# *TCAS Simulation*

BSC
Associates, LLC

BSC Associates, LLC (BSC) has available a Traffic Collision Avoidance System (TCAS) Simulator that utilizes a software simulation of the TCAS Processor. It provides the FAA collision avoidance algorithms, avoidance maneuvers and alerting and display data. The system consists of an autonomous hardware suite providing a universal capability for driving a variety of TCAS vendor equipment and cockpit indicators and accommodating various aircraft types.

The design minimizes simulator downtime during installation. Only development of I/O software for the specific simulator is required. The I/O software enables transfer of aircraft state data to the TCAS and threat data to the host computer for visual, Instructor Operator Station (IOS) and ATC functions. The hardware architecture consists of commercially available elements, including an industrial grade PC, installed in a 14-slot chassis. The PC executes the TCAS model, services interfaces to the host, generates the audio alerts and interfaces. ARINC-429 and discrete TCAS signals. Since discrete I/O is contained in the TCAS chassis, no additional I/O channels are required. Intrusion into other existing simulator resources, such as host computer and IOS systems, is greatly minimized.

Where the existing visual system can accommodate, the TCAS simulator provides for the display of intruder traffic. A touch control Electroluminescent (EL) graphic panel provides for instructor control of the TCAS scenarios, or the system may be integrated with the existing IOS. Preset or instructor determined scenarios are provided.

Innovative Solutions for Cost Effective Simulator Life Extensions
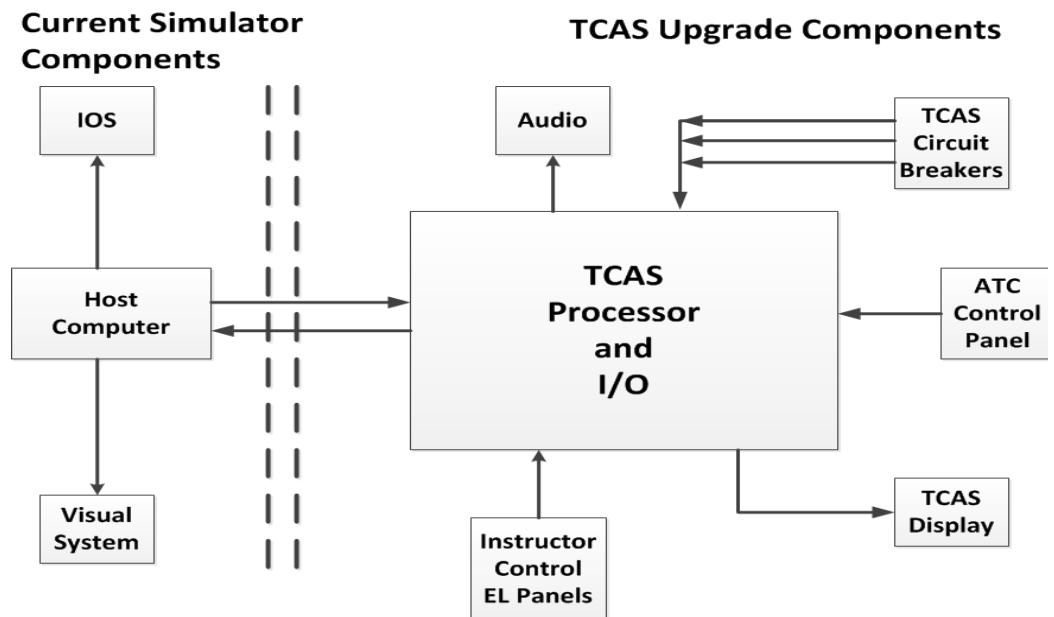
Typical TCAS Layout

BSC Associates, LLC
151 Court Street
Binghamton, NY 13901
Phone: 607-321-2980