



4th Quarter of 2020

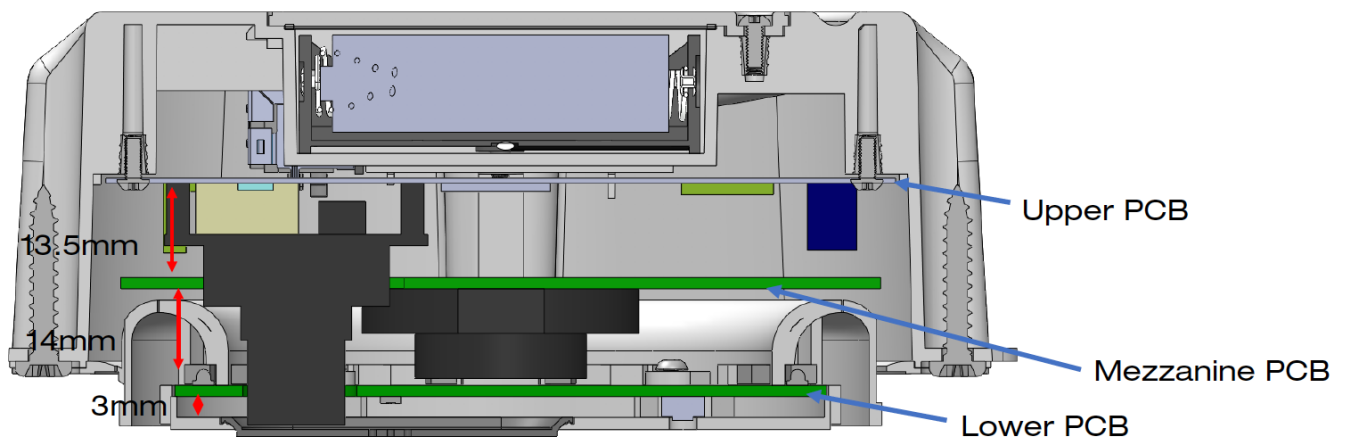
We can't believe it's that time of year again; the holidays are upon us, and as we close out a crazy 2020, we look forward to a new year and all the blessings it has to bring!

Orrigen has been very heavily focused on the mechanical and electrical engineering of the device this quarter. You may have noticed we have not been posting as much on social media and that is due to many of the engineering updates being part of our "secret sauce". We'll highlight the advancements we have made this quarter below, but as always, if you would like more information, please reach out to any of our team members.

Mechanical Engineering

We've made extensive progress mechanically, but the most notable change to the device is the addition of a PCB board. This new board is referred to as the mezzanine PCB and can be seen in the 3D rendering below. We were having challenges fitting every element, specifically the alarm, on two PCBs. With the addition of the third PCB, we can now easily fit an alarm that meets UL's sound pressure level specifications. The upper PCB is now for power and POE, and the camera. The mezzanine PCB is for the alarm, speaker, and WiFi. Finally, the lower PCB is now for the LED ring, antenna, sensors, and microphone.

Our lead mechanical engineer, Annie, has also spent a fair amount of time testing the LED PCB to determine the best material for the housing to avoid hotspots on the LED ring. This LED ring will not only serve as a status indicator for the device, but it will also direct people to the closest point of egress in a property during an emergency event.



Electrical Engineering

Similar to the mechanical development, we have also made great electrical improvements to the device. Of the improvements, the most significant milestone is the release of the second PCB. A portion of the PCB can be seen inside the red circle in the top image. With the PCB powered on, the light ring is fully functioning (see the bottom picture), as well as the antenna, sensors, and microphone. The PCBs are the true “brains” of the device, and it’s really exciting to see all the components working together.

In addition to getting the second PCB released, our lead electrical engineer has focused on sourcing the best options for the gigabit ethernet switch, the WiFi hotspot, and the carbon monoxide alarm. Every component for the device and manufacturer undergoes extensive scrutiny from our engineering teams to ensure each component meets our UL certification, scalability, pricing, and timeline needs.

Finally, in addition to sourcing the outstanding components listed above, the next steps for the electrical engineering team includes additional photodiode testing and reducing of UL data on the smoke alarm, cleaning up and merging the photodiode code on the second PCB, and finding a more suitable IP camera.



Packaging

It was pretty exciting when our mechanical engineering team told us it was time to start thinking about packaging. Because we are focusing on B2B the first phase of our go-to-market strategy, the packaging can be simpler than if we were focusing on B2C. We are currently planning to package the device and the electrical box in one recyclable mailer box (example to the left). We want to make the unpacking process as easy as possible for home builders and have the least chance for parts and pieces to go missing. Inside the mailer box, a white molded cardboard insert will present the electrical box first for pre-drywall install, with the Orrigen unit following.



Manufacturing

We received the manufacturing proformas back from our financial modeling partners in October. We have thoroughly reviewed this data with our engineering team and have narrowed down the list of potential contract manufacturing partners. Again, there's much to consider when selecting a partner – UL certifications, scalability, timeline, and cost. We are not yet to the point that we have to make a decision on who our contract manufacturer(s) will be, but we will be approaching that point very soon. There are many different scenarios in which we can organize the manufacturing and assembly, so we expect this decision to take some time. Our engineering firms have experience working with every contract manufacturer option, so we are thankful for their guidance in helping us make this decision.

Series A Funding

The search continues for a Series A investor. We have had great conversations with potential investors, but many are hesitant to invest right now due to COVID-19. We are optimistic the perfect partner will come along soon. In the meantime, we have revamped our Series A pitch deck and hope this will help us easily spread the word. See a preview of our Series A deck below. We would really appreciate any leads our stakeholder team can provide; please reach out to Mike or Macie if you need more information.

Status and Use of Funds

3rd Q 2017: Provisional Patent Filed
 3rd Q 2018: First Year Funding Secured
 1st Q 2019: PCB Designed
 3rd Q 2019: Prototype Smart Testing
 1st Q 2020: Refinement of UL Smoke Tests
 4th Q 2020: Projected Series A Funding

Competitive Analysis

	Ring Alarm Smoke + CO Listener	First Alert + Ring First Alert Z-Wave + Smoke/CO Jam	First Alert Onlink	First Alert Onlink Safe + Sound	Nest Nest Protect	Orriegen
Smoke + CO Detection		✓	✓	✓	✓	✓
Syncs with Additional Smoke Detectors		✓	✓	✓	✓	✓
Mobile Notifications	✓	✓	✓	✓	✓	✓
Speaker			✓	✓	✓	✓
Microphone			✓	✓	✓	✓
Health Checks				✓	✓	✓
Infrared + Motion Detection					✓	✓
WiFi Hot Spot					✓	✓
10 Year Battery Life			✓	✓	✓	✓
Price Point Per Device	\$34	\$39	\$11.95	\$239.95	\$19	\$225

Value Proposition

Save lives during emergencies

Go-To-Market Plan

Phased Approach: Homebuilder Contracts → Commercial Property Contracts → Retrofit to Existing Homes

There is currently not a single product that offers the convenience, connectivity, and safety Orriegen does, making it a perfect opportunity to enter the Smart Sensor and Smoke Detector markets.

Smart Sensor Market
 In 2015: \$18.58 Billion
 By 2022: \$57.77 Billion
 Annual Growth Rate 18.1%

Smoke Detector Market
 In 2015: \$1.31 Billion
 By 2022: \$2.52 Billion
 Annual Growth Rate 9.2%

Stay in Touch

We are truly so thankful for your ongoing support and belief in our product and company. As always, we are focused on getting Orriegen to market and bringing in revenue. Success comes closer every day!

Please feel free to reach out to any of the team members with any questions or concerns you might have. We love connecting with you on social media as well!

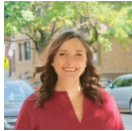
Most importantly, we hope this newsletter finds you and yours happy, safe, and healthy. Although 2020 has been a year full of surprises, our hope is that we can all focus on the blessings the year has brought. We hope you all have a blessed, blissful, and safe holiday season. We can't wait to connect with you in the new year!



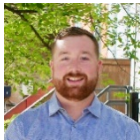
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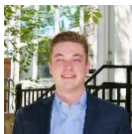
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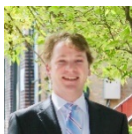
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