INFORMATION

AXIS Q6000-E: Mounting height recommendations

The general recommendation for the optimal mounting of AXIS Q6000-E is five (5) meters (16 feet) off the ground. This provide adequate vertical coverage, reasonable level of image detail (pixel density) and optimal zoom angle (Q60-E) for facial identification.
At a mounting height of five meters, it is estimated that AXIS Q6000-E can provide a 360° field of view that covers more than 20,000 m² (215,000 sq ft) - more than the size of four football fields.

There are three key considerations to take into account when installing an AXIS Q6000-E:

- area of coverage
- image detail (pixel density)
- zoom angle

Area of coverage
In situational awareness mode (Quad View in Q6000-E), it is interesting to note that the four cameras provide the *same* horizontal area of coverage regardless of mounting height. The vertical area of coverage *increases* with the mounting height.

Image detail (pixel density)
However, the higher up the camera is mounted, the smaller the pixel density becomes for an object (i.e. objects will have fewer pixels and thereby less details—which is readily visible in Quad View.

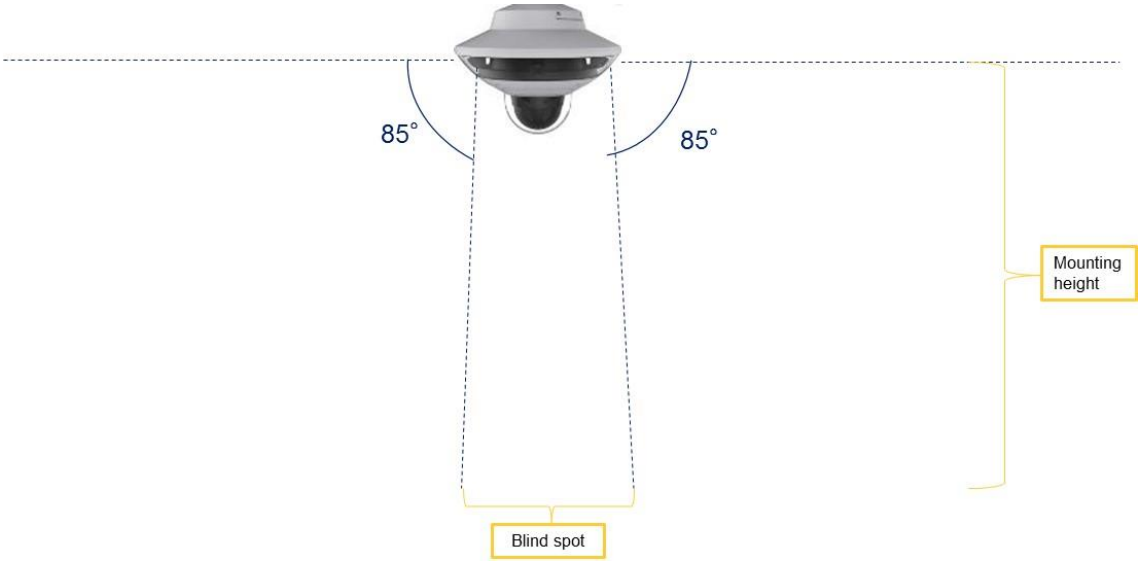
Example of calculation pixel/m

Distance to object (m)	**5**	**5**	**10**	**10**	**30**
Resolution (px)	1280	960	1280	960	1280
Angle of view (horizontal) / 2	76	56	76	56	76
Calculations (px/m)	**31,9**	**64,8**	**16,0**	**32,4**	**5,3**

$$\frac{Resolution}{(\text{Distance to object} * 2) * \tan\frac{Angle\ of\ view}{2}}$$

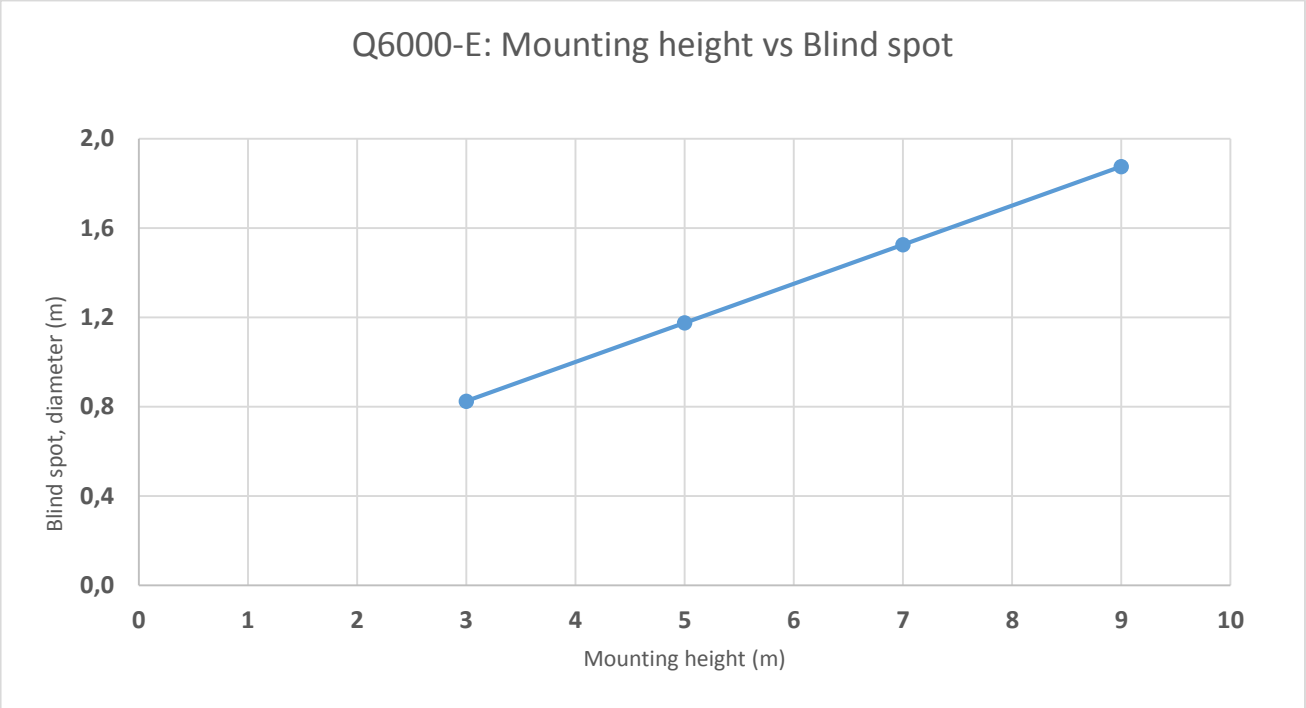
Zoom angle
In addition, when using the zoom lens of the Q60-E, the view angle will be steeper, which makes it more difficult for facial identification if a person is standing close to the camera.

Blind spot
Another aspect is the blind spot underneath the camera that will be affected by the mounting height. Regardless of the resolution format (4:3 or 16:9), the **vertical FoV remains 85°** meaning there is practically no blind spot except under the camera.



With the Q60-E initial position, meaning the camera facing down, the PTZ FoV covers pretty much the remaining blind spot under the Q6000-E. The blind spot can be covered by the Q60-E, and should therefore not be of any problem for the installation.

Furthermore, an object will not be able to leave the blind spot without being captured by the Q6000-E as long as the cameras are covering 360º. Illustration of mounting height vs blind spot will demonstrate that aspect.



Conclusion

Our recommendations is intended to give assistance for making decision for an optimal installation as possible.

Best regards,
AXIS PTZ team