Volarent

AUGUST 2026

Tecnam P2010 Professional Flight Trainer

PRODUCT PROFILE & TECHNICAL SPECIFICATIONS

Multi-Crew Flight Simulator

This Product Profile and Technical Specifications document is intended for general informational purposes only. It provides an overview of standard features and capabilities, but exact specifications, included features, and system configurations may vary depending on your selected options, requested modifications, and finalized purchase agreement.

For authoritative and up-to-date information, including compliance documentation, training allowances, and approved configurations, please refer to your simulator's Qualification & Approval Guide (QAG), Qualification Test Guide (QTG), final quote, and delivery documentation.

If you have any questions regarding specifications or regulatory use, please contact Volarent Aerospace directly.

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Introduction

The **SoftekSim Tecnam P2010 Flight Simulator** is a high-fidelity, Advanced Aviation Training Device (AATD) eligible two-pilot simulator designed to replicate the flight characteristics, cockpit environment, and avionics systems of the single-engine Tecnam P2010 aircraft. This simulator blends **engineering-grade realism** with **regulatory compliance**—offering a **scalable**, **cost-effective** training solution for flight schools, universities, and commercial aviation academies.

FAA-approved Loggable Credit

- Up to 2.5 hours toward Private Pilot Certificate
- Up to 20 hours toward an Instrument Rating
- Up to 50 hours toward a Commercial Pilot Certificate
- Additional credit toward ATP and Flight Instructor certificates
- Instrument currency and IPC checks

This simulator includes a full-scale replica of the Tecnam P2010 cockpit, with features such as:

- Dual control-loaded yokes and rudder pedals
- Garmin G1000NXi avionics suite
- Functional Garmin GFC700 autopilot replica
- SEP throttle quadrant
- High-resolution 180-degree visual projection system for IFR/VFR scenarios
- Adjustable pilot seating, circuit breaker panels, and replicated overhead/trim modules

Aircraft Model Overview

About the Tecnam P2010

The Tecnam P2010 is a modern, lightweight, single-engine aircraft developed by Italian firm Costruzioni Aeronautiche Tecnam. Known for its **simplicity**, **fuel efficiency**, and **versatility**, the P2010 has become a leading choice for flight training around the world.

Certified under **EASA CS-23** and **FAA Part 23**, the aircraft is designed for ease of operation while maintaining the performance standards required for advanced pilot training. Its relatively low operating costs, superior visibility, and forgiving flight characteristics make it especially suitable for students transitioning into complex and cross-country operations.

Key Features of the Tecnam P2010

Configuration
High-wing, four-seat, single-engine aircraft

Propellers
Constant-speed, variable-pitch

Engine
Lycoming IO-390-C3B6
(215 hp @ 2700 rpm)

Avionics
Garmin G1000NXi glass cockpit
(standard on training variants)

Simulator Overview

The **Tecnam P2010 Advanced Aviation Training Device** (AATD) is a purpose-built simulation platform designed to support **FAA-compliant, curriculum-integrated pilot training**. Developed in alignment with Advisory Circular AC 61-136B, this AATD is approved under 14 CFR §61.4(c) and provides creditable experience for a range of certificates and ratings, including private, commercial, instrument, ATP, and flight instructor endorsements.

This simulator is not simply a representation of an aircraft—it is a training environment engineered to **reinforce critical skills**, **bridge theory and practice**, and **reduce real-aircraft dependency**. The P2010 AATD enables instructors to walk students through complex systems operations, abnormal and emergency procedures, and precision flying tasks—all in a **safe, repeatable, and fully controlled setting**.

While many simulators provide basic procedural training, this AATD offers a **full-spectrum flight training solution**: from the fundamentals of cockpit familiarization to advanced cross-country decision-making. It excels at teaching single-engine management, **IFR navigation**, autopilot operation, and flight scenario management, making it a cornerstone asset for schools and academies preparing students for real-world operations.

Designed around one of the industry's most popular light aircraft, the simulator mirrors both the **flight envelope and human-machine interface** of the Tecnam P2010. The result is a product that's not only FAA-approved, but also instructionally valuable and operationally relevant—serving as a bridge between **classroom theory and real-aircraft proficiency**.

In short, this simulator exists to elevate the **quality, accessibility, and consistency** of flight training, while lowering operating costs and risk. Whether part of a collegiate program or an independent flight school, the **Tecnam P2010 AATD delivers scalable value without compromise**.

Key Highlights:

- **AATD eligible:** Fully compliant AATD approved under 14 CFR §61.4(c) and AC 61-136B
- **Multi-Certificate Ready:** Supports training credit for Private, Instrument, Commercial, ATP, and CFI certificates
- **Built for Instruction:** Real-time instructor control station for scenario management and performance tracking
- **High-Utility Design:** Enables complex single-engine procedures, IFR operations, and emergency drills
- **Cost-Efficient Training:** Reduces dependency on aircraft hours while maintaining curriculum fidelity
- **Full Cockpit Realism:** G1000NXi integration, control-loaded systems, and a true-to-scale cabin environment

System Components & Hardware Config.

The Tecnam P2010 Flight Simulator is engineered to deliver a **fully immersive**, **hardware-accurate simulation environment**, closely mirroring the real-world cockpit experience. Each simulator is built around a full-scale replica of the P2010 instrument panel and flight controls, enabling both procedural and operational training for students at all experience levels. The system integrates tactile realism with durable components, ensuring **long-term functionality** and **training continuity**.

Cockpit Enclosure & Structure

- Full fiberglass cockpit enclosure, modeled to the actual dimensions of the Tecnam P2010 cabin
- Side-by-side dual seating with adjustable pilot and copilot seats
- Realistic window placement and field of view to mimic aircraft sightlines Integrated overhead panel with working switches and indicators
- Center floor console including rudder trim control, headset ports, and trim wheel

Flight Controls

Control-loaded Dual Yoke System
Including resistance and feedback calibrated to match real world aircraft control forces

Control-loaded Dual Pedal Assembly
Featuring differential braking and precision linear potentiometers

System Components & Hardware Config.

continued

SEP Throttle Quadrant

SEP (Single-Engine Piston) quadrant fitted with Throttle, Prop, and Mixture controls

Manual and Electric Pitch Trim Functionality

Avionics & Instrumentation

- Garmin G1000NXi glass cockpit replica with PFD and MFD displays
- Garmin GFC700 autopilot emulation, fully integrated with G1000 suite
- Backup analog instruments modeled after the MD 203 standby attitude module
- Magnetic compass with built-in LCD display and realistic turning behavior
- Set of active circuit breakers for hands-on systems training

Visual & Audio Systems

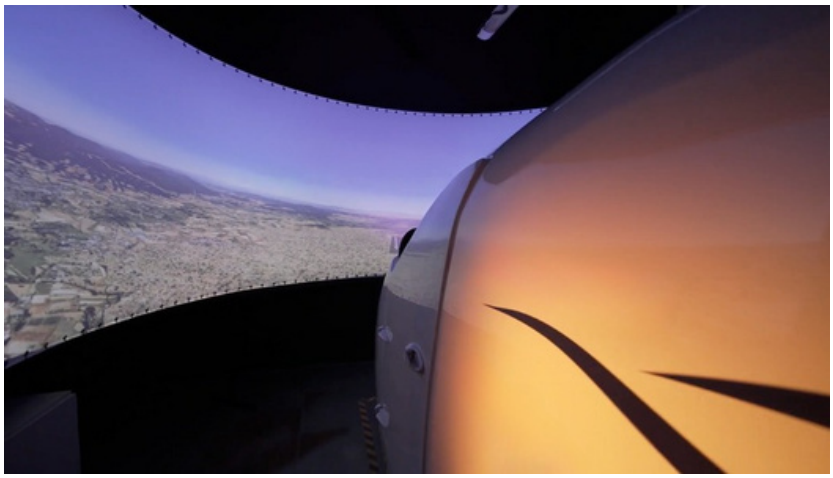
- High-resolution 180-degree projection screen or wraparound display system
- Visual database supporting VFR and IFR weather conditions, adjustable ceiling, visibility, and time of day
- Realistic engine and environmental sounds synced with power settings and external visuals
- Independent audio panel with stereo sound and communication simulation

Computing & Integration

- High-performance simulation-optimized computer hardware preloaded with Lockheed-Martin developed Prepar3D software
- Preconfigured with aircraft-specific performance modeling for the Tecnam P2010
- Networked IOS integration and simulator firmware support
- Fully configured flight controls
- Turnkey plug-and-play system with on-site installation included

Visual System

Hardware Integrations



180˚ Display Environment for Enhanced Training Realism

The P2010 AATD is equipped with a dedicated **180-degree visual projection system**, purpose-built to support both VFR and IFR training environments. The visual system is designed to immerse the trainee in **realistic flight conditions**, replicating the in-cockpit perspective of a Tecnam P2010 aircraft while enhancing spatial awareness, depth perception, and environmental responsiveness.

System Architecture

01

Three-Projector Wraparound System

The P2010 simulator utilizes a triple-projector arrangement for a 180˚ horizontal field of view, enabling panoramic immersion. This setup simulates side-window visibility for realistic visual cues during pattern work, instrument approaches, and crosswind landings.

02

High-Gain Projection Surface

The wraparound display uses a matte curved projection screen with anti-glare and color-true surface finishes, ensuring brightness and color fidelity in varying light conditions. The screen curvature is engineered for optimal focal consistency from the pilot's seated position.

03

Resolution and Detail

The visual system supports Full HD (1920x1080) resolution per projector, creating a crisp, distortion-free image across the arc. Airports, terrain, runway markings, and lighting systems are rendered with high fidelity to reinforce procedural visual references and pilot orientation.

Visual System

Software Integrations

Prepar3D-Based Environment
Powered by Lockheed Martin's Prepar3D simulation engine, the visual system provides a professional-grade flight scenario platform. The software includes a global terrain and airport database, weather injection tools, and compatibility with add-on visual content (e.g., photoreal scenery, custom airports).

Dynamic Weather Simulation
Supports variable meteorological conditions including adjustable:

- Visibility (e.g., <1SM to unrestricted)
- Ceiling (overcast layers, broken layers)
- Day/Night Transitions
- Precipitation, turbulence, and wind layers

Runway Environment Accuracy
Runway lighting systems, approach path indicators (PAPI/VASI), and terrain contours are rendered in real-time, enabling precise simulation of instrument and visual approaches.

Training Use Case

The 180˚ visual system is optimized for:

- Instrument Approaches (ILS, LPV, VOR, RNAV)
- Traffic Pattern Work with realistic turn and sight cues
- Engine-Out Procedures during VFR or simulated IMC
- Crosswind Takeoffs and Landings
- Emergency Training including visual disorientation and weather degradation scenarios

FAA AATD Visual Compliance

In alignment with FAA AC 61-136B, the visual system exceeds the minimum AATD requirements, including:

- Independent screen delivering realistic day/night VFR and IFR cues
- Adjustable visibility and ceiling parameters
- Full-field visual movement for accurate representation of approach profiles and aircraft maneuvering

These features ensure the simulator not only meets compliance thresholds but delivers instructionally meaningful realism, reinforcing muscle memory and visual scanning habits.

The 180˚ visual display system effectively transforms any given flight scenario—ranging from routine VFR traffic patterns to high-workload, low-visibility IFR approaches—into an exceptionally safe, highly repeatable, and operationally rigorous pilot training experience that maximizes student proficiency.

Regulatory & Training Compliance

FAA Authorization & Approved Training Usages

The **P2010 AATD** is fully eligible by the Federal Aviation Administration (FAA) to be certified as an **Advanced Aviation Training Device (AATD)** under 14 CFR §61.4(c).

This approval confirms that the simulator meets or exceeds the standards outlined in **Advisory Circular (AC) 61-136B**, which governs the use, design, and allowable credit of aviation training devices in both **Part 61 and Part 141 training environments**.

Please Note: While the simulator is fully eligible for FAA AATD approval, the official **Letter of Authorization (LOA)** is issued only after installation and successful completion of an FAA on-site inspection at the end-user location. This is a standard regulatory requirement under AC 61-136B.

Official FAA Designations

Device Type:

- Advanced Aviation Training Device (AATD)

Authorization Pathway:

- FAA AC 61-136B + 14 CFR §61.4(c)

Documentation Included Upon Purchase:

- FAA-prepared Qualification & Approval Guide
- (QAG) Aircraft Configuration & Performance Data
- Application-ready LOA package (pending site visit and inspector sign-off)

Loggable Time & Training Allowances

	Allowances Under 14 CFR	BATD	AATD	F	FFS
Private Pilot Certificate	Part 61	2.5 hrs	2.5 hrs	2 hrs	2.5 hrs
	Part 141	5.25 hr	5.25 hrs	7 s	7 hrs
Instrument Rating	Part 61	10 hrs	20 hrs	2 rs	20 hrs
	Part 141	8.75 hr	14 hrs	1 rs	17.5 hrs
Combined Private Pilot Certificate & Instrument Rating	Part 61	20 hrs	20 hrs	2 rs	20 hrs
	Part 141	17.5 hr	17.5 hrs	1 hrs	24.5 hrs
Commercial Pilot Certificate	Part 61	n/a	50 hrs	5 rs	50 hrs
	Part 141	n/a	24 hrs	2 rs	36 hrs
Flight Instructor Certificate	Part 61	n/a	n/a	n	n/a
	Part 141	n/a	1.25 hrs	1 hrs	1.25 hrs
Instrument Flight Instructor Certificate	Part 61	n/a	n/a	n	n/a
	Part 141	n/a	0.75 hrs	0 hrs	1.5 hrs
Airline Transport Pilot Certificate	Part 61	n/a	25 hrs	2 rs	25 hrs
	Part 141	n/a	6.25 hrs	6 hrs	12.5 hrs

P2010 Professional Flight Trainer →

Regulatory & Training Compliance

Maximum Credit Approval

The P2010 AATD is approved for the following maximum training credits when used in accordance with its LOA:

PRIVATE PILOT CERTIFICATE
2.5 HOURS

INSTRUMENT RATING
UP TO 20 HOURS

COMMERCIAL PILOT CERTIFICATE
UP TO 50 HOURS

AIRLINE TRANSPORT PILOT (ATP)
UP TO 25 HOURS

INSTRUMENT CURRENCY (PART 61.57)
FULLY SUPPORTED (NO INSTRUCTOR REQUIRED)

INSTRUMENT PROFICIENCY CHECK (IPC)
MAY BE CONDUCTED PER INSTRUMENT ACS

CFI
UP TO 5% OF TOTAL TRAINING UNDER PART 141

CFII
UP TO 5% OF TOTAL TRAINING UNDER PART 141

Additional loggable time is allowed when adding category/class ratings (e.g., multi-engine):

PRIVATE PILOT ADD-ON
UP TO 3 HOURS

COMMERCIAL PILOT ADD-ON
UP TO 11 HOURS

ADDITIONAL ATP ADD-ON
UP TO 6.5 HOURS

Regulatory & Training Compliance

Allowances & Restrictions

Part 141 Allowances by Curriculum Appendix

When approved as part of a Part 141 curriculum, the simulator may count for:

- Appendix B (Private): Up to 15% of total training time
- Appendix C (Instrument): Up to 40%
- Appendix D (Commercial): Up to 20%
- Appendix E (ATP): Up to 25%
- Appendix F (CFI): Up to 5%
- Appendix G (CFII): Up to 5%
- Appendix M (Private + Instrument combined): Up to 25%

Compliance Notes & Restrictions

- AATDs cannot be used for practical tests, flight reviews, or type-specific training credit.
- ATDs must not be used for aircraft type ratings or for Part 121/135 program credits.
- Minimum requirements for night, solo, and cross-country flight time must be completed in an actual aircraft as required by 14 CFR.

ATD time can only be logged as:

- Total Time
- Instruction Received
- Instrument Time (when applicable)

FAA-AUTHORIZED. LOGGABLE. CURRICULUM-INTEGRATED.

THE P2010 AATD DELIVERS REAL-WORLD TRAINING CREDIT—APPROVED, STANDARDIZED, AND FULLY COMPLIANT WITH FAA REGULATIONS.

Warranty & Terms of Service

At Volarent Aerospace, we believe that investing in a flight simulator is a long-term commitment — and our support doesn't end at delivery. Every P2010 AATD is backed by a **comprehensive warranty** and clearly defined terms of service to ensure your organization can operate with **confidence** and **peace of mind**.

Standard Warranty

Coverage Period: 24 months from the date of on-site installation

Scope of Coverage:

- All manufacturing defects in materials and workmanship
- Avionics hardware, computer systems, control components, and display units
- Software updates and firmware patches required to maintain FAA compliance

Response Time:

- Remote support: Within 1 business day
- On-site support (if required): Within 5–7 business days (U.S. mainland)

NOTE: CONSUMABLES SUCH AS PROJECTOR LAMPS AND PILOT SEAT CUSHIONS ARE COVERED FOR 90 DAYS UNDER STANDARD WEAR TERMS.

Extended Warranty Options

3-Year Extension: Available at time of purchase

Coverage Includes:

- Continued hardware replacement and labor
- Remote diagnostics and software tuning
- FAA reauthorization support for LOA renewals (required every 60 months)

Cost:

- Quoted at time of sale; based on region and support tier

Support & Maintenance

Support Portal: 24/7 ticket system and documentation access

Phone & Email Support: Available Monday–Friday, 9 AM–6 PM CST

Annual Maintenance Option (Optional):

- Preventive system checks
- Software validation and simulator health report
- FAA LOA renewal support consultation

Installation & Support

From day one, Volarent Aerospace ensures that your **P2010 Advanced Aviation Training Device** is installed correctly, configured to FAA standards, and **fully supported throughout its operational lifecycle.** We manage every detail so your team can focus on what matters most — training **safe, proficient pilots.**

On-Site Installation

Every P2010 simulator includes a comprehensive, white-glove installation service performed on-site by our factory-trained technicians. Our team coordinates directly with your facility to ensure a seamless setup, minimal disruption, and full operational readiness from day one.

Standard Installation Notes

- Physical delivery and assembly of all simulator hardware
- Full calibration of avionics, flight controls, and visual projection system
- System validation and functional testing
- FAA AATD pre-LOA checklist confirmation
- Instructor/staff onboarding session

TYPICAL DURATION: 1–2 BUSINESS DAYS, DEPENDING ON SITE CONDITIONS

Facility Requirements

To ensure a smooth installation process, your site must meet the following specifications:

- **Space**: Minimum 10' x 12' open area with a 7' ceiling clearance
- **Electrical**: Standard 120V/15A power (U.S.), surge protection recommended
- **Network (Optional):** Internet access for remote support and software updates
- **Environment**: Indoor, climate-controlled setting (55–85˚F recommended)

Detailed prep instructions will be provided prior to shipment.

Post-Installation Training & Support

After installation, Volarent provides immediate onboarding and access to our full suite of support services.

- Instructor Orientation:
  - Overview of simulator components
  - LOA best practices and compliance reminders
- Support Access:
  - Live remote troubleshooting (Mon–Fri, 9 AM–6 PM CST)
  - 24/7 access to technical documentation and support portal
  - Optional annual maintenance visits (U.S. only)

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Contact us
+1 (800) 928-0540

Visit our website
VolarentAerospace.com

Reach our email
Info@Volarent.com