

## VU University Medical Center's Neonatology Department introduces Baby Viewer.

24 hour access to live images of your baby.



Organization:  
VU University Medical  
Center

Location:  
Amsterdam, Netherlands

Industry segment:  
Healthcare

Application:  
Neonatal monitoring

Axis partner:  
J&K Automatisering

### Mission

The VU University Medical Center has placed cameras over incubators to let parents see their child at any time they wish via the Internet.

### Solution

The VU University Medical Center chose an IP-based camera, particularly because they are easy to use. As the newborns are mostly incubated in a darkened environment, the VU University Medical Center thought it important for the cameras to produce images of excellent quality under these conditions.

### Result

The VU University Medical Center is extremely satisfied with the Baby Viewers and believes them to be a great step forward for the parents and children involved with this department. The VU University Medical Center's Neonatal Intensive Care Unit (NICU) consists of two units situated on the eighth floor. It is a well-ordered department with the capacity to admit twenty newborns, fifteen in Intensive Care and five in High Care.

VU University Medical Center's NICU is one of 10 perinatal centers in the Netherlands. This department and the Neonatal Intensive Care Unit at the Academic Medical Center (AMC) work together to provide care to the regions North Holland and Flevoland. If other units do not have enough room, newborns from other regions are admitted here. The NICU is a unique nursing ward. It cares for newborns with complex and acute issues at birth. This is where their vital bodily functions are monitored, supported and, if needed, supplemented by machines. The infants are treated after a pregnancy term of 25 weeks or more.

"Because life at home does not stop, parents are not always able to visit their children every day. So for them the Baby Viewer is a huge added advantage. Now they can log on to the VU University Medical Center's website whenever they please and view their baby via a secure Internet portal. They can also very easily show their child to their colleagues and other people in their lives, for example."

Margot van Elburg, Neonatology Team Leader at the VU University Medical Center.

### Accessible and easy to use

The images are accessed via a single portal, a central point of access to the images taken by the cameras. The advantage of this portal is that messages can be posted on the screen. Perhaps the child has been removed from the cot as part of its care. If parents log on while this is happening, rather than seeing an empty cot they will read a message saying, "We are looking after your baby." The camera may have a technical fault or might have switched off for some reason. If so, the system displays the message, "No image is currently available due to a fault or because the camera has been switched off." The system also has an emergency button. When this button is pressed, power to the camera in question is cut and the feed disappears. Each camera can also be cut simultaneously with just one push of the button. Once the situation has normalized, the camera images can be released once more.

### AXIS 221 Network Camera

The VU University Medical Center approached J&K Automatisering, a company with experience in baby camera solutions since 2006, with a proposal for the Baby Viewer project. J&K Automatisering recommended the AXIS 221 Network Camera with built-in web server, because it has the best day and night functionality. Stichting DaDa, a foundation that works towards better healthcare for children in the Netherlands, made a financial contribution towards installing the cameras.

The camera automatically switches between color and black & white when illumination levels change, which is important as the babies in the neonatology department are mostly in low light conditions. The combination of CCD and lens provides the Infrared sensitivity required to produce good quality images in low-light environments.

The camera supports Power over Ethernet technology and so receives its power supply from the network cable which makes installing and turning the camera on and off during emergencies easier and less expensive. The midspan ensures that electricity is fed to the camera through the network cable. The images from the twenty cameras can be viewed live at both nurses' stations, even when access through the portal has been switched off. The nursing staff see the Baby Viewer mostly as a positive development due to its ease of use.

### Satisfaction

Many parents have used this service offered by the VU University Medical Center since its inception and their reactions are entirely positive.

According to Van Elburg: "Of course, the system isn't designed to replace visiting the baby, but people at home want to know that everything's OK. Plus viewing the images gives parents the feeling that they are closer to their baby. The images give confirmation and reassurance. Moreover, both the parents and the nursing staff find the system very easy to use. As soon as the baby is registered, the department prints a user guide to the Baby Viewer with a separate log-in code solely for the parents' use. This is linked to the camera trained on their baby. The camera is then activated with one click of the mouse. It's all very user-friendly."

Before placing the cameras, nursing staff were worried that they would receive increased numbers of calls from worried parents who, for example, saw their child crying in the Internet images. Their worries proved unfounded. Van Elburg concluded, "We have not seen a rise in worried parents calling us because of the images they see. In fact, it is just the opposite - we see a great deal of satisfaction in the parents who find the images reassuring. The service is highly appreciated."

