FLIR ONE F.A.Q.

What is the FLIR ONE?
Available in two new second generation models mid year, FLIR ONE is a thermal camera that attaches to Android or iOS devices that visualize the otherwise hidden world of heat. Equipped with an enhanced Lepton thermal camera core, the FLIR ONE combines visible and thermal images together using a patented technology called MSX to make the thermal image crisper and more recognizable. Everything around us is either emitting or reflecting thermal energy and with the ability to see it and measure it on a mobile device, we can interact with and understand it in useful, interesting and fun ways. FLIR ONE extends human vision. It is the new sixth sense.

How are the new FLIR ONEs better than the original?
Available in either iOS or Android hardware versions, FLIR ONE features:

- A more powerful thermal sensor with four times the resolution for crisper and clearer thermal images.
- Automatic tuning. There is no need to manually tune the device for optimum use.
- A lighter-weight design that is less than a third the weight of the original.

The device retains its own dedicated battery and has the side-by-side visible and thermal cameras. When combined through MSX, the software dramatically increase a user's ability to interpret a thermal image in real-world environments.

How should I refer to the new FLIR ONE?
Two new second-generation FLIR ONE models will be available. One compatible with Android phones that use the Micro USB interface, and one for Apple iOS devices that use the Lightning connector. These products will be known as ***FLIR ONE for Android*** and ***FLIR ONE for iOS***, respectively. Refer top the original FLIR ONE as the first generation FLIR ONE.

What is the price point of FLIR ONE?
FLIR ONE is available worldwide for MSRP $249.99 U.S.

What is the launch date of the next-generation FLIR ONE? When will it ship?
As of June 25, 2015, the FLIR ONE is available for purchase worldwide through FLIR.com/FLIRONE.

How can I purchase FLIR ONE?
In addition to purchasing through FLIR.com/FLIRONE, availability at Amazon, Apple.com and BestBuy.com is expected in July followed by worldwide a roll out in major retailers during the calendar-year third quarter, including The Home Depot and Best Buy.

I'm a dealer/store owner and would like to sell FLIR ONE. Who do I contact?
If you are interested in becoming a channel partner for FLIR ONE, please contact Keith Geck at Keith.Geck@FLIR.com.

Which mobile devices are compatible for use with this generation of FLIR ONE?
The latest generation of FLIR ONE is compatible with Android products with a micro-USB and Apple products with a lightning connector, including the Nexus 6, Samsung Galaxy S6, iPhone 6, 6 plus and iPad, among other devices.

With this new version, how long will you offer the FLIR ONE case for iPhone 5/5s?
The FLIR ONE case will continue to be offered for sale through FLIR.com. We will provide guidance on how long we will continue to sell the first generation FLIR ONE at a later date.

What is FLIR doing to encourage app development?
The FLIR ONE Developer Program is an entire campaign dedicated to enabling developers to create innovative and useful apps for the FLIR ONE. Developers are encouraged to join the program to gain access to FLIR ONE development tools, resources and training to become a FLIR Certified Developer. The new FLIR Approved Applications program gives developers access to additional resources and tools to make their apps as compelling as possible and gives consumers some assurance that apps bearing the FLIR Approved Applications badge have been reviewed by FLIR and deliver thermal imaging benefits to consumers.

Where can I get the FLIR ONE SDK?
An updated FLIR ONE SDK for the iOS platform is available at http://www.flir.com/flirone/developer, which is compatible with the original FLIR ONE and the new FLIR ONE for iOS. A new SDK for FLIR ONE for Android is in beta now and will be publicly available in July. With the FLIR ONE SDKs, developers have access to absolute temperature data for all pixels and control the Lepton camera's shutter mode, in both manual and automatic settings.

For information on this program, contact Cal Loo at cal.loo@flir.com.

What other benefits does FLIR provide the developer community?
The FLIR Certified Developer program offers interested developers specific training in thermal imaging technology and the use of the FLIR ONE developer tools, as well as additional technical and business support to bring apps to market. Once certified, the developers can market themselves as FLIR Certified Developers using the FLIR Certified Developer badge (below). The developer may also be included in the FLIR Developer Universe featured on the FLIR developer website in addition to being eligible for app development business leads from FLIR.

The FLIR Approved Applications program offers developers access to additional resources and tools to make their respective apps as compelling as possible. It also provides consumers assurance that apps bearing the FLIR Approved Application badge have been reviewed by FLIR for quality and value.

Those apps that qualify may be marketed using the FLIR Approved Application badge (below) and may be included in the FLIR ONE applications gallery on the FLIR developer website and included in the "Feature App" listing. Additional benefits include the possible complementary promotion on FLIR.com and FLIR-owned social media channels.

While FLIR can't assume responsibility for the apps developed by any independent developers, this program offers consumers assurances that apps bearing the FLIR Approved Applications badge are of good quality and offer thermal imaging value to customers.

What is FLIR doing to recruit developers to the FLIR Developer Program?
FLIR recently launched the "Bring the Heat" event campaign, which is a series of hacker and maker challenge events set around the world. At these events, software developers come together in the spirit of collaboration and competition to brainstorm thermal imaging-related ideas and to evolve them into real applications for cash and product prizes. FLIR provides the venue, the hardware and software tools along with mentoring and technical support. Developers provide the smarts, the ingenuity and passion to create great apps.

For more information, check out the events page at http://www.flir.com/flirone/developer.

What if I can't physically attend and participate one of the "Bring the Heat" hacker challenge events?
We want to include and encourage developers all over the world to bring their creative ideas and skills to FLIR ONE. In the near future is launching a global, online Bring the Heat hacker challenge. Developers will be able to register on ChallengePost, develop and test their apps using either a physical FLIR ONE device or an online simulator, and submit their respective apps online to compete for cash and product prizes.

Stay tuned for more information at http://www.flir.com/flirone/developer.

What apps will be available for use with FLIR ONE?
The primary FLIR ONE app has been updated with the introduction of the new FLIR ONE models and is available for free download on the Apple App Store and the Google Play Store. Additionally, FLIR is working with multiple flagship developers through the FLIR Developer Program to create apps that address specific user groups with features and capabilities that suit a variety of needs.

Some examples of the many new apps that are or will soon be available, include:

- **Comfort Tracker:** guides homeowners and professional contractors through a home energy assessment to identify opportunities to improve comfort and efficiency by recommending solutions and identifying local retailers of Owens Corning insulation.
- **Manything:** a free app that turns spare iOS devices into video monitoring cameras and has integrated the FLIR ONE to enable remote thermal vision, temperature triggered alerts and thermal motion detection, even in total darkness.
- **Zombie Vision:** turns your FLIR One enabled mobile device into a fun, real-time Zombie locator.
- **Everfave:** Innovative iOS and Android app for consumers to discover and share recommended businesses and pros. Consumers earn rewards for sharing their experiences and recommendations with their friends.
- **Infrahorse:** aides horse enthusiasts in determining 'hotspots' or asymmetry in a horse's legs, hooves or back that may denote a potential health issue.

What would I use FLIR ONE for?
Thermal imaging makes the otherwise invisible world of heat energy visible to your eyes. Everything around you either emits or reflects heat energy. For example, with FLIR ONE, when you look around a room in your home, you can see where doors and windows are not well insulated. You might see a wall switch is slightly warm that could indicate a pending problem or overloaded circuit. The list of uses is long and will grow dramatically as customers discover this unseen portion of the electromagnetic spectrum. Visit FLIR.com/FLIR ONE for educational information on how thermal imaging can and will be useful in everyday life, and discover this previously invisible world first-hand.

I'm concerned about privacy. Can someone use FLIR ONE to spy inside my home or underneath clothes?
FLIR ONE does not provide x-ray vision. It allows you to visualize and measure the surface temperate of most objects. In many cases, the surface temperature of an object can be affected by things behind or under the surface. For example, under certain conditions the surface temperature of a wall can be subtly affected by the wooden studs behind it. This characteristic can allow you to easily see the location of the studs behind the wall, without actually looking through the wall.

Aren't you concerned FLIR ONEs can be used to steal personal information? Like an ATM pin code?
With any new technology in the hands of consumers, there is a chance it will be used in unintended ways. At FLIR, our heritage is to provide the world's most advanced thermal imaging technology for public safety, environmental protection and to enhance our daily lives. Therefore, we take personal security very seriously.
The purported ability to steal pin codes with thermal imaging cameras, such as at ATMs, requires very specific conditions and circumstances making such a scenario highly unlikely. Regardless, we recommend practicing prudent identity protection measures to ensure personal data remains secure no matter the situation.

What is the indoor/outdoor range of FLIR ONE?
At about 100 feet, you can see the heat signature of a person. However, atmospheric conditions can influence the visible range. Dry, clear weather will provide a greater range than rainy, foggy, or humid conditions as water in the atmosphere can absorb infrared radiation before it reaches the sensor.

What is the resolution of the camera?
Resolution is often synonymous with image quality, but in reality, resolution is one of many factors that determine thermal image quality. The new FLIR ONE's more powerful Lepton thermal camera has been upgraded to generate image quality equal to or better than the original in every respect. When combined with the VGA visible camera, FLIR ONE creates a crisper and clearer 640x480 image than ever before. This is achieved with FLIR's patented two-camera MSX™ Technology, which embosses a visible image onto the thermal image without eliminating any thermal information, greatly enhancing the perceived resolution and detail of the thermal image.

How does MSX blending work?
FLIR developed MSX blending as a proprietary and patented technique to improve image quality. It dramatically increases a user's ability to interpret a thermal image in real-world environments by adding visible edge detail to a thermal image without sacrificing detail. MSX is additive in that no thermal information is lost, greatly enhancing the perceived resolution of the thermal image. However, MSX only works in conditions where visible light is present. In dark conditions, turn on the companion-device flashlight to generate light.

Does the FLIR ONE require frequent manual tuning of the shutter to ensure the best experience?
No. The new FLIR ONE now features automatic tuning and thus will not require the user to periodically reset the thermal sensor.

What is the operating temperature for the FLIR ONE?
FLIR ONE operates at 32°F to 95°F (0°C to 35°C). It also features an enhanced scene temperature range of -4°F to 248°F (-20° to 120°C), a 40°C increase in range from the predecessor device.

Will there be a new FLIR ONE that wraps around my mobile device like the previous version?
Because this generation of FLIR ONE is a small and lightweight attachment to mobile devices through either a micro-USB (Android) or a lightning connector (Apple), it provides the user flexibility to use FLIR ONE with multiple device types.

How is the new FLIR ONE powered? Will it drain my tablet/smartphone battery?
No. The attachment includes an internal battery, ensuring that the FLIR ONE won't drain the respective battery of the attached device.

The FLIR ONE adds some bulk and weight to the mobile device. Will it still fit in a pants pocket?
FLIR ONE weighs just 2.75 ounce (~30 grams), which is less than a third the weight of the predecessor. With its small and lightweight form factor, it adds just 0.7 inches (18 mm) of depth and about 2.8 inches (72 mm) in length when attached to an Android smartphone or the iPhone 6, as examples.