PHYTEC

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Smart Pulse Oximeter
ODM Design

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Covid-19 pandemic has taught us a lot, mainly to take care of ourselves and keep health records even before going to a hospital. Pulse Oximeter and digital thermometer are very much vital requirement for almost every family which we have learned from the Covid-19 pandemic experience. In the near future in the health-conscious market there will be an enormous opportunity for organisations working on embedded systems and product development specially to add Pulse Oximeter to their product portfolio.

PHYTEC as an Embedded Mother board Manufacturing organisation, has developed Pulse Oximeter and provide as white label certified product, also provide customization requests as per partners need. **Utilise PHYTEC's ODM design expertise to develop *Made In India* Pulse Oximeter within 6 to 8 weeks.**

PHYTEC's small size SpO2 OEM module is suitable for oximetry applications for integration on devices running with batteries. Multiple connectivity option to choose from, such as USB, UART, BLE, Wi-Fi, LoRA & RF Mesh.

It has excellent algorithms for motion artifacts rejection providing a continuous correct detection of saturation and pulse. Its high accuracy and sensitivity allowing low blood perfusion to be readable, match the requirements for OR, ICU and NICU use, suitable for neonate to adult patients.

Features of the Pulse Oximeter Design:

- Small Size for easy integration and assembly (00mm x 00mm, 00mm high.
- Real time transmission of pulse wave signal over UART, USB, WiFi, LoRA & RF Mesh.
- High accuracy and reliability when low blood perfusion (0.075%),
- Suitable for application in Home for family, OR, ICU & NICU.
- Advanced anti-motion algorithm preventing interferences and false alarms
- Accuracy according to the requirements of Medical Standards

Technical Specifications:

Electrical and Mechanical Specifications	Range and Accuracy
• MCU: RL78/G1 • Sensor: RENESAS OB1203SD • Interface Options: UART, USB, WiFi, LoRA & RF Mesh (To be Selected before design) • Compatible with Linux, Windows, and Android • Voltage: +3V DC, offset voltage between ±10% of full range • Voltage Noise: < 50mV • Dimension: 20x50mm (Customisable)	**SpO2** • Range: 0 ~ 100% • Accuracy: from 70 ~ 100%, ±2%; **BPM** • Range: 25 ~ 250bpm • Accuracy: ±2% **Perfusion Index** • Range: 0.075 ~ 20% • Accuracy: undefined