

## **BLUE BOXER EXTENDED REALITY (BBXR) TRAINING SYSTEM**

### High-fidelity Deployable Flight Training Device

The Blue Boxer™ Extended Reality (BBXR) deployable flight training system built by L3Harris Link Training & Simulation is a high-fidelity device in a condensed form factor. Engineered from inception as a low-cost, low-footprint system, it is the latest flight training solution in the L3Harris Link family of technologies designed to help its customers achieve training objectives more effectively and efficiently. When paired with L3Harris Link's patented Adaptive Learning Engine (ALE), the BBXR provides an "always on" assessment capability of pilot performance across a wide range of military aviation training.

The training suite unifies the functionality of physical and virtual aircraft equipment allowing high-fidelity skill-set training from individual to unit tasks or mission rehearsal in a simulated environment. Key features and benefits:

- > Deployable to austere environments, increasing accessibility and training opportunities
- > Mixed Reality approach maintains tactile interaction within the cockpit for realism
- > Operational Flight Program (actual or emulated) ensures fidelity of representation
- > Expandable for joint networked training anywhere, anytime
- > Optimized student and instructor coaching through real-time, immediate feedback
- > Biometric analysis provides more holistic representation of pilot performance

#### **FLEXIBILITY IN DIVERSE ENVIRONMENTS**

Optimally designed for space-constrained users in environments including expeditionary airfields or aircraft carrier ready rooms, the portable BBXR training system is vertically encased minimizing floor space requirements. Human transportable, the device is less than 300 pounds and designed to fit through non-standard openings and measures 72 inches long by 23 inches deep with the cover removed. Power supply is a standard 120-volt outlet.

#### **MIXED REALITY**

- > The L3Harris Link BBXR system emulates aircraft flight characteristics and Operational Flight Programs, utilizing mixed reality simulation achieved by blending virtual reality, high-precision hand tracking, and the accurate, tactile feel of the aircraft's main instrument panel. Basic mission and virtual/constructive threat scenarios provide experience in aircraft employment across multiple mission sets and threat environments, including flight profiles, sensor operation, weapons and overall situational awareness. This ensures pilots operate in a tactically correct training environment as though they are performing actual missions.



#### **ADVANTAGES**

- > Real-time rule-based measurement increases grading and teaching standardization
- > Engaging user experience for both trainees and instructors
- > Supports students with individualized training and targeted feedback
- > Increases student throughput and instructor/student ratio
- > Rule-based standards guarantee expected skill attainment levels

## LOCAL AND WIDE AREA NETWORKS CAPABLE

The BBXR system allows entities to fly individually or linked and complete training across a wide range of skills, from basic proficiency to tactical combat and joint training. The BBXR provides unlimited expandability and connectivity, and seamlessly networks devices that are co-located, or those located anywhere around the world.

- > Fundamental pilot tasks from ground operations to basic aerial maneuvers
- > Core tactical skills including flight profiles, sensor and weapons employment
- > Advanced skills and mission sets

## ADAPTIVE LEARNING ENGINE (ALE)

Link's patented Adaptive Learning Engine improves training efficiencies through systematic and objective rule-based measures of performance and effectiveness across any flight-training curriculum. ALE performance monitoring and assessment technology provides instructors and students with real-time feedback, allowing for immediate coaching through a mix of instructor and automated teaching. Thanks to the intuitive user interface and powerful visualizations, ALE serves as a force multiplier for instructors who can follow multiple trainees simultaneously, intervene when necessary and focus on teaching vice data collection. With the ALE biometric suite, instructors can also gauge students' stress, engagement and cognitive workload levels allowing instructors to modulate complexity based on biometric indicators.

In the self-paced mode, ALE supports automated debriefs and interactive grade sheets empowering students to take training into their own hands. Additionally, ALE can be a motivational tool via its gamified user interface that when enabled, presents student profiles, training achievements, learning curves and team averages.



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