

RB30(18)SRail

Overhead Rail Robotic Lifting Pan/Tilt Head System

The SEEDER RB30(18)SRail overhead rail robotic lifting pan and tilt head system is a broadcast-grade automated auxiliary shooting system, equipped with a U-shaped robotic pan and tilt head. It supports automated camera motion for live-action, AR/VR/XR/MR virtual production in studios and live events. The robotic pan and tilt head delivers image stabilization for fast start-stop movements, ensuring usable footage. Operating noise: ≤ 40 dB (≤ 0.7 m/s), ≤ 60 dB (≤ 1.2 m/s), meeting professional studio acoustic requirements. Modular construction enables full assembly within 15 minutes. Absolute encoders record position and tracking data; ready for use after power-up without initialization or calibration, ideal for live broadcast.



Applications

1. Enables Automated Camera Operation
2. Standardizes opening and closing shots for news & feature programmes
3. Ensures high precision for combined live-action & virtual production
4. Provides professional tracking data for virtual production at large live events
5. Enables automated camera positions in OB vans & large studios
6. Provides telephoto image stabilization for UHD camera operation
7. Minimizes human shooting errors for high-profile live productions
8. Enables smooth remote camera motion over the network

Basic Functions		
Built-in System	Embedded OS; standalone operation without an external control panel	
Motion Axes	7-axis motion: Head Pan/Tilt, Track Travel, Lift, Zoom, Focus, Iris	
Mounting Method	Overhead Truss Mount	
Robotic Head	U-shaped Robotic Head	
Start/Stop Anti-shake	Anti-shake for rapid start/stop	
Acceleration/deceleration	Automatic acceleration/deceleration based on motion position and duration; smooth 16-point curved motion	
Position Memory	Permanent storage of preset motion and tracking positions	
Motion Path	Automatic motion path planning	
Track Specs	Straight/curved tracks; curved track min. inner radius: 2.5 m; single track section: 2 m (L) × 360 mm (W); height adjustment: +20 mm; truss-mount compatible	
Lifting Range	Vertical Travel: 0.8 m	
Lens Control	20-pin lens cable with automatic compatibility for Canon/Fujinon full-servo lenses; optional M2 lens servo	
Max Camera Height	Depends on ceiling-mount height	
Auto Tracking	Pan-tilt head automatically tracks the primary subject	
Safety Limits	Head Pan/Tilt; Track Forward/Backward; Lift — 8-direction safety limits	
Safety Power Switch	Main power switch	
Emergency Stop	Dual buttons for power and motion (control panel)	
Backup Power	Supports V-mount professional battery power	
Quick-release Design	Quick-release robotic head; direct installation on the track dolly without readjustment	
Scene Sequence Combination	Motion trigger at any point within sequences & scenes; freely combinable sequences for flexible operation	
Flexible Motion Control	Motion interruption with target switching; manual/auto pause; adjustable dwell time	
Loop Timing Control	Seamless continuous looping; per-sequence independent loop/reverse settings; high-precision countdown timer	
Advanced Tracking Capability	HD-SDI input; CPU-based face tracking; reduced hardware dependency; improved shooting performance	
Safe Collaborative Control	Multi-console coordinated control with priority management	
VR Tracking Specifications		
VR Tracking Accuracy	23-bit absolute encoder; 8.3M/360°; <0.000043°	
Lens Delay	Auto calibration for full-servo lenses	
Tracking Sync	Supports BB and 3G/1.5G/SD-SDI reference input with loop-through and internal sync	
Virtual Tracking Calibration	Motion-compensation calibration based on virtual tracking error values	
Tracking Output	3-way directional UDP output supported	
Movement Specifications		
Head Pan	±170°; 0–20°/s; accuracy 0.001°	
Head Tilt	±55°; 0–20°/s; accuracy 0.001°	
Track Motion	0.1–1.2 m/s; accuracy 0.1mm	
Lift Motion	0.2 m/s; accuracy 0.001°	
Lens Motion	Full-servo lens compatible; 0–52 mm/s; accuracy 0.001 mm	
Basic Specifications		
Third-party Control	Free standard TCP/IP control protocol	
Scene Backup	Scene file import/export/backup	
Operation Monitoring	Long-term system log recording and storage	
Operating Noise	≤40 dB (≤0.7 m/s); ≤60 dB (≤1.2 m/s)	
Motion Storage	32 programs × 16 sequences × 16 scenes = 8192 scenes	
Keyframes per Sequence	16, supporting 16-point curvilinear motion	
Head Payload	30(18) kg	
Total Weight	82.54 kg (excluding tracks)	
Input Voltage	90–264 V	
Max. Power Consumption	300 W	
Configuration List		
1. U-shaped omnidirectional robotic pan and tilt head ×1 set		
2. Robotic overhead rail lifting platform ×1 set		
3. Control cables ×1 set		
Optional Feature	Model	Description
Tracking Output	RBVR	Directional UDP 3-channel tracking output supported
AI Auto Tracking	RBAI	HDSDI input from the primary camera with AI face and skeletal tracking for low-latency automatic camera tracking
Control panel	RBCS300、RBCS300PRO、RBCS1	RB Series control panel
Scene Composition Snapshots	RBCS300PRO	Supports scene preset composition snapshot capture

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Ordering Information

Product Model	Product Name
RB30(18)SRail	Overhead Rail Robotic Lifting Pan/Tilt Head System