



APPLICATION STORY

Aston Martin Red Bull Racing keeps its data center in shape with the help of thermal imaging
The pocket-sized FLIR ONE Pro helps to monitor the condition of power supplies and distribution boards

A lot of preparation goes into each Aston Martin Red Bull race, both on the track and behind the scenes at the factory. It's up to the IT team to ensure sure that race data can be shared between the race team and the factory from anywhere in the world. That is why it is so important that the data center at the Milton Keynes headquarters is in peak condition 24/7 year-round. To keep an eye on things, the IT team relies on the thermal imaging capabilities of the FLIR ONE Pro.

It's obvious that the skills of a race car driver are a major part of the competitive edge of Formula One. But what goes on behind the scenes at the race track and the factory is just as – if not more – important. They test aerodynamics in the wind tunnel, monitor various sensors on the car, and run virtual simulations and analytics to make sure the car will perform at its best. There is a lot of data to keep track of, and all of it needs to be stored and available for instant access wherever the team is travelling during the race season.

THE IMPORTANCE OF THE DATA CENTER

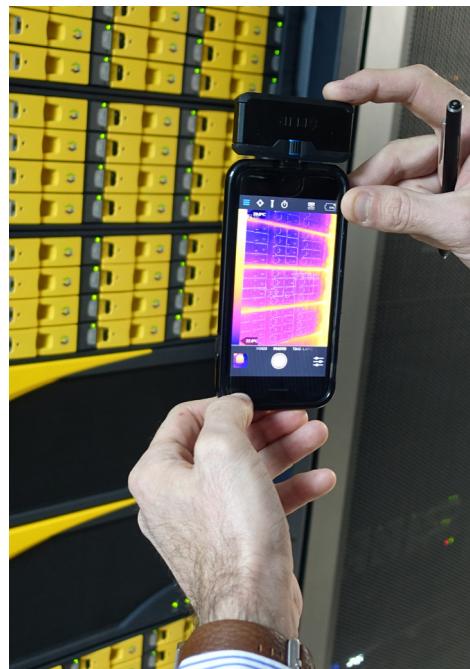
Aston Martin Red Bull Racing has about 700 employees. During a race weekend, a group of about 60 employees will travel to the race. This doesn't mean the others will have the weekend off. A team of engineers and mechanics must work out of the factory during the race weekend to offer remote support. Gary French, the Data Center Manager for Aston Martin Red

Bull Racing, is responsible for keeping the data center operational 24/7. It's his job to ensure that everyone involved with the race can stay connected to all vital data.

"The whole year round, especially during race weekends, we need to make sure the data center operates as efficiently and resiliently as it should," French said. "In the past, we have experienced electrical outages that compromised the performance of the data center. Although these never led to serious problems, it did make us look for a solution to detect these kinds of problems earlier."

AN EXTENSIVE PARTNERSHIP

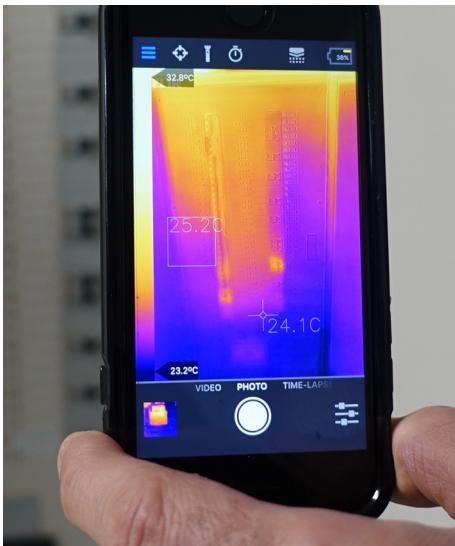
Since 2014, FLIR Systems, Inc. has been an Innovation Partner with Aston Martin Red Bull Racing. Initially, FLIR supported the team by gathering temperature data from the race cars, but the collaboration quickly expanded to other areas as well. The team uses FLIR thermal cameras and test and measurement



Spot checks on racks help highlight hot air recirculation. Here you see the equipment is nice and cool around the air intakes.



Spot checks on electrical distribution boards instantly highlights those supplies with high power loads or poor electrical connections causing breakers to run hot.



Hot air recirculation becomes clearly visible when viewing the front of racks with the FLIR ONE Pro.

equipment for other company assets, and for thermal management of the wind tunnel. They also use FLIR's end-to-end security solutions using a combination of thermal and visible security cameras to monitor both inside and outside of their factory buildings. The partnership has proven to be very fruitful.

"As FLIR products are used within different parts of the team, and because of the partnership, it was easy for us to get advice on which thermal imaging cameras could help us in the data center," French said. "We chose the FLIR ONE Pro."

THE RIGHT TOOL FOR THE JOB

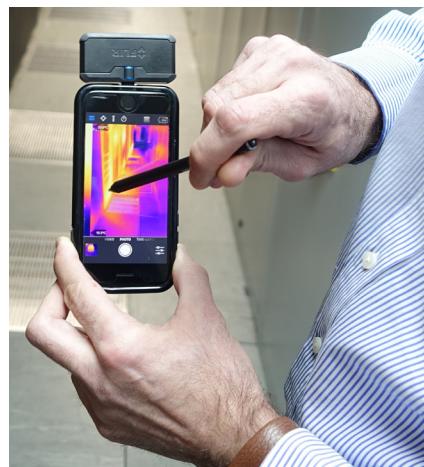
The main challenges for a data center are preventing and managing electrical and cooling issues. Unless you have the right tools to highlight areas of concern, these types of issues are invisible. "Our latest data center has advanced power usage and temperature monitoring, but this will not highlight a poor electrical connection that is getting hot and could risk a potential fire. Nor will it highlight poorly installed hardware that is causing hot air circulation," French said.

To monitor these potential risks, French and his team needed a small and simple thermal camera to carry out basic visual checks around the data center infrastructure, enabling them to highlight areas of concern.

"When the FLIR ONE Pro was demonstrated to us we were sold right away. The size and weight allow you to keep it in your pocket, and you can perform checks on the go for both electrical and

airflow concerns whenever this is required. The quality of the thermal images allows us to give management visibility of any issues and to immediately submit budget requests for remedial work. The integration with your smartphone makes it so easy to share concerns right away," French said.

The FLIR ONE Pro has proven its value to French and his team. "Going forward, I want to kick-off regular thermal spot checks to reduce the risk of power and cooling issues, and to help give management more visibility of any areas of concern," French concludes.



The FLIR ONE Pro highlights how effective water cooled rear doors are at removing heat from the rear of the racks.



The FLIR ONE Pro explained

The FLIR ONE Pro is a thermal imaging camera attachment for iOS and Android that gives you the power to find invisible problems faster than ever. It combines a high-resolution thermal sensor that can measure temperatures up to 400°C (752°F) with powerful measurement tools and report generation capability.

Its revolutionary VividIR™ image processing lets you see more details than previous generations of the FLIR ONE. The updated design features the OneFit™ adjustable connector that fits your phone without having to remove it from its protective case.

An improved FLIR ONE app lets you measure multiple temperatures or regions of interest at once and can stream to your smartwatch for remote viewing.

For more information about thermal imaging cameras or about this application, please visit:

www.flir.eu/flirone

The images displayed may not be representative of the actual resolution of the camera shown.
Images for illustrative purposes only.
Date original created: January 2018
18-0152_INS