (Ingress Protection)                   | ■ |
| Drop tests from 2m height on concrete       | ■ |
| T°C dynamic range -40°C to 1150°C           | ■ |
| Display resolution 320 x 240 px             | ■ |
| IR sensor resolution 384 x 288 px           | ■ |
| 60 Hz Frequency (export license outside EU) | ■ |
| IR sensor protected by Germanium window     | ■ |
| LiFePO4 Batteries (2 per camera)            | ■ |
| Up to 8h running time                       | ■ |
| T°C measurement at center point of display  | ■ |
| 3 sensitivity modes with automatic switch   | ■ |
| Less than 5 seconds boot time               | ■ |
| Overheat warning                            | ■ |
| Aramide hand straps on both sides           | ■ |

### CERTIFICATIONS

|                                |                |
|--------------------------------|----------------|
| CE certified                   | ■              |
| NFPA 1801                      | under progress |
| ISA 12.12.01 / CSA C22.2 N°213 | under progress |

### WARRANTY

|                            |   |
|----------------------------|---|
| 5 years on camera          | ■ |
| 6 years on batteries       | ■ |
| 10 years on thermal sensor | ■ |

### OPTIONS

|  |   |
|--|---|
| Startup screen with text or logo                     | ☞ |
| 9Hz low image frequency: export license not required | ☞ |

### ACCESSORIES

|  |   |
|--|---|
| Wireless transmission kit for live streaming | □ |
| Removable pistol grip                        | □ |
| Aramide neck strap                           | □ |
| Retractable lanyard (500g or 1000g tension)  | □ |
| Heat protection hood                         | □ |
| Rechargeable spare batteries                 | □ |
| Mains charger 12-24 VDC or 100-240 VAC       | □ |
| Charging bay 12-24 VDC or 100-240 VAC        | □ |
| Watertight hard case                         | □ |

### LEGEND

- As standard
- Option to be specified
- ☞ On request



# OPTIONAL ACCESSORIES



### Wireless video transmission kit

Allows live video streaming displayed onto computer, tablet or mobile phone (3 devices max simultaneously) via a free player up to 140m (open field). Very useful for training purpose or during ladder operation or Hazmat situation while colleagues follow at distance in a safe area!



### Retractable lanyard

LEADER TIC can be held with 1 or 2 retractable lanyards (zipper) attached to the side "D" rings. Often used by 2 to avoid swinging on chest. 500g and 1000g tension force are available.



### Heat protection doubles exposure time

Made of aluminized textile the protective hood doubles NFPA requested exposure time of the camera: It allows 30 min at 150°C and 10 min at 260°C!



### Removable pistol grip

The pistol grip is easily mounted for those who prefer a comfortable pistol grip (delivered with tool).



### Neck strap

This strap is an alternative to the retractable lanyards. Made of aramide (fire-proof), it holds the LEADER TIC by its side "D" rings.



### Charger

12-24 VDC or 100-240 VAC available with all international adapters. Allows charging the 2 batteries inside the camera so that it is ready to go at any time.



### Spare batteries

LiFePO4 (Lithium Iron Phosphate) batteries with 5000 cycles life time, 6 year warranty. Lightweight and safe when used during fire operations with high temperature.



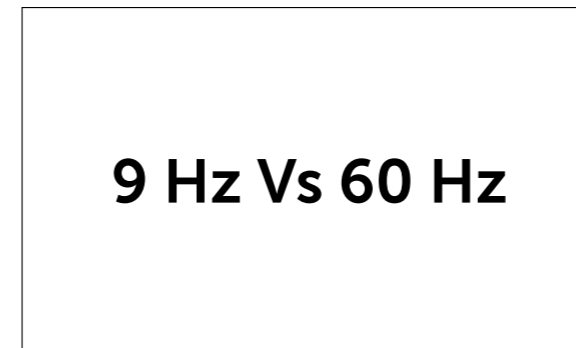
### Charging bays

12-24 VDC or 100-240 VAC. Standard model charges the 2 batteries inside the TIC for making it ready to go at any time. A model with external slots allows charging the 2 batteries in the camera and 2 spares. Vehicle mount possible. Complies with EN1789 against 10G accelerations (under process).



### Transport case

Hard and IP67 waterproof case is available for protecting the camera and the optional accessories.



### Image motion fluidity

Frame Per Second (Hz) can be chosen. 60Hz has great fluidity and requires a dual use license outside EU. 9Hz has lower fluidity but doesn't request any license.





## **LONG RANGE THERMAL IMAGING CAMERAS**

IDEAL FOR FINDING PEOPLE  
IN LARGE AREAS SUCH AS  
DESERT, MOUNTAIN AND SEA!

### **THE LEADER TIC LR HAS BEEN DESIGNED FOR MANY SEARCH AND SURVEILLANCE APPLICATIONS.**

The Long Range thermal cameras are useful for many applications in large areas. LR1000 allow detecting a human target at 1000m. The TICs are convenient with 3.5" display and easy to use with 1 or 3 buttons. The 3 buttons models allow greater versatility such as ability to zoom in the image to recognize the detected target.

#### **LONG RANGE TIC**

P.18



- ✓ Ideal for surveillance
- ✓ 1000m
- ✓ Robust and all weather camera
- ✓ Versatile thanks to large temperature range
- ✓ Various color modes



# LEADER TIC LR: LONG RANGE THERMAL IMAGING CAMERAS

FOR SURVEILLANCE OR FINDING PEOPLE  
IN LARGE AREAS SUCH AS SEA, MOUNTAIN  
AND DESERT!

Long Range TICs combine 1000m target detection together with all functions of LEADER TICs regular range (TIC 3.1 / TIC 3.3) : 5 color schemes, video, picture, gallery, laser, wireless video streaming...

The thermal cameras are compact, IP67 with 8h run time and dedicated to tough environments!

The wide range of temperature measurement allows search for victims in large open fields, brings fire situation awareness and also a clear view of fire up to 1150°C.

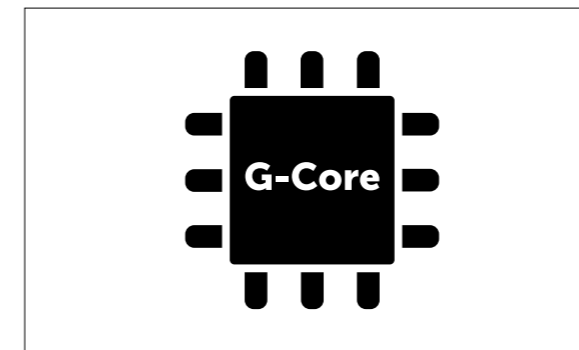
Applications:

- Find missing persons
- See humans at sea, mountain, desert... during Rescue operations
- Move safe during Search and Rescue responses
- Identify hot spots at distance
- See in the dark and through smokes
- Locate the origin of a fire
- Detect and display fire temperature even in larger, hotter fires
- Understand the spread of the fire



LEADER TIC  
3.5" DISPLAY

## FEATURES AND BENEFITS



### Image quality

Our engineers designed G-Core that provides high quality image displayed at 320x240px.



### Wireless video transmission

For live video streaming to a tablet, computer or mobile. Very useful for training purpose or during ladder operation or Hazmat situation while colleagues follow at distance in a safe area!

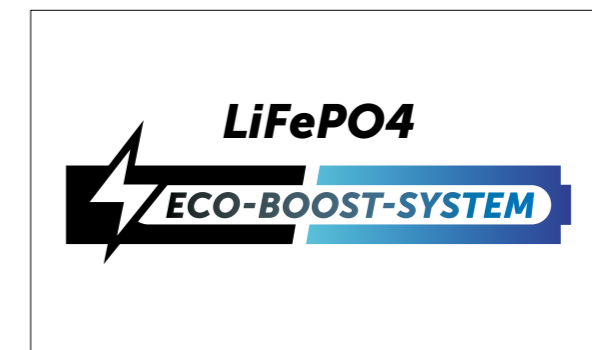


### Fully ergonomic and intuitive

Large glove-friendly buttons for ease of use. No menu to scroll.

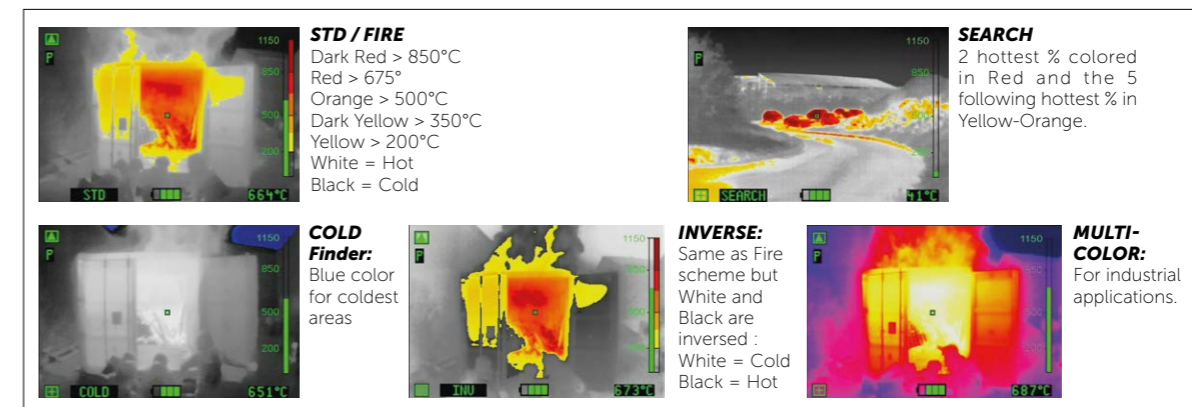
2 models:

- TIC 3.1 with 1 button - Simple and easy to use in stressful operations,
- TIC 3.3 with 3 buttons - A maximum of functions for various uses (Color modes, Freeze, Zoom, Photo, Video, Gallery, Laser pointer).



### Long last and safe batteries

- Eco-Boost-System allows up to 8h running time with 2 batteries. Camera imager comes with 2 batteries. One can be removed while 2nd keeps the camera running ON.
- Batteries are LiFePO4 (Lithium Iron Phosphate) which is non flammable for use during high temp operations.
- They offer 6 year warranty with 5000 charging cycles life time.



### Up to 5 color schemes

According to the chosen model (1 or 3 buttons), LEADER TIC cameras give access to up to 5 color schemes: Fire, Search, Cold, Inverse and Multicolor. One button camera shows Fire mode as standard with optional Search mode. Three buttons camera offers Fire, Search and Inverse schemes with Cold and Multicolor as options.

# AVAILABLE FUNCTIONS WITHIN YOUR LEADER TIC



### High-Gain Mode

Camera automatically adjusts temperature sensitivity levels (Low, Medium, High). High-Gain mode displays this icon in Medium and Upper temp ranges for better quality image management on the most extended temperature range.



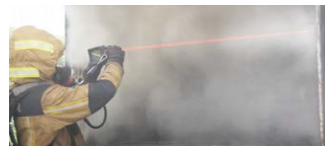
### Freeze / Picture

Freeze / Picture capture (1000 records): For analysis in operation or post operation for training purpose without exposing to danger.



### Laser pointer

Optional integrated laser pointer allows pointing object for better communication with colleagues during operation



### Zoom x2 and x4

### Video

Video capture (8 hours record): For analysis in operation or post operation for training purpose without exposing to danger.



### Wireless video transmission

For live video streaming to a tablet, computer or mobile.



### Color Scheme indicator

According to TIC model; you can switch Fire to Search, Inverse, Cold or Multicolor modes (check previous page)

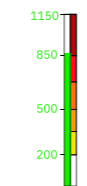


### Battery level indicator

1082°C

### Spot Temperature

Temperature at measurement point (Hot Spot) in center of display (°C / °F swappable).



### Colors VS Temperature

Reference temperature bar with color gradients for easy understanding of heat hazard.



### Picture and Video gallery



Simply access to recorded pictures and videos in the Gallery to display them on the camera. For displaying on a computer; no software needed for downloading files. Simply plug the camera to computer.



### Overheat alarm

Blinking overheat warning appears when infrared sensor reaches upper limit of internal temperature.

## FUNCTIONS PER MODEL

|   | Quick code | Disp. | Ref.       | COLOR SCHEMES: |        |         |      |            | FUNCTIONS: |       |       |         |      |       |  |
|---|------------|-------|------------|----------------|--------|---------|------|------------|------------|-------|-------|---------|------|-------|--|
|   |            |       |            | Fire           | Search | Inverse | Cold | MultiColor | Freeze     | Video | Photo | Gallery | Zoom | Laser |  |
| <b>LONG RANGE</b>   |            |       |            | <b>LR1000</b>  |        |         |      |            |            |       |       |         |      |       |  |
| <b>LEADER TIC 3.1</b>   | 3.1 1CSF   | 3.5"  | A10.10.310 | ■              | -      | -       | -    | -          | ■          | -     | -     | -       | -    | -     |  |
|  | 3.1 2CS    | 3.5"  | A10.10.316 | ■              | ■      | -       | -    | -          | -          | -     | -     | -       | -    | -     |  |
|   | 3.1 P      | 3.5"  | A10.10.314 | ■              | -      | -       | -    | -          | ■          | -     | ■     | -       | -    | -     |  |
|   | 3.1 V      | 3.5"  | A10.10.315 | ■              | -      | -       | -    | -          | ■          | ■     | ■     | -       | -    | -     |  |
| <b>LEADER TIC 3.3</b>   | 3.3        | 3.5"  | A10.10.330 | ■              | ■      | ■       | -    | -          | ■          | -     | -     | -       | ■    | -     |  |
|  | 3.3 L      | 3.5"  | A10.10.332 | ■              | ■      | ■       | -    | -          | ■          | -     | -     | -       | ■    | ■     |  |
|   | 3.3 V      | 3.5"  | A10.10.331 | ■              | ■      | ■       | -    | -          | ■          | ■     | ■     | ■       | ■    | -     |  |
|   | 3.3 VL     | 3.5"  | A10.10.333 | ■              | ■      | ■       | -    | -          | ■          | ■     | ■     | ■       | ■    | ■     |  |
|   | 3.3 5CS    | 3.5"  | A10.10.336 | ■              | ■      | ■       | ■    | ■          | ■          | -     | -     | -       | ■    | -     |  |
|   | 3.3 L5CS   | 3.5"  | A10.10.337 | ■              | ■      | ■       | ■    | ■          | ■          | -     | -     | -       | ■    | ■     |  |
|   | 3.3 V5CS   | 3.5"  | A10.10.338 | ■              | ■      | ■       | ■    | ■          | ■          | ■     | ■     | ■       | ■    | -     |  |
|   | 3.3 VL5CS  | 3.5"  | A10.10.339 | ■              | ■      | ■       | ■    | ■          | ■          | ■     | ■     | ■       | ■    | ■     |  |

### LEGEND

■ As standard

F : Freeze

V : Video + Picture

9Hz available for all cameras (no Dual Use license)

CS : Color Scheme




P : Picture

L : Laser

Check out our product data sheet for more technical details

## IDENTIFY A TARGET

**LEADER TIC LR1000** can detect up to 1000m distance. However, there are major differences between detection, recognition and identification.

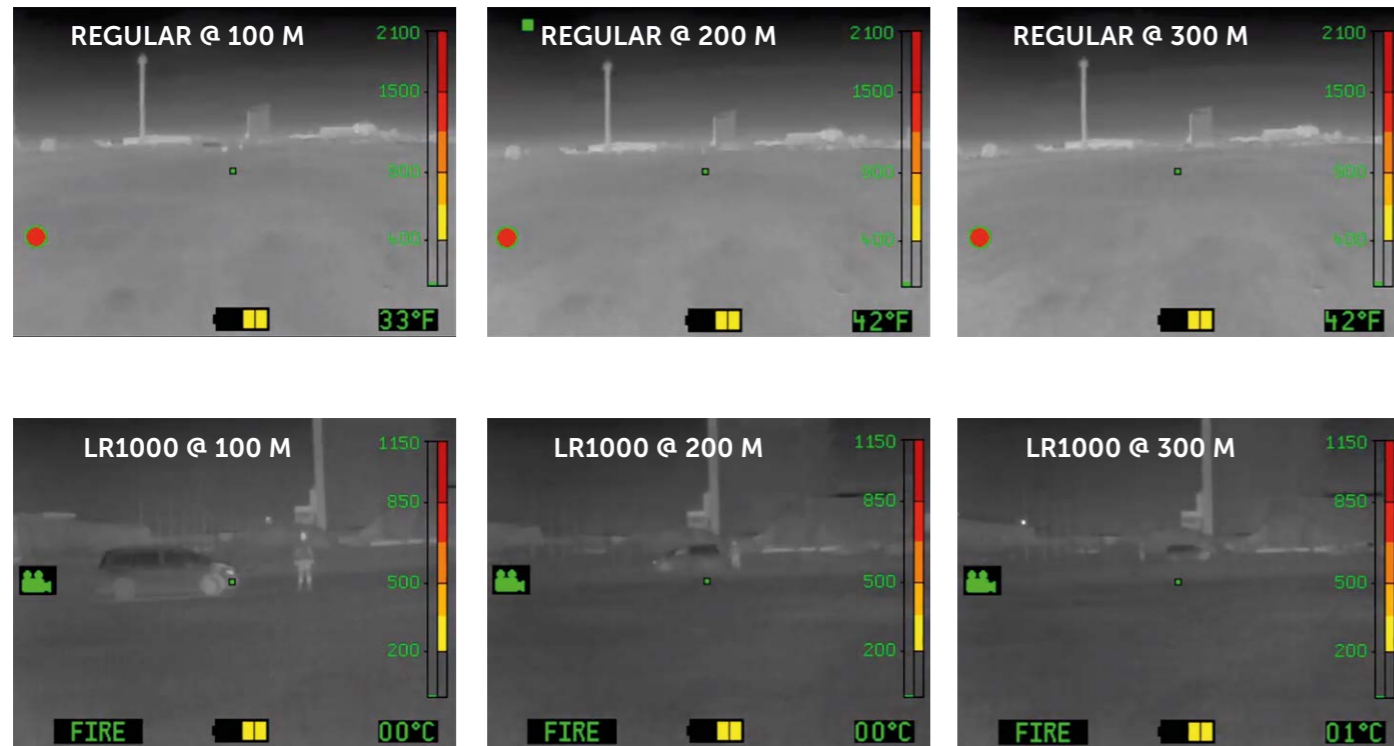
|   |   |  |
|---|---|--|
|  <p><b>Detection:</b><br/>Display showing that something is there</p> |  <p><b>Recognition:</b><br/>Display showing that a person is there</p> |  <p><b>Identification:</b><br/>Display showing that a person looks like a person</p> |
|---|---|--|

The LEADER TIC LR ranges is follow:

| LEADER TIC          | HUMAN TARGET (1.8 x 0.6m) |             |                | VEHICULE TARGET (2.3 x 2.3m) |             |                |
|---------------------|---------------------------|-------------|----------------|------------------------------|-------------|----------------|
|                     | Detection                 | Recognition | Identification | Detection                    | Recognition | Identification |
| TIC3 / TIC4 REGULAR | 180 m                     | 40 m        | 30 m           | 500 m                        | 100 m       | 75 m           |
| TIC3 LR1000         | 1000 m                    | 200 m       | 150 m          | 2400 m                       | 500 m       | 370 m          |

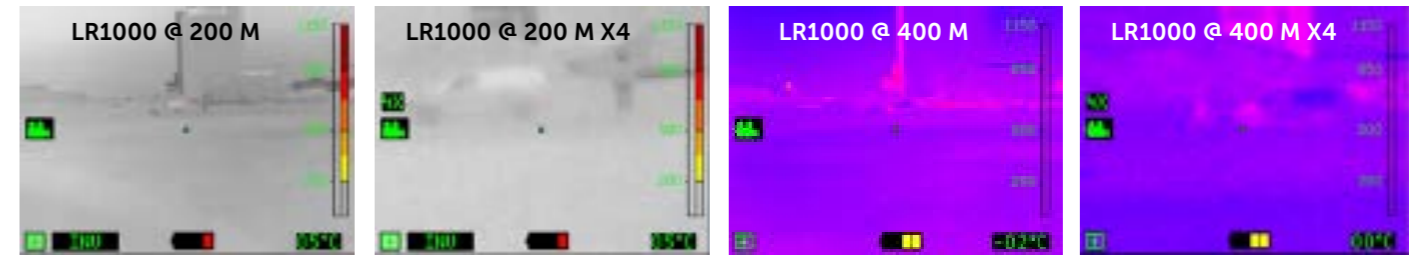
Accuracy based on 17µm sensor and having good weather conditions, 70% probability (Real distance may vary from atmospheric conditions).

**Note:** Target material, shape, background, environment, camera or target movement could influence the detection ability.



## LONG RANGE MODELS COMPARISON

LEADER TIC LR thermal cameras offer up to 5 color schemes, and x2 x4 digital Zoom. This gives the ability to switch from each color mode and combine Zoom level for better distinguishing the target. So that the user adapts the camera vision to the environment, background and undergoing movements.



**LEADER TIC 3.1 LR1000**  
3.5" display, 1 button simple camera  
910g incl. batteries



**LEADER TIC 3.3 LR1000**  
3.5" display, 3 buttons versatile camera  
910g incl. batteries

### PERFORMANCE AND TECHNICAL CHARACTERISTICS

|   |   |
|---|---|
| IP67 (Ingress Protection)                   | ■ |
| Drop tests at 2m height on concrete         | ■ |
| °C dynamic range -40°C to 1150°C            | ■ |
| Display resolution 320 x 240 px             | ■ |
| IR sensor resolution 384 x 288 px           | ■ |
| 60 Hz Frequency (export license outside EU) | ■ |
| IR sensor protected by Germanium window     | ■ |
| LiFePO4 Batteries (2 per camera)            | ■ |
| Up to 8h running time                       | ■ |
| °C measurement at center point of display   | ■ |
| 3 sensitivity modes with automatic switch   | ■ |
| Less than 5 seconds boot time               | ■ |
| Overheat warning                            | ■ |
| Aramide hand straps on each side            | ■ |
| CE certified                                | ■ |

### WARRANTY

|                            |   |
|----------------------------|---|
| 5 years on camera          | ■ |
| 6 years on batteries       | ■ |
| 10 years on thermal sensor | ■ |

### ACCESSORIES

|  |   |
|--|---|
| Wireless transmission kit for live streaming | □ |
| Removable pistol grip                        | □ |
| Aramide neck strap                           | □ |
| Retractable lanyard (500g or 1000g tension)  | □ |
| Heat protection hood                         | □ |
| Rechargeable spare batteries                 | □ |
| Mains charger 12-24 VDC or 100-240 VAC       | □ |
| Charging bay 12-24 VDC or 100-240 VAC        | □ |
| Watertight hard case                         | □ |
| Startup screen with text or logo             | ☎ |
| 9Hz (no export license)                      | ☎ |

### LEGEND

- As standard
- Option to be specified
- ☎ On request

# OPTIONAL ACCESSORIES



### Wireless video transmission kit.

Allows live video streaming displayed onto computer, tablet or mobile phone (3 devices max simultaneously) via a free player up to 140m range (open field). Very useful for training purpose, or where colleagues want to follow at distance in a safe area!



### Retractable lanyard

LEADER TIC can be held with 1 or 2 retractable lanyards (zipper) attached to the side "D" rings. Often used by 2 to avoid swinging on chest. 500g and 1000g tension force are available.



### Removable pistol grip

The pistol grip is easily mounted for those who prefer a comfortable pistol grip (delivered with tool). It is red.



### Heat and dust protection

Made of aluminized textile protective hood prevents the camera from overheating when left for surveillance in hot areas.



### Neck strap

This strap is an alternative to the retractable lanyard(s). Made of aramide (fire-proof), it holds the LEADER TIC by the side "D" rings.



### Mains charger

12-24 VDC or 100-240 VAC available with all international adapters. Allows charging the 2 batteries inside the camera so that it is ready to go at any time.



### Spare batteries

LiFePO4 (Lithium Iron Phosphate) batteries with 5000 cycles life time, 6 year warranty. Lightweight and safe when used during fire operations with high temperature.



### Charging bays

12-24 VDC or 100-240 VAC. Standard model charges the 2 batteries inside the TIC for making it ready to go at any time. A model with external slots allows charging 2 batteries in the camera and 2 spares. Vehicle mount possible. Complies with EN1789 against 10G accelerations (under process).



### Transport case

Hard and IP67 waterproof case is available for protecting the camera and the optional accessories.

**9 Hz Vs 60 Hz**

### Image motion fluidity

Frame Per Second (Hz) can be chosen. 60Hz has great fluidity and requires a dual use license outside EU. 9Hz has lower fluidity but doesn't request any license.

**SINCE 1985**, LEADER HAS DESIGNED AND MANUFACTURED HIGHER PERFORMING EQUIPMENT USED IN FIREFIGHTING, FIRE TRAINING AND SEARCH AND RESCUE APPLICATIONS AND PROPOSES THEM TO FIRE AND RESCUE SERVICES, CIVIL DEFENSE, HAZARDOUS INDUSTRIES, NGOS, MARITIME SERVICES, ETC. ON THE 5 CONTINENTS.



## OUR COMMITMENT

When you choose LEADER equipment, you are assured of the quality and compliance of our products. These have been made in our workshops by our engineering and electronics specialists.

### ISO 9001 certified since 1999, LEADER:

- ▶ Carries out checks at every stage of the manufacturing process as well as on the finished products before dispatch,
- ▶ Provides continuous training for all its staff.

## GUARANTEED EQUIPMENT

Every LEADER product comes with a specific contractual guarantee.

## CLOSE TO OUR CUSTOMERS

Through its sales force, its subsidiaries (in Germany, Austria, China and the USA) and an international distribution network, LEADER is present worldwide, keeping us as close as possible to its customers.



## ADAPTED TRAINING

For optimal and long-term use of the equipment you purchase, LEADER can propose suitable training on the handling, on the use and maintenance of the equipment. Training can be done at our site or at your own site.

## A MAJOR AXIS: INNOVATION

**To meet the advancing challenges of fire hazards and search & rescue missions, equipment must continually evolve and adapt to be more effective while ensuring maximum safety for workers.**

To meet these challenges, LEADER is committed to constant innovation and new technologies and has its own in-house Research & Development team which works alongside end-users to design and develop the equipment that will be available tomorrow.

To test our equipment and assess its performance, we at LEADER continually invest in our own infrastructure:

- ▶ Water and High-Expansion Foam test room (400 sq m)
- ▶ Ventilation test room (400 sq m)
- ▶ Fire test area in fire container - Fire extinguishing equipment
- ▶ Casualty Search Equipment test area

## AN INTERNATIONAL PRESENCE

SUBSIDIARIES AND A STRONG RETAILER NETWORK



# LEADER GROUP



**MOBILE VENTILATION**



**LARGE-FLOW VENTILATION**



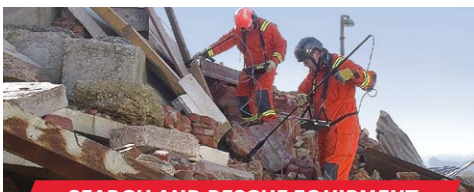
**THERMAL VISION**



**FIRE EXTINGUISHING**



**FIRE TRAINING DEVICES**



**SEARCH AND RESCUE EQUIPMENT**



**CHAINSAWS**



**FIRE FOAM CONCENTRATES**

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