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(51) International classification	:A61G 11/00, A61B 5/01, A61B 5/00, A61B 5/0205, A61B 5/145	(71)Name of Applicant : 1)VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS) Address of Applicant :THE REGISTRAR, VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS), PALLAVARAM, CHENNAI-600117, TAMIL NADU, INDIA herlinsam.me@gmail.com Tamil Nadu India
(31) Priority Document No	:NA	(72)Name of Inventor : 1)Dr.K. Sheela 2)Dr.R.Mahalakshmi 3)Dr.B.Suresh 4)Dr.B.Booba 5)Dr. Vishwa Priya V 6)Dr.V.Poornima 7)Dr.N.Kalaichelvi 8)Dr.B.Kamatchy 9)Dr.P .Arivazhagan
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(57) Abstract :

The present invention relates to a neonatal care system and particularly to an Internet of Things (IoT) integrated incubator designed for monitoring and maintaining optimal physiological conditions for newborn infants. Premature and critically ill neonates require controlled environmental conditions such as stable temperature, humidity, and oxygen levels in order to ensure healthy development and survival. The proposed invention provides an intelligent incubator system that integrates multiple physiological sensors, environmental monitoring modules, and wireless communication technologies to enable real-time monitoring and remote supervision of infant health parameters. The incubator comprises a transparent enclosure configured to house a newborn infant, an environmental control system configured to regulate temperature, humidity and airflow, and a plurality of biomedical sensors configured to continuously monitor vital parameters including heart rate, respiration rate, oxygen saturation level, body temperature and movement. A microcontroller-based control unit processes the collected sensor data and dynamically adjusts environmental conditions inside the incubator. The system further includes an IoT communication module configured to transmit real-time health data and alerts to a remote monitoring platform accessible by healthcare professionals.

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