

RBU30VH4

Overhead Robotic Pan and Tilt Head System

SEEDER RBU30VH4 overhead robotic pan and tilt head system adopts a U-shaped robotic pan/tilt head for automated shooting. It is an automated auxiliary shooting system for broadcast-grade film & television pre-production, suited for real-scene and virtual production (AR, VR, XR, MR) in studios and live event venues. Modular construction enables simple assembly and disassembly; typical installation takes around 15 minutes. The unit runs on 90–264 V AC power with a maximum power consumption of 108 W for flexible power sourcing. The system is operational within 10 seconds after power-on without initialization calibration, ideal for live broadcasts in studios and large events.



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 Range	5-axis motion: Pan, Tilt, Zoom, Focus, Iris	
Mounting Method	Standard and Inverted Mounting	
Robotic Head	U-shaped Robotic Head	
Mounting Interface	100 mm bowl, dovetail clamp, Mitchell mount	
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	
Max. Camera Height	Adjustable according to tripod or pedestal	
Auto Tracking	Pan-tilt head automatically tracks the primary subject	
Safety Limits	Pan; Tilt — 4-direction protection	
Safety Power Switch	Main chassis power button	
Backup Power	Supports V-mount professional battery power	
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		
Electronic Leveling	Electronic leveling system for the robotic head	
Virtual Tracking Accuracy	23-bit absolute encoder; 8.3M/360°; <0.000043°	
Tracking Sync	Supports BB and 3G/1.5G/SD-SDI reference input with loop-through and internal sync	
Lens Delay	Auto-calibration for full-servo lenses	
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, 0.001° accuracy	
Head Tilt	±120°, 0–20°/s, 0.001° accuracy	
Lens Motion	For full-servo lenses; 0–52 mm/s, 0.001 mm accuracy	
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	<20 dB	
Motion Storage	32 programs × 16 sequences × 16 scenes = 8192 scenes	
Keyframes per Sequence	16, supporting 16-point curvilinear motion	
Head Payload	30 kg	
Total Weight	12 kg	
Input Voltage	90–264 V	
Maximum Power	108 W	
Configuration list		
1. U-shaped omnidirectional robotic pan and tilt head ×1 set		
2. Robotic control software ×1 set		
3. Control cables ×1 set		
4. Suspended Mounting Bracket ×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
AI Module	RBAI+	Supports Bluetooth app control and voice control

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Ordering Information

Product Model	Product Name
RB30VH4	Overhead Robotic Pan and Tilt Head System