

ROSS Robotics



SmartShell
One Control System for All Ross Robotics

ROSS[®]
LIVING LIVE!

Control. Revolutionized.

The Industry's Broadest Portfolio of Studio Robotics

Ross has the most complete Studio Robotics offering available, whether you are looking for the unparalleled smoothness of a track-based system, the unbeatable flexibility of a free-roaming pedestal, efficiency of a standalone or robotic lift Pan/Tilt head or the simplicity of integrating a PTZ camera. Ross robotics systems are designed, developed and manufactured in-house using state-of-the-art technologies, providing industry-leading accuracy and precision

One Control System for All Ross Robotics

SmartShell provides a flexible, intuitive user interface for controlling all Ross Robotic solutions that can be scaled to suit both large and small installations. The SmartShell Unified Control System combines a flexible touchscreen GUI with an ergonomic joystick control panel. So whether you have track-based Furios, free-roaming CamBots, PT heads or PTL pedestals, all your Ross Robotics can be controlled from a common control system using a flexible Ethernet-based architecture.

SmartShell V5 introduces MotionDirector technology, which consistently produces smoother, more natural looking camera movements, allowing the camera artist to focus on the subject and not the robot. Meanwhile, unlike most robotic systems that force you to choose between programmed motion and remote manual (joystick) operation, MotionDirector gives you the best of both worlds: the precision and predictability of a pre-programmed trajectory, combined with the flexibility to speed up, slow down, or make small – or large – corrections to any axis while a programmed movement is in progress. MotionDirector is currently available on all Furio Studio dollies, S-Series BlackBirds, VR-series PT heads, and CamBot XY pedestals.

SmartShell enables the easy creation, storage and management of an unlimited number of camera positions and movements, which can be replayed reliably, simultaneously, and live, on-air. It's the most simplified and straightforward solution to complex Studio Automation and Multi-Camera Control. SmartShell is easy, intuitive and user-friendly, ensuring any camera operator can quickly master the power and sophistication hidden within.

Camera View

The SmartShell graphical user interface (GUI) permits the operator to setup pre-programmed camera positions (presets) and program complex on-air camera moves.



- Categories permit you to organize your presets and moves, letting you group shots by show, scene, operator or anything else you desire.
- Each control axis can be custom tailored to suit your personal preferences, by adjusting the speed, damping, and limits.
- Moves allow you to create the most complex signature moving shots by simply dragging and dropping keyframes into a timeline or recording manual operator movements overtop of keyframes.

The Matrix View provides:

- A single consolidated matrix of shots from which you can recall presets and moves from any connected camera simply by touching a thumbnail
- Simultaneous preparation of camera presets and moves while executing others with no need to wait for one command to complete before initiating the next.



Take Control

The SmartShell control panel is available in both single and dual joystick models, providing a lower cost option for simple pan-tilt environments, in addition to the higher end dual stick version required for systems that include tracks or pedestals. Both versions include:

- High quality Hall Effect joysticks provide responsive, progressive control of Pan, Tilt, Elevation, Floor/Track and Zoom - even while a programmed movement is in progress!
- 11 camera selection buttons for the operator to select the active camera/robot directly from the control panel
- Action buttons allow the operator to initiate a Cue, Cut or Run of presets and moves from the control panel, that provides a definitive, tactile interface for the initiation of robotic movements.
- A 'time' knob that allows the user to change the duration of a timed preset directly from the control panel, either before or after the movement has started!
- The 'Iris' knob provides direct control of the lens iris from the robotic control panel*.
- In addition to providing responsive focus control, pressing the 'Focus' knob activates the Quick Focus function, zooming the lens all the way in to facilitate focus optimization. The head can be panned or tilted to allow focusing on the desired subject, automatically returning to its original position at the press of a button, when focusing is complete.

*Supported on CamBots today, coming soon on Furios.



The standard control system includes a quiet, high performance all-in-one touchscreen PC, eliminating the need for space hungry towers, and reducing the overall sound level in your control room.

IP-Based Control

Each SmartShell control station communicates with the robots using native IP-based protocols over an Ethernet infrastructure, simplifying integration into new or existing facilities.

Our modern network architecture enables remote and automated production by consistently delivering the same visual results, whether controlled locally, remotely over a high-speed network, or via automated control software.

Command Central

The SmartShell architecture includes a separate Robotics Server that provides centralized storage and management for thumbnails, and communications with the robotic systems. With the ability to simultaneously support every control station within your facility, this central server architecture consolidates your robotic control data, simplifies control station redundancy, and easily pools and shares all your robot resources between control stations.

For single station installations, there is the option of a fully integrated control station that includes all of the Robotics Server functionality, along with the SmartShell software and control panel.

Global Deployments – Global Support

With over 3000 robotic systems deployed around the world, few suppliers have more experience with installing, commissioning and maintaining robotic systems than Ross Video. As with all Ross Video products, the industry's best support, legendary for its flexibility and customer-oriented approach, is an important part of the solution. In addition to comprehensive maintenance and hardware warranty plans, Ross offers all of its customers free 24/7/365 worldwide support.

Control Systems specs

	SmartShell
Supported Robots	All Furio Studio and CamBot systems
Supported PTZ Integration	Ross PIVOTCam Sony BRC 700*, 800*, 900, X100
Comm. Robots – Control System	Ethernet
Video Router control	IP or RS232/422
Tally Inputs	IP

	Robotics Server
Operating System	Windows 10 Professional
Form Factor	1U Rack Mounted Server

	SmartShell Station
Operating System	Windows 10 Professional
Form Factor	All-in-One PC with 24" Touchscreen Display

	Unified Control Panel
Right Joystick Control	Pan/Tilt/Zoom
Left Joystick Control (6-Axis only)	Track/XY/Lift
Control Knobs	Focus, Time and Iris
Camera Selection Buttons	11
Action Buttons	Cue, Cut, Run, ALT
Comm. Joystick – Workstation	USB
Comm. Joystick – Robot	UDP over Ethenet
Power Supply	24 VDC External Power Supply



Ross Video has a complete range of technical services available to ensure that your SmartShell installation is a success.

Operational Training can be provided at Ross Video, on-site, or on the web. Experienced Ross operators will teach your staff to get the most out of your new system and enhance your productions.

Commissioning is a service to help get your production system properly configured, connected, and installed. This service is performed by factory-trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site, or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Your SmartShell comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your system.

Contact Us

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