

DETECT . LOCATE . PROTECT

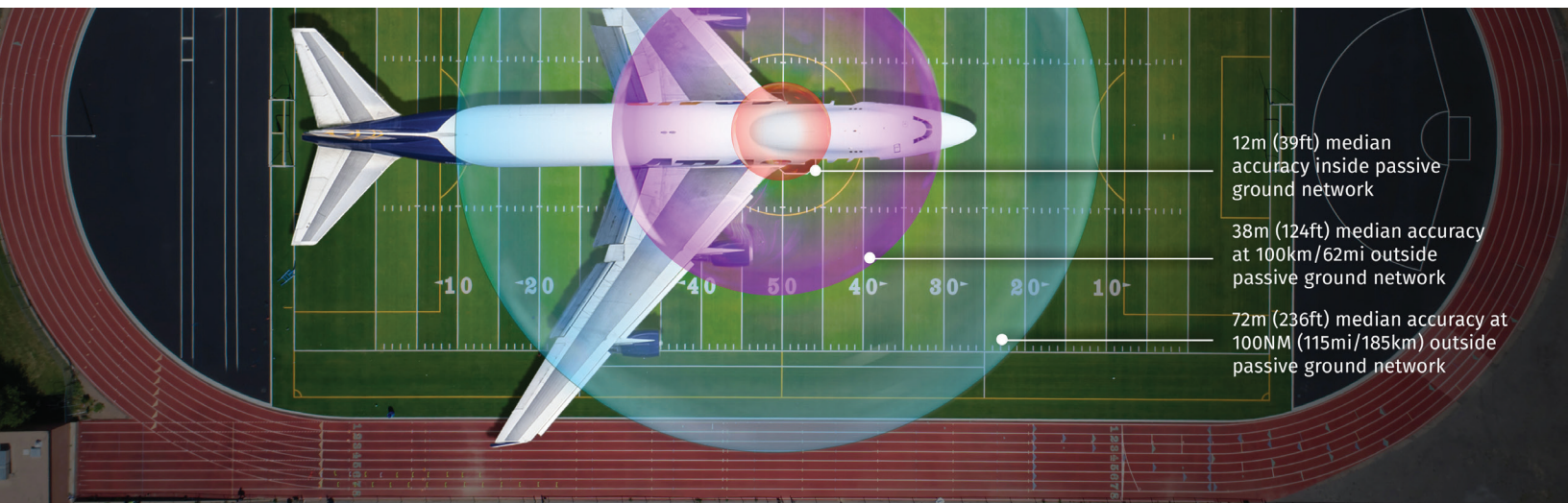
CRFS on target – Latest 3D Geolocation technology pinpoints airborne platforms

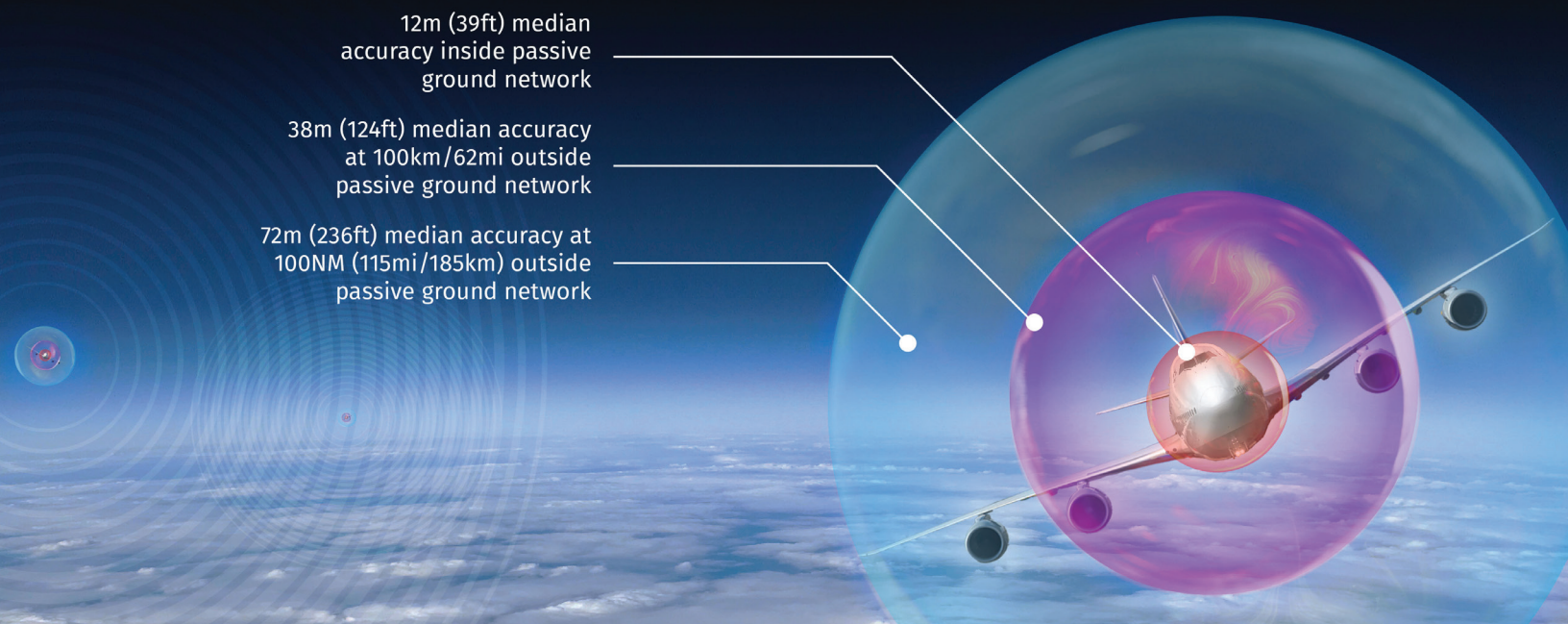
CRFS, a global leader in RF spectrum monitoring, intelligence, and geolocation solutions, has completed a new phase of research and development into real-time passive 3D TDOA geolocation techniques to pinpoint airborne platforms over many hundreds of kilometers.

Having an accurate airspace picture is critical for both civilian and military users. To understand how the new algorithms enhance accuracy, CRFS captured over 100,000 aircraft ADS-B transmissions across New York state using 4 RFeye receivers roughly 45 miles (75km) apart. The RF transmissions were then geolocated using a three-dimensional Time Difference Of Arrival (3D TDOA) technique. To assess accuracy, the 3D TDOA geolocation results were compared to the decoded ADS-B GPS transmissions.

The results achieved within the network demonstrated a range accuracy of 16 meters (95% CL), roughly half a Boeing 747-8 tail span, and 70 meters (95% CL) altitude. At 60 miles (100 kilometres) outside the network, range accuracy was 72 meters (95% CL). To put that into context, at 60 miles (100 kilometers) outside the network, latitude longitude is accurate to within a fuselage length of a Boeing 747-8 intercontinental aircraft, traveling at speed.

The same data set was used to derive bearing accuracy at 100NM (165km). At this distance, the system produced range accuracy of 139 meters equivalent to a directional bearing accuracy of just 0.02° (95% CL), alongside elevation error of only 0.4° (95% CL).

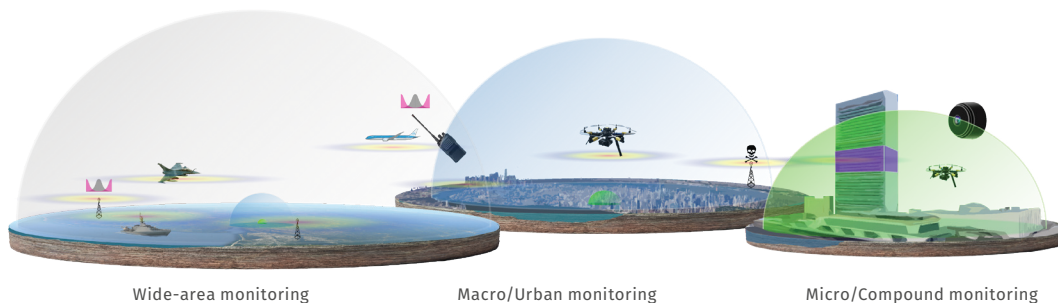




Product Manager for the RFeye AirDefense system, Malcolm Sellars commented “I’m so proud of this product, and what has been achieved with its three-dimensional positioning accuracy. A passive system that gives 360° visibility without any intrinsic blind spots is such a powerful proposition”. Sellars continued, “Remember, it’s not just a geolocation you get here, it’s the signals intelligence that comes with it, making this an invaluable tool for the modern electronic warfighter”.

The latest update to the ground-based RFeye AirDefense solution has completed real-world trials and is available for customers with immediate effect. RFeye AirDefense is available direct from CRFS or their many international distribution partners.

For further information or to schedule a demonstration visit: [crfs.com](https://www.crfs.com)



See through the noise

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