ROSS *Robotics*

DASHBOARD PLUGINS FOR PTZ CAMERAS AND ROSS PAN AND TILT HEADS

DashBoard now offers native control of Ross robotic pan and tilt (PT) heads and all-in-one PTZ cameras. These plugins embed control directly into the DashBoard framework and provide access to the core functionality of these products. They also offer flexible and intuitive user interfaces that include on-screen controls for all axes and a suite of preset creation, editing and management tools. Combined with a standard Windows HID-compatible USB joystick, users get a straightforward control system for an unbeatably low price.

LOW-COST CONTROL SOLUTION

The plugins provide access to all of the core capabilities of our PT heads in a simple interface. This includes MotionDirector's flexible in-flight adjustments and the ability to configure all joystick settings – all for the cost of a computer and an off-the-shelf USB joystick.

IDEAL AS EMERGENCY BACKUP OR LIMITED USE STATION

New on-screen "joystick" controls make it possible to frame a shot from any computer on the network even without a hardware joystick. Combined with complete access to all of the presets stored on the robot or PTZ camera, these features ensure your production keeps moving in the event of a SmartShell failure.
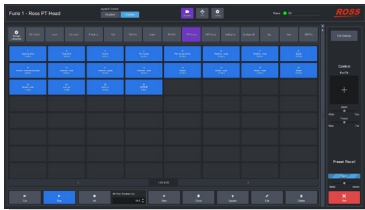
FLEXIBLE CONFIGURATION OPTIONS

The plugins offer two operational modes for recalling presets. With panel mode, the user selects a preset and then the desired action. With shotbox mode, the user chooses an action mode, and then each time a preset is touched it immediately executes the action.
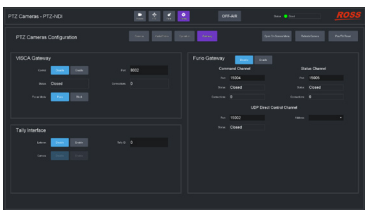
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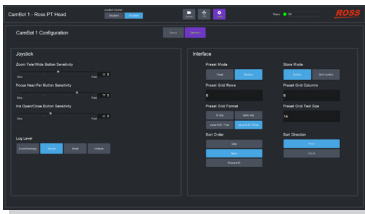
PT Head Operational Configuration Page
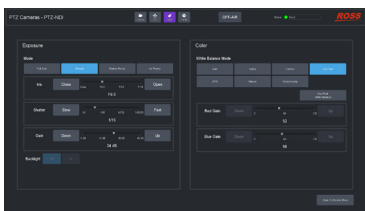

PT Head Preset Matrix in Shotbox mode
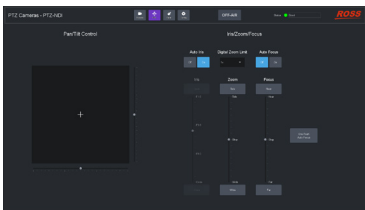
On-screen Joystick Control in PTZ Plugin

Gateway configuration in PTZ Plugin

Exposure and Color controls in PTZ Plugin

MORE CONFIGURATION FEATURES

- Even in this simplified UI, we provide the ability to organize shots in banks (PTZs) or categories (PT heads). Configuration options include setting the preset grid size and the way presets are displayed, allowing the user to configure the UI to match their personal preferences.

- Joystick control is also completely configurable, with the ability to invert any axis, adjust sensitivity (most axes – see Specifications for details), and on PT heads, damping and zoom-dependent sensitivity (a.k.a. zoomvar). This makes it easy for the user to tune and tweak the joystick operation to their liking.

PAN AND TILT HEAD-SPECIFIC FEATURES

- Full support for the new MotionDirector technology, including the ability to vary the duration of a preset recall that is already in progress or apply corrections to the path of the robot using the joystick.

- Even though the plugin does not offer joystick control over the lift, track or floor axes of the larger systems, it is still possible to recall, store or update presets on all Ross Robotic systems, making this perfect as an emergency backup or as a secondary control point within a larger installation.

PTZ CAMERA-SPECIFIC FEATURES

- Recall options: select whether to recall focus, exposure (iris and gain settings) or white balance settings. Default settings are stored with the preset but can be overridden at the time of recall. The user can choose between relying on auto-capabilities like Auto-Focus, Auto White Balance or Auto Exposure or use the setting(s) stored with the Preset.

- Option to store presets locally (i.e. coordinates are stored on the host computer and sent to the PTZ on recall) or on the camera's non-volatile storage (i.e. coordinates are stored on the camera and the DashBoard simply instructs the camera to recall the preset by number).
    - As the amount of data required for each preset is quite small, the local storage can effectively hold an unlimited number of presets instead of being limited to a hundred or so by the camera's onboard storage.

    - Note that presets are always stored locally even for those that are stored on the camera. This way, if the user would rather use the local store or if the shots stored on the camera are lost, a copy of the coordinates is stored on the control system PC.

- The PTZ plugins include gateways that allow other controllers or applications to communicate to a group of cameras via the plugin, which both mediates the traffic to the PTZ camera and provides protocol translation. This includes translating the Furio API, allowing SmartShell to control supported PTZ cameras (Ross PTZ-12G and PTZ-NDI, Sony BRC, and Panasonic AW-UE150) as if they were native Furio devices. They also accept the serial VISCA protocol (over IP) that Carbonite uses for communicating with VISCA devices, which ensures reliable communication even when there are multiple control points in the system.

NOW AVAILABLE FOR CUSTOM PANEL INTEGRATION

- Adding native control to the DashBoard framework means that control of these products is now available for integration into DashBoard custom applications. This further expands the scope of the custom user interfaces that can be created by our end customers, integrators, developers and applications engineers.

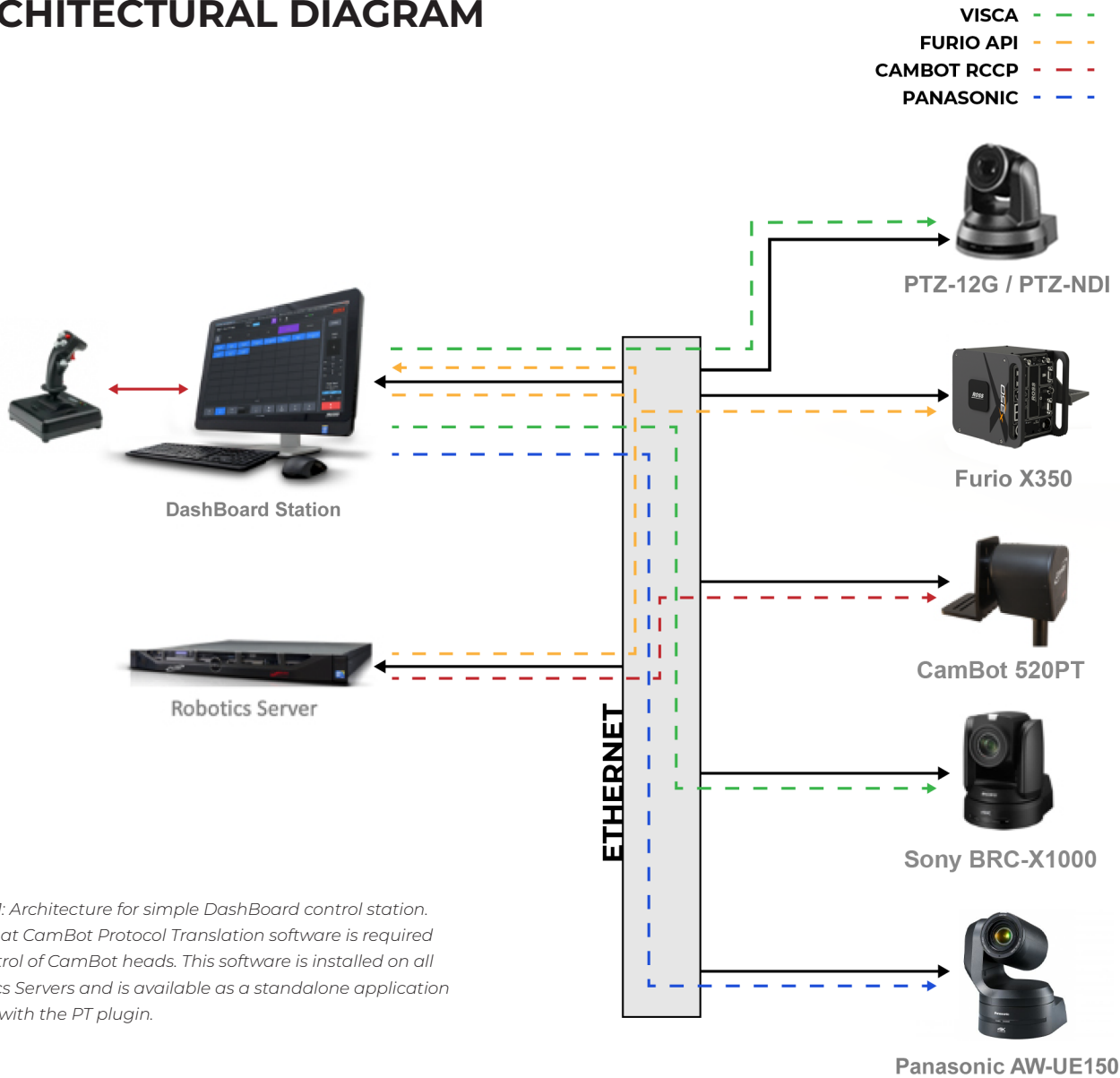**ROSS**

ARCHITECTURAL DIAGRAM

Figure 1: Architecture for simple DashBoard control station. Note that CamBot Protocol Translation software is required for control of CamBot heads. This software is installed on all Robotics Servers and is available as a standalone application for use with the PT plugin.

SPECIFICATIONS

	ROSS PT HEADS	ROSS PTZ CAMERAS	3rd Party PTZ Cameras
SUPPORTED MODELS	Furio: VR600 CamBot: 520PT, 600PT, 700PT X-Series: X300, X350	PTZ-12G, PTZ-NDI	Sony: BRC-H900, BRC-X1000, BRC-H800* Panasonic: AW-UE150
JOYSTICK AXES	Pan, Tilt, Zoom, Focus, Iris (if supported by PT head)	Pan, Tilt, Zoom, Focus, Iris	Pan, Tilt, Zoom, Focus, Iris
JOYSTICK OPTIONS	Sensitivity, Damping, Zoom-dependent sensitivity, Invert axes	Sensitivity (zoom and focus only), Invert axes	Sensitivity (zoom and focus only), Invert axes
PRESET STORAGE	On head (Furio) / Robotics Server (CamBot)	On camera (256 max) On control station (unlimited)	On camera (camera dependent max) On control station (unlimited)
LICENSING	None required	None required	Paid license, per computer

* Not tested