

Self-check kiosk to detect, prevent Covid-19

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New Delhi, Sept 09 (India Science Wire): With the gradual easing of public lockdown measures and return to normal life, it is the need of the hour to ensure safe entry to any premises. Indian Institute of Technology Guwahati (IIT Guwahati) in collaboration with Workspace Metal Solutions Private Limited, Udaipur, has developed a first-of-its-kind self-check kiosk. The small structure helps by streamlining flow of people through the kiosk. The Kiosk only takes about 30 seconds to check whether the person is safe to enter the premises or not. It is a quick yet accurate contactless check which can determine if an individual is running a fever, low blood oxygen levels and, therefore, potentially has COVID-19 or any other viral or bacterial infection.

The fully automated touchless self-check kiosk has been designed as per the World Health Organisation (WHO) guidelines. It instantly detects and records the syndromes associated with COVID-19 like body temperature and blood oxygen content and raises alarm in case it is beyond the limits. The Kiosk features a first of its kind UV-C disinfectant box capable of killing viruses/bacteria present on the surfaces of luggage, bags, keys, mobiles, wallets etc. thereby reducing the risk of spreading.



Self-check kiosk installed at IIT Guwahati

The following steps are involved when a person enters the premise. The person has to stand on the footmarks marked in front of the kiosk after removing the face mask and align the face in the grid displayed on the screen to measure the body temperature. Once the temperature is measured, the individual will have to wave its hand over the sensor of the UV-C chamber to open its door for keeping the belongings inside. UV-C box will perform 360° disinfection on the entire exposed surface. The individual will have to place its index finger on the SpO₂ sensor to check the oxygen saturation in the body (Oxygen above 95% is a sign of a healthy human body). After this, the individual can disinfect the hands by placing them below the automatic sanitizer dispenser unit. Post hand sanitization, the individual can collect the belongings from UV-C chamber and can proceed further.



Self-check kiosk

A self-check kiosk has already been installed at IIT Guwahati campus. Dr. Senthilmurugan Subbiah, Associate Professor, Department of chemical engineering, IIT Guwahati, said, “The kiosk installed at IIT Guwahati campus is IoT enabled and its data analysis system is capable of face identification and creating employee/person health historical data. Kiosk’s AI-based software system is capable of monitoring an individual’s health from historical data and in case of abnormal temperature and SpO2 level measured than the kiosk generates the alarm to health department authorities of their company/organisation/institute. The innovative UVC system design is capable of emitting UVC radiation from 6 surfaces of UVC box and that provides 99.99 % of viruses’/bacteria disinfection in 10 seconds.”

“Current catastrophic situation made us realise the importance of hygiene for a safe environment. ‘The self-check kiosk’ is an invaluable solution for quick detection of illnesses and reduce the spread of bacteria & viruses. This is a 100% Indian product and I feel that it will be a very good resource to fight the pandemic” said Puneet Talesara, IIT-Guwahati Alumni and Founder, Workspace Metal Solutions Private Limited, Udaipur.

The cost of a self-check kiosk varies from 3.5 lakh to 7.5 lakh depending on the specification and features. The product has already been commercialised. The team has also filed for a patent. The self-check kiosk has been developed by Dr.Senthilmurugan Subbiah, Associate Professor, Department of Chemical Engineering, IIT Guwahati, and Mr. Puneet Talesara, Founder, Workspace Group, and alumnus of IIT Guwahati. (India Science Wire)

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