



Greetings hackers!

GroupGets has put together the *PureThermal 1 Wi-Fi Integration Challenge* for you all to compete for at SB Hacks! The details of this challenge are on the next page of this document.

Additionally, GroupGets and FLIR are hosting a pre-event webinar to provide further details about their challenges and to answer questions. We strongly encourage you to attend the webinar. The details are below.

SB Hacks FLIR & GroupGets pre-event webinar

The purpose of this webinar is to prep SB Hacks participants for a fun weekend of hacking and making on the FLIR & Group Gets platforms. This is gonna be a fun weekend!

Agenda:

6:00 - Kickoff, overview of FLIR ONE challenge, FLIR ONE tech talk, and Q&A (Cal and Ian)

7:00 - GroupGets introduction, overview of GG challenge, Q&A (Ron)

Instructions to join the webinar:

1. Please join my meeting, Apr 20, 2016 at 6:00 PM EDT.

<https://global.gotomeeting.com/join/756155541>

2. Use your microphone and speakers (VoIP) - a headset is recommended. Or, call in using your telephone.

Dial +1 (571) 317-3122 Access Code: 756-155-541

Audio PIN: Shown after joining the meeting

Meeting ID: 756-155-541

Not at your computer? Click the link to join this meeting from your iPhone®, iPad®, Android® or Windows Phone® device via the GoToMeeting app.



"Calling all SBHackers, GroupGets needs an ACE team to integrate Wi-Fi into its best selling PureThermal 1 FLIR Lepton Smart I/O Module. The desired result is thermal video transmission over Wi-Fi to a browser on a phone or computer. From the start, PT1 was envisioned as a standalone wireless thermal webcam but we've been waiting for the right moment to make it a truly unique IoT device. We are giving an SBHacks team that honor. The "PT1" module was designed right here in Santa Barbara just as we were founded in SB in late 2013."

The GroupGets PureThermal 1 Wi-Fi Integration Challenge

The challenge. We challenge any and all SB Hacks participants to do the following:

- Form a team
- Learn about thermal imaging applications in general
- Learn about the GroupGets PureThermal 1 Smart I/O module (PT1):
<https://groupgets.com/manufacturers/getlab/products/purethermal-1-flir-lepton-smart-i-o-module>
- Integrate Wi-Fi communications onto the PT1 to send thermal images from the module to a web browser on a phone or computer using an ESP8266 Wi-Fi module.

The tools. We'll provide the following for every team that accepts the challenge:

- At least one PT1 module with an ESP8266 Wi-Fi Module connected
- At least one FLIR Lepton thermal imager and STM32 ARM programmer
- Open source sample code on our GitHub repo:
<https://github.com/groupgets/purethermal1-firmware>
- Live or remote technical support throughout most of the event
- NOTE 1: it's strongly recommended that contestants familiarize themselves with the PT1 and ESP8266 Wi-Fi module before the event
- NOTE 2: The sample code for PT1 is written in C
- NOTE 3: The MQTT/MQTT-SN protocol is an open standard for wireless sensor nodes. An implementation that uses any open standard would be well appreciated by the judges. Open source MQTT/MQTT-SN samples here:
<http://www.eclipse.org/paho/>

The Criteria. We'll judge each app submitted on the following criteria to determine the winners:

- The quality of the wireless thermal image received in a browser
- How many clever convenience features are added such as automated notifications on scene changes in the field of view of the Lepton
- How reliable it is – does not crash often
- How elegant the code is – loosely coupled, readable, efficient, commented, maintainable
- Use of open standards such as MQTT/MQTT-SN

The prizes. Here's what's at stake:

- Best PT1 Wi-Fi Integration: \$1000 VISA gift card and a PT1 module for each team member
- Any other team that demonstrates a strong effort will get a PT1 for each member
- GroupGets will promote the winning team and their work on its social media channels