

OEM Use Case: Healthcare

Embedded Vision: Remote Patient monitoring

Initial situation

Today's healthcare systems are under tremendous pressure - from handling increased patient load to dealing with a shortage of health workers. Hence, cameras are becoming increasingly significant in modern patient care journeys. Imaging technologies help medical device manufacturers to enable healthcare providers and practitioners' new ways to examine, diagnose, monitor, and treat patients with limited resources – and in a contactless manner, which has been a crucial lesson learned following the recent pandemic



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What the client needed

The client was looking for a cost-effective camera solution to enable the device to monitor a patient's room for safety and behavioural analysis. When placed inside the care unit, it should capture the patients' movements and send the data through the network to a remote station. The device ensures that the patient's bed is within the camera's FoV while being mounted on a wall about 15 feet away.

The solution

An off the shelf See3CAM CU135 camera, compatible with the client's own platform was then customised to reflect the needs of this critical application. This included integrating a motorized IR filter holder for 24-hours streaming and a compact lens to cover field of view and zoom requirements.

Key camera requirements

- High-resolution with HDR capability
- Streaming 24 hours - day (room light) & night (dark or low-light)
- Zoom, pan, and tilt capabilities
- Low-light and IR performance
- USB3.0 interface



See3CAM CU135, 13MP USB camera

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Compliance

Electronic devices used in medical environments must meet stringent safety and performance standards. This custom camera solution was certified for Class B Level emissions and immunity compliance measures

Results and benefits:

This embedded vision solution enabled a remote monitoring system that provided 24/7 real time monitoring of patients within a critical care environment. Not only has this improved patient care, but it has also done so in one of the most challenging medical scenarios possible. Where clinical intervention is not immediately needed, it has created a safer working environment for critical care staff.

- 5000+ COVID patients monitored in 97 hospitals (March-April 2020)
- 20,000+ patients monitored across multiple hospitals
- 50,00,000+ monitor hours clocked.



See3CAM CU135, 13MP USB camera with board



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The QUAD Advanced Systems and e-con Systems partnership offers end-to-end camera solutions to meet the needs of the medical and healthcare industry.

e-con Systems has a strong foothold in the medical device industry – having empowered clients to integrate unique camera solutions for medical applications in ophthalmology, dentistry, dermatology, lab equipment's, microscopy, assistive technology, Point-of-care, patient care, and patient monitoring.



Your Advanced Systems team are here to help you with your OEM integration requirements. Work with us to develop solutions that take advantage of these intelligent, embedded vision systems that are driving significant improvements by delivering enhanced data and insights that directly contribute to world-class industry experiences.