

# ISRAELIS CONFIDENT IN AEROSTAT SURVEILLANCE

Controp's new SPEED-A camera pods and tethered balloons have proven themselves a powerful combination in recent months, particularly during Operation *Cast Lead*. Typically operating at a height of 305 m (1,000 ft), their persistent surveillance capability with continuous-zoom IR cameras detected a number of rocket attacks and ambushes in the preparation phase, giving warnings timely and precise enough for the attacks to be prevented.

Tactical aerostats are attracting increasing attention at the moment because of their promise of persistence, ease and speed of deployment, and broad coverage at low life-cycle cost – but optimising cameras to give their best while attached to a balloon is far from a trivial task, says Controp's marketing VP, Johnny Carni. The key, he tells *Digital Battlespace*, is to stabilise it properly in pitch, yaw and roll using thorough knowledge of the dynamics – particularly the aerodynamics – of aerostats, which are subject to frequent gusts of wind and are constantly in complex motion over large displacements, despite being tied to the ground. Their range of operating altitudes is generally from around 152 m (500 ft) to 914 m (3,000 ft).

Also critical, he says, is reducing the weight of the camera while still allowing good long-range performance. Smaller tactical aerostat systems, such as that from Aeronautics Ltd, with whom Controp is working, tend to be more stable than larger ones, but they can't carry as much, so light sensor packages are a must. Another plus point of the smaller aerostat is the ease and speed with which it can be transported to where it is needed and launched to its operating altitude. The ground infrastructure for large aerostats, in contrast, can be very complex and expensive.

The tactical aerostat, with its rapid deployment capability – a typical launch time once in the right location is about three hours, and it can be recovered in about an hour – is likely to find applications in force protection and base security, possibly as a rival to some UAV systems, believes Carni, because of the much lower operating costs involved.

The need for low weight led Controp to design SPEED-A with a housing made largely from reinforced plastic composites to contain the FOX 720, one of the company's own FOX family of IR cameras, known for its continuous-zoom capabilities over a long range of focal lengths and very accurate geolocation capabilities.

Aero India 2009 was the first time that SPEED-A had been shown outside Israel, and it was the same story for a new member of the FOX family. The FOX 1400, as the designation suggests, has a 1,400 mm (4.6 ft) focal length IR lens with a x35 magnification capability.