Health Detectors & Symptom Gates for the World

Executive Overview

- On March 11, 2020, the WHO called the Coronavirus a pandemic and it is now a threat to the 195 sovereign countries recognized by the United Nations.
- The spread is driven by the infected interacting with the non-infected.
- Helping to screen those who are infected from the general population is a major step towards avoiding the spread of the infection, but no technology has been readily available to do so – **until now**.
- Soter Technologies has developed and is selling a Medical Evaluation Gateway (MEG) called SymptomSense™ through which people pass and are rapidly and effectively screened for signs of illness.
  - Beaufort Medical International is the Exclusive Distributor in the MENA region
- Just as a metal detector detects metal, this product detects vital signs, elevated temperature, respiratory issues and other critical health factors.
- SymptomSense™ Gateway are placed at the entrance of hospitals, office buildings, schools, airports, malls, government buildings and the like.
- It effectively Green-Lights or Red-Lights pedestrians from entering the general population.
- As daily life and commercial activity begin to move forward again, it is incumbent on every business and institution to do what it can to keep its visitors safe and to instill as much confidence as possible in the safety and security of its facilities. Just as metal detectors provide both security and greater confidence throughout the airline industry in the safety of flying, SymptomSense™ provides such added security and confidence to every facility.

What It Can Detect

The SymptomSense™ product is capable of detecting:

– Temperature	– Chest Displacement
– Shortness of Breath	– Respiration Rate
– Heart Rate	– Lung Congestion
– Elevated Heart Rate	– Oxygen Level

Temperature: A thermopile infrared sensor reads the infrared energy from the target and through an optical lens system and then converts the energy into voltage, which is then converted to temperature by calibrating against a standard black box body target.

Shortness of Breath: Shortness of breath is detected by analyzing and correlating elevated heart rate, short chest displacement variation, and high respiration rate.

Heart Rate and Respiration Rate: Miniscule heart movements are other vital signs are detected via FMCW radar. Comparing typical adult chest movements, breathing and heartbeat data to a target's data, the Medical Evaluation Gateway can distinguish signs of illness with high accuracy.

Elevated Heart Rate: This is calculated by looking at average heart rate reading and detecting changes.

Lung Congestion: Lung congestion is detected by high respiration rate and small chest displacement, or low respiration rate and large chest displacement over longer than average duration. By comparing these features to standard, lung congestion can be efficiently detected.

Oxygen Level: The device uses pulse oximetry as a non-invasive measurement of the oxygen saturation. The LEDs enable a photodetector to perceive the non-absorbed light and an algorithm uses the percentage of returned light to compute the oxygen saturation.

Company Background

Soter Technologies is led by Founder & CEO, Derek Peterson, a seasoned entrepreneur with 30+ years of experience. He has led the engineering initiative behind SymptomSense™ since its inception and is responsible for the successful launch of the Company's concurrent product Flysense™, a sensor hub that can specifically detect Vape and e-cigarette smoke, perfectly suitable for schools. The device alerts teachers and security officers of children vaping in the bathrooms. The Company successfully sold over 6000 units sold in 21 countries and continues to market and sell it successfully. With the rise of Coronavirus, and the temporary emptying of schools, the Company is focused now on the SymptomSense™ product to help address the global health crisis.

Key Features

- ✓ **Global Mapping** to track the spread of diseases.
- ✓ **Meta-Data** correlates with external data to spot trends.
- ✓ **Real Time Vitals** provide instant results
- ✓ **Reports & Analytics** reveal geographic spread-trends
- ✓ **Enterprise Ready Deployment** at the Country, State, City or Individual levels
- ✓ **Threshold Alerts** provide notifications when sickness reaches a specific level.
- ✓ **Integration** with legacy security systems (shown right). Facial recognition can also be added as an optional feature

Pricing

The SymptomSense™ product sells for USD$35,000 per unit with a $1,500 annual software update fee. Orders of 1,000 units or more qualify for a discounted price.

Delivery

Presently, the Company expects an 8 to 10-week delivery window. Global demand is putting pressure; thus, delays are to be expected. Units are delivered on a first-come, first-served basis.

Process

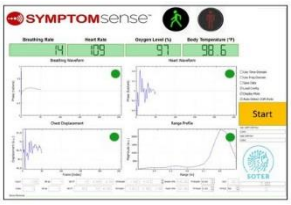
Step 1: Individuals are remotely monitored as they pass through SymptomSense™.

Step 2: SymptomSense™ operator will observe the monitor. They will be notified via silent and visual alarm when a person of interest vital signs are above the configured threshold.

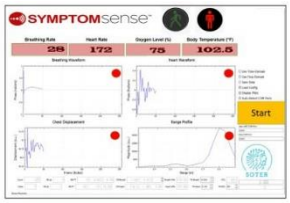
Step 3: Individuals with vital signs that show signs of illness will be sent to meet with the designated healthcare professional.

Control Outputs

The units will provide a target's temperature, chest displacement, indication of shortness of breath, heart rate, indication of elevated heart rate, respiration rate, indication of lung congestion, and oxygen level. Control output screens may vary with software upgrades.



GREEN LIGHT



RED LIGHT

Applications

The SymptomSense devices are designed for both indoor and outdoor use. Installations will likely include: Malls, Restaurant Chains, Movie Theater Chains, Big Box Retail, Schools, Hospitals, Airports, Train Stations, Bus Stations, Houses of Worship, Hotels, Commercial Buildings, Military Bases, Naval and Cruise Ships (prior to boarding) Government Buildings and many more places where people congregate in high numbers.

For More Information

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Early Detection, Less **Infection!**

Understand who is sick, reduce the possibility of mass infection, and detect key vitals with SymptomSense™.

SYMPTOMsense™

The non-invasive approach in providing early detection of sickness.

Remote Health Monitoring

Use location-specific scans to identify regional trends of individuals testing "positive" for correlated symptoms.

Network Ready

Product is off-the-shelf ready, and interconnected to mesh-network to collect and exchange critical data securely and efficiently at each site and their regional authorities.

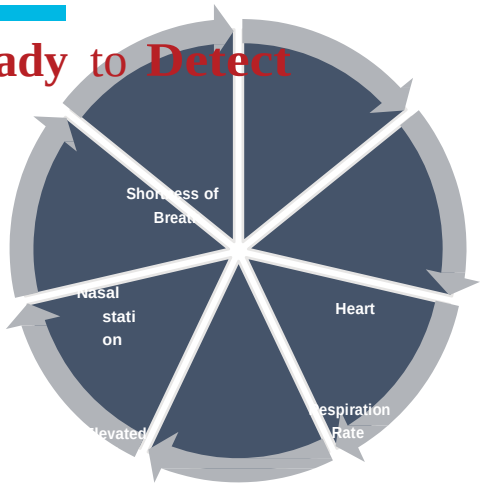
SymptomSense™ Dashboard

Real-time sensor data captured on secure system-of-record, and auto-mapped to customized interactive dashboard at user-friendly portal for monitoring by credentialed stakeholders.

Reports & Analytics

Determine which locations and time-of-day, frequently report positive scans to control the risk of spreading potential illnesses.

Ready to Detect



SOTER

Beaufort Medical International
Hamryiah Free Zone. Sharjah,

www.beaufortmedical.org

Global Trace with Facial Recognition Technology

Health Detection Zones: 20 independent zones

Multi-Unit Synchronization: Synchronization with wired AC power lines or with manual frequency selection for wireless operation

Video Accessories: LED health zone monitor

Access Control: eight-button keypad with numerical codes. Keyboard lock to control access and to enable/disable the keypad.

Passageway Interior Size: Width 30” (0.76 m), Height 80” (2.03 m), Depth 23” (0.58 m)

Overall Exterior Size: Width 35" (0.90 m), Height 87" (2.21 m), Depth 23" (0.58 m)

Shipping Size: Width 35.5" (0.90 m), Height 91.5" (2.32 m), Depth 6.25" (.16 m)

Shipping Weight: 165 lbs. (74 kg)

Warranty: 24 months, limited parts and labor

- **Operating Temperatures:** 4º F (-20º C) to +149º F (65º C); Humidity to 95% non-condensing.
- **Power**: Fully automatic 100 to 240 VAC, 50 or 60 Hertz, 45 watts; no rewiring, switching or adjustments needed.
- **Weatherproofing**: Meets IP 55, IP 65, IEC 529 Standard for moisture, foreign matter protection.
- **Warranty**: 24 months, limited parts and labor

- **Construction:** Attractive scratch and more-resistant laminate. Detection Heads and Support: heavy duty aluminum.
- **Control Outputs**: Solid state switches (low voltage AC or DC) for operating external alarms and control devices.
- **Networking**: Manage individual or groups of sensors and perform real-time statistical
- **Install Guidelines**: Surface mount with structural bolts (A325, steel, plain finish, 1/2"-13 x 5”), and monitored by TPZ camera with orthogonal view of each SymptomSense™ install.

SYMPTOMsense™

Frequently Asked Questions

1. What is the throughput number of people per hour that can be tested?

Currently rated at throughput of 720 people tested per hour. Capable of processing over 5,000 people per 8-Hr shift, with zero downtime.

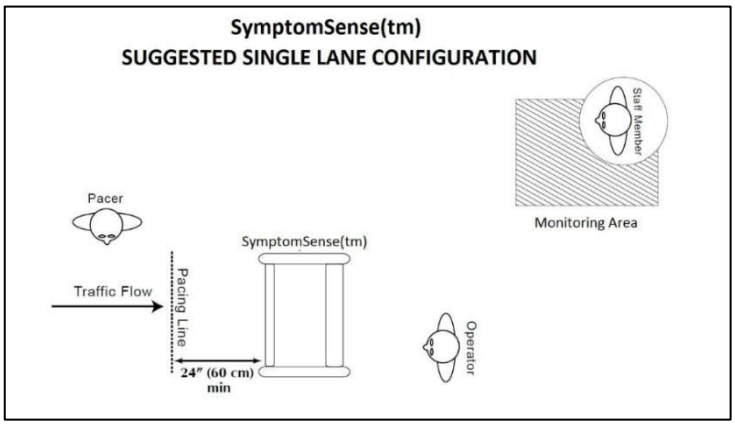
2. What field testing has been done and what results can Soter share?

The system has gone through a series of benchmark tests of known invasive medical equipment such as EKG machines, multiple thermometers and has been holding the line at a 98-99% accuracy level. The Company has followed industry standard engineering processes and ISO procedures and has been working with EVT (Engineering Verification Testing) models that allow it to prove out the base line engineering. The Company then moved to DVT (Design Verification Test) models, which allows it ensure its design is sound and reproducible. The Company finalized its PPT (Pre-Production Test) model and is proceeding to full production. In regard to the Medical Verification, the Company hosted a panel discussion with top medical doctors from across the United States to verify its approach and need for device outputs. The result of this meeting was they were all pleased and gave the greenlight to move forward. As of the end of March 2020, the first orders have been placed and the Company has begun fulfillment.

3. Who has partnered with the Company for the production of the units?

SymptomSense is made from the highest quality component from leading American companies. Among the companies who have partnered with the company include: Texas Instruments, who has provided a number of sensors, Microsoft who is providing iCloud storage, analysis and dissemination of the Medical Evaluation Gateway results and BayFirst, a Microsoft affiliate, who is providing site implementation at critical facilities of government and corporate client sites.

4. What does an implementation look like? How many people are needed to operate each unit? Is the expectation that this will be an additional responsibility for on-site personnel?



The implementation looks very similar to a metal detector at an airport. Traffic Flow should remain consistent and unrestricted as a means of minimizing the time a person remains within the gateway – estimated to be 8 seconds. A single uniformed operator can be placed to supervise two units and a supervisor can monitor the entire health screening area. Security screening personnel should be instructed in the care of persons with special medical needs and use of alternative screening methods that meet the requirements of medical practitioners. Finally, the security screening personnel need to be trained on how to handle red-lit targets, those people who are screened and illness is detected.

5. What is the price per unit?

Each unit sells for USD$45,000++. Bulk discounts are available for order of more than 1000 units. The Company requires a purchase order and a 50% deposit to secure an order number, estimated delivery date, estimated install date and installer contact. The remaining 50% is due at shipping.

6. What are the annual maintenance and software update fees?

$4500 per unit, due at the anniversary date when respective unit is commissioned at site.

7. What is the Operating Temperature & Humidity range?

4° F (-20° C) to +149 ° F (65° C); Humidity up to 95% non-condensing.

8. What are the Power Requirement?

Units operate on both 110 and 240V. Fully automatic conversion, 50 or 60 Hertz, 45 watts. No rewiring, switching or adjustments are needed.

9. What is the Weatherproofing Rating?

Meets IP 55, IP 65, IEC 529 Standard for moisture, foreign matter protection.

10. What is the Product Warranty?

24 months limited parts and labor.

11. What is the false positive rate?

False positive (Type-I error) rate is currently estimated at 1%. In other words, the SymptomSense™ is estimated to be 99% accurate per a defined statistical population.

12. What is the construction type and materials?

Attractive scratch and mark-resistant laminate. Detection Heads & Support: Heavy Duty Aluminum.

13. What is the networking set-up?

The units connect easily to any local area network, wired or wireless internet connection. In remote locations, the units can also connect to the internet over telephone networks.

14. What are the installation guidelines?

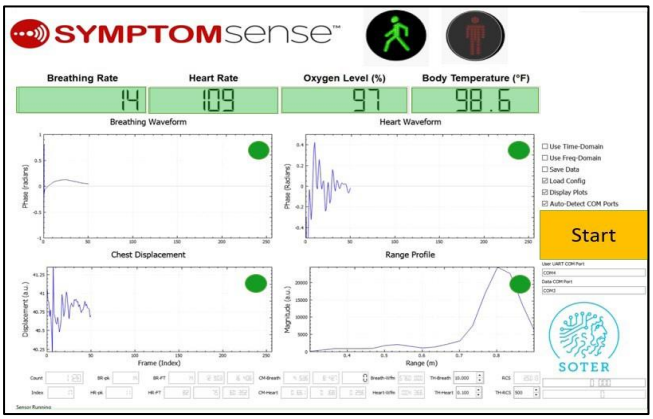
The units are secured by surface mount with structural bolts (A325, steel, plain finish, 1/2"-13 x 5”), and monitored by TPZ camera with orthogonal view of each SymptomSense™ device.

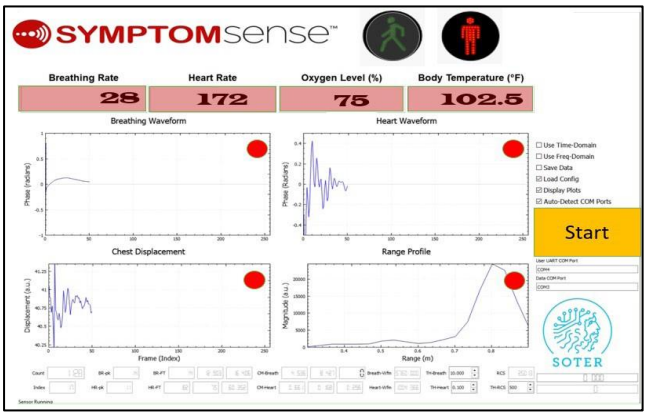
15. Is a video available of the unit’s operations.

Yes, the Company has a video demonstration available upon request.

16. What are the control outputs?

The units will provide a target's temperature, chest displacement, indication of shortness of breath, heart rate, indication of elevated heart rate, respiration rate, indication of lung congestion, and oxygen level. One control output screen is shown right, which may vary as the software is continuously being upgraded and improved.





17. What is the unit's other security recommendations?

Provide prior notification to site security personnel to help assure highest compliance to site security protocol and recommend installation of PTZ networked camera directed from orthogonal view of exit point of each SymptomSense™ unit in such a manner that facial recognition can be active.

18. What is the unit's Passageway Interior Size?

Width 30" (0.76 m), Height 80" (2.03 m), Depth 23" (0.58 m).

19. What is the unit's Overall Exterior Size?

Width 35" (0.90 m), Height 87" (2.21 m), Depth 23" (0.58 m).

20. What is the unit's Shipping Size?

Width 35.5" (0.90 m), Height 91.5" (2.32 m), Depth 6.25" (.16 m).

21. What is the unit's Shipping Weight?

It is 165 lbs. (74 kg).

22. What is the lead time to receive a unit?

The lead time is currently at 4-weeks after receipt of a purchase order and the 50% deposit. This stated, given that demand is substantially increasing each week, the lead time depends on size of order, any customization of order, and when the order is placed. There may also be an estimated 10-days lead time to ship order and clear customs.

23. What is production capacity?

The Company is presently ramping up to hundreds per month and is in discussions with a Tier 1 manufacturer (traded on NASDAQ with $24 billion in revenue last year) that would be able to produce thousands of units per month.

24. Does the unit have FDA certification?

The device is completely non-invasive and does not require FDA certification since it does not touch or come in contact with the human body at any point.

25. Does the unit have UL and CE certifications?

The device uses UL and CE certified power supply and components.

26. What additional features will be added?

The Company intends to incorporate Facial Recognition (optional), Metal Detection and Concealed Weapon Detection (CWD) into its next generation units. This will allow customers to eliminate their existing metal detectors.

27. How are privacy concerns handled?

Companies and government agencies are seeking to balance privacy concerns versus the health and economic needs and the greater public safety needs. In the United States, the decision has been made that if the Centers for Disease Control (CDC) or regional health authority proclaims a pandemic has spread in an area, then it is both a legal and moral requirement to measure an individual or workers' temperature and that doing so supersedes privacy concerns according to Equal Employment Opportunity Commission (EEOC). For more information visit: https://www.eeoc.gov/eeoc/newsroom/wysk/wysk_ada_rehabilitaion_act_coronavirus.cfm. Additionally, the infrared forehead thermometers ("thermometer guns") are "notoriously unreliable," according to medical experts quoted in an article in The New York Times https://www.nytimes.com/2020/02/14/business/coronavirus-temperature-sensor-guns.html. The SymptomSense™ Medical Evaluation Gateway provides a private, non-invasive, contact-free method of measuring External Body Temperature with 0.2 degrees of accuracy, while simultaneously measuring of Heart Rate, Respiration Rate, and Blood Oxygen Level to allow for correlating to known virus symptoms, including but limited to the current Coronavirus (COVID-19), within ~8 seconds. The system does not record name or social security number, thereby protecting the individual's privacy. Each scan is simply provided a number. (For example: Scan 3,455 was green-lit and scan 3,456 was red-lit with elevated temperature of 102 degrees and an elevated heartrate of 150). This experience can be tailored per community, company, institution and government agency in accordance with their respective circumstance, and in compliance with respective building or site security as per regional guidelines. Therefore, while measurement of an individual's vital signs is supported, communities, companies, institutions, and government agencies around the world would be better served if using SymptomSense™ to help assure highest accuracy and highest discretion or privacy available given respective circumstance, and compliance to regional or federal guidelines.

28. What is the procedure to order a unit?

The Company requires a purchase order and a 50% deposit when the order is placed. The remaining 50% is due at shipping.

29. Can I become a distributor of the SymptomSense™ units in my country?

Yes. The Company is seeking experienced distributors. Exclusivity may be negotiated.

30. Where can I get more information or discuss placing an order, regional distribution or investment into the Company?

Please call or WhatsApp Jihad Fakhreddine at +971504870288 or contact via email at jfakhreddine@beaufortmedical.org.

SYMPTOMsense™