

TCAS for UAVs? ACSS Is Testing M2CAS, an IR Camera System

There are enough UAVs out there now for them to have started bumping into things.

“Although we have TCAS [traffic collision avoidance system] on the Global Hawk, there are no procedures to operate it autonomously because TCAS was certified with the pilot in the loop,” says Kris Ganase, president of ACSS, the joint venture company of L-3 Communications and Thales known for its airborne TCAS II and T2CAS Traffic Collision Avoidance Systems. “So you have to have some sort of visual contact.”

The Mode-S transponder-based TCAS system has another problem for UAVs—it depends on them signaling their position, which one wouldn’t want to do if they are supposed to be stealthy.

The answer? A very high-power infrared camera that can identify approaching aircraft from several miles away.

ACSS is installing an experimental camera in the nose of its company test airplane to see whether it can pick up aircraft as accurately as a transponder would, and it will fly it in September.



Kris Ganase.

Future plans call to fuse the images from the camera with transponder returns for greater situational awareness.

Ganase said he didn’t know how the camera worked. “I think that’s secret,” he said. Nevertheless, with ACSS’s penchant for squaring the circle, the prospective product already has a name: M2CAS.