CALICO PRO C7-PRO-1200 Video Processor

PRODUCT OVERVIEW:

The CALICO PRO C7-PRO-1200 Video Processor has been designed from the ground-up by tvONE to process live video, with hundreds of video windows. It can support up to 4K60 resolution with 10-bit processing with all of its on-board inputs and outputs, and all with typically only 1-frame (16ms@4K60) of latency throughout. In addition, HDR10 and HLG can be freely converted from any input to any output. Video from any source can be freely rotated, format and standards converted, scaled and mapped as you wish.

CALICO PRO has been designed with dvLED in mind, with each one of its outputs capable of being video mapped up to 32 times. CALICO PRO, using its powerful set-up software, CALICO studio, makes creating extremely complicated dvLED walls quite easy to set up, saving the installer time and the customer money.

Content creation, management and delivery is easy as all sources can be mapped in up to 32 individual virtual inputs, and each source can be cropped many times allowing for truly dynamic live content from any source to be delivered anywhere across its outputs.

CALICO PRO is display and source agnostic, allowing for installation in any set up, even if that involves multiple display technologies and multiple manufacturers.

Controlling the device is also made easy by the availability of a full API allowing control from many third-party control platforms, with software modules and plug-ins available for Crestron and Q-SYS control devices. tvONE's own hardware wall controllers and control application, CALICO studio mobile, available for android and IOS devices, are free to download and use, from Google Play and Apple stores. CALICO studio software can also be used for controlling CALICO PRO using its control dashboard feature and can be installed on to any Windows 10 or above computer.

Key Features and Benefits:

Advanced Video Processing:

- 10-bit video processing for superior image quality.
- HDR / SDR conversion for every input and output. HDR10 and HLG are supported.
- Capable of processing more than 250 separate video windows, regardless of image resolution
- Extremely low latency parallel processing with no more than typically 1 to maximum 2 video frames (16 to 32ms) for 4K60
- Future proof with free firmware feature upgrades throughout the life of the unit.

Flexible Configuration:

- Dedicated configuration software CALICO Studio, available free of charge, with offline mode for pre-purchase setup.
- On-board input and output connectivity.

Powerful Mapping Capabilities:

- Supports up to 32 mapped virtual inputs per source and up to 32 mapped areas per output.
- Fully independent 1-360º rotation in 1º increments on each video source, mapped video source, output and mapped output.

Robust Control and Management:

- Network control via RJ45 (IPv4) and support for secure communication HTTPS.
- REST API and WebSocket for real-time feedback and multi-user communication.
- CALICO Studio Mobile applications are available free for both Android and iOS devices.
- Plug-ins are available for Q-SYS and Crestron third party controllers.

Reliability and Compliance:

- Hardware, FPGA based. Low power consumption, no device operating system.
- Guaranteed for 5 years with 24/7 use.
- Intelligent cooling fans for improved reliability.
- Compliance with FCC, CE, UKCA, RoHS, and UL standards.

Versatile Audio and Media Support:

- Embedded audio support
- Integrated internal 3GB media file storage for background images and labels.

General Requirements:

Warranty:

1. Video processors must include a free 5-year 24/7 warranty with system support for at least 5 years after discontinuation of the product. Video processors that do not include a free 5-year 24/7 warranty with system support for 5 years after discontinuation of the product will not be accepted.

Compliance:

2. Video processors must have FCC, CE, RoHS, and UL compliance. Video processors that do not have FCC, CE, RoHS, UL compliance will not be accepted.

Cooling:

3. Video processors must have cooling fans that are automatically and intelligently controlled by detecting changes in temperature of the circuitry inside the unit, helping to keep the unit cool and improve reliability. Video processors that do not have cooling fans that are automatically and intelligently controlled by detecting changes in temperature of the circuitry inside the unit, helping to keep the unit cool and improve reliability will not be accepted.

Dust Protection:

4. Video processors must have a provision for a dust filter that is provided with the unit that restricts dust ingress through its cooling fans by using a stainless steel, lifetime use air filter. Video processors that do not have a provision for a dust filter that is provided with the unit, which restricts dust ingress through its cooling fans by using a stainless steel, lifetime use air filter will not be accepted.

Power:

5. Video processors must operate at full capacity, with power consumption below 160w. Video processors that do not operate at full capacity, with power consumption below 160w, will not be accepted.

Front panel OLED Display:

6. Video processors must have an OLED display visible at the front of the unit, which has a controllable brightness and capable of displaying its IP address and status information set by user choice. Video processors that do not have an OLED display visible at the front of the unit, which has a controllable brightness and capable of displaying its IP address and status information set by user choice will not be accepted.

Set-Up and Control Software:

7. Video processors must use free of charge dedicated configuration software, CALICO Studio, to specify and set-up the video processor. Video processors that do not use free of charge dedicated configuration software CALICO Studio to specify and set-up the video processor will not be accepted.

8. Video processors must use free of charge dedicated configuration software, CALICO Studio, which has an offline mode where a set-up can be configured and checked prior to purchasing the hardware. Video processors that do not use free of charge dedicated configuration software CALICO Studio that has an offline mode where a set-up can be configured and checked prior to purchase of the hardware will not be accepted.

Connectivity:

Inputs/Outputs:

9. Video processors must have six HDMI 2.0 inputs and two HDMI 2.0 outputs as standard. Video processors that do not have six HDMI 2.0 inputs and two HDMI 2.0 outputs as standard will not be accepted.
10. Video processors must support up to two discrete 4K60 displays with the ability to place these displays in any orientation. Video processors that cannot support up to two discrete 4K60 displays, with the ability to place these displays in any orientation will not be accepted.

Video Processing Capabilities:

11. Video processors must utilize FPGA video processing using CALICO core technology. Video processors that do not utilize FPGA video processing using CALICO core technology will not be accepted.
12. Video processors must support 10-bit video processing. Video processors that do not support 10-bit video processing will not be accepted.
13. Video processors must support scaling on all outputs. Video processors that do not support scaling on all outputs will not be accepted.
14. Video processors must support up to 256 video windows per system. Video processors that do not support up to 256 video windows per system will not be accepted.
15. Video processors must be able to manage four independent, simultaneous canvases each of 64,000 x 64,000 pixels within one chassis. Video processors that do not manage four independent, simultaneous canvases each of 64,000 x 64,000 pixels within one chassis will not be accepted.
16. Video processors must support HDR10 and HLG for high dynamic range. Video processors that do not support HDR10 and HLG for high dynamic range will not be accepted.
17. Video processors must have no more than typically 1 and maximum 2 frames of latency input to output. Video processors that allow more than typically 1 and maximum 2 frames of latency input to output will not be accepted.
18. Video processors must support 1-360º rotation on each video source in 1º increments. Video processors that do not support 1-360º rotation in 1º increments on all video sources will not be accepted.
19. Video processors must support 1-360º rotation in 1º increments on every output. Video processors that do not support 1-360º rotation in 1º increments on every output will not be accepted.

Audio:

20. Video processors must support embedded audio through the system from source to display. Video processors that cannot support embedded audio through the system from source to display will not be accepted.
21. Video processors must support input and output volume control together with audio mute. Video processors that cannot support input and output volume control together with audio mute will not be accepted.

Features

Hardware:

22. Video processors must be FPGA based, allowing firmware upgrades to add new functionality and features. Video processors that are not FPGA based allowing firmware upgrades to add new functionality and features will not be accepted.

4K60:

23. Video processors must support 4K60 video sources. Video processors that do not support 4K60 video sources will not be accepted.
24. Video processors must support 4K60 outputs. Video processors that do not support 4K60 outputs will not be accepted.

Cropping and Mapping:

25. The video processor must be able to crop multiple sections from any source and place them in any size and rotation anywhere on the output. Video processors that cannot crop multiple sections from any source and place them in any size and rotation anywhere on the output will not be accepted.
26. The video processor must be able to map up to 32 areas per output for independent placement on the canvas. Video processors that are unable to map up to 32 areas per output for independent placement on the canvas will not be accepted.
27. The video processor must allow every input source to be mapped up to 32 times to create 32 virtual inputs per source. Video processors that do not allow every input source to be mapped up to 32 times to create 32 virtual inputs per source will not be accepted.

Labeling and Borders:

28. The video processor must be able to create source labels and display these on any output. Video processors that cannot create source labels and display these on any output will not be accepted.
29. The video processor must be able to create free text labels and display these on any output. Video processors that cannot create free text labels and display these on any output will not be accepted.
30. The video processor must be able to create labels using images, and display these on any output. Video processors that cannot create labels using images, and display these on any output will not be accepted.
31. The video processor must be able to create labels from live sources, and display these on any output. Video processors that cannot create labels from live sources, and display these on any output will not be accepted.
32. The video processor must be able to parent labels to source windows, outputs and layouts. Video processors that cannot parent labels to source windows, outputs and layouts will not be accepted.
33. The video processor must be able to dynamically change the label text based on the source selection that is displayed in a video window. Video processors that cannot dynamically change the label text based on the source selection that is displayed in a video window will not be accepted.
34. The video processor must be able to add borders to windows of various widths or colors which can be animated using Presets. Video processors that cannot add borders to windows of various widths or colors which can be animated using Presets will not be accepted.

Source Switching:

35. The video processor must be able to switch between sources using cuts, dissolves, fade to black, fade through black, horizontal shrink, vertical shrink, and spin. Video processors that do not switch between sources using cuts, dissolves, fade to black, fade through black, horizontal shrink, vertical shrink, and spin will not be accepted.

Test Patterns:

45. The video processor must be able to display various test patterns on all sources or a selection of sources. Video processors that do not display various test patterns on all sources or a selection of sources will not be accepted.

Display and Edge-Blending:

46. Video processors must support different sizes and resolutions of displays within each set-up. Video processors that do not support different sizes and resolutions of displays within each set-up will not be accepted.

47. Video processors must support video projector edge-blending on every output. Video processors that do not support video projector edge-blending on every output will not be accepted.

HDCP Compliance:

48. Video processors must be HDCP 2.2 compliant with all on-board HDMI inputs and outputs. Video processors that are not HDCP 2.2 compliant with all on-board HDMI inputs and outputs will not be accepted.

Presets:

49. Video processors must have a minimum of 500 programmable presets per system. Video processors that do not have a minimum of 500 programmable presets per system will not be accepted.

50. Video processors must provide preset-driven transitions. Video processors that do not support preset-driven transitions will not be accepted.

51. Video processors must have programmable presets that include the ability to select specific windows and choose between layout only or layout and sources. Video processors that do not include the ability to select specific windows and choose between layout only or layout and sources, will not be accepted.

52. Video processors must support 1080p 120Hz support on all HDMI outputs. Video processors that do not support 1080p 120Hz support on all HDMI outputs will not be accepted.

Luminance Keying:

53. Video processors must support luminance keying for any source window, label, or still image. Video processors that do not support luminance keying for any source window, label, or still image will not be accepted.

Custom Resolutions:

54. Video processors must have setup software that allows for the creation of custom input and output resolutions. Video processors that do not have setup software that allows for the creation of custom input and output resolutions will not be accepted.

Media Storage:

55. Video processors must have integrated internal media file storage of at least 3 GB for still image and label template storage. Video processors that do not have integrated internal media file storage of at least 3 GB for still image and label template storage will not be accepted.

Control:

Network Control:

56. Video processors must support network control via RJ45 (IPv4). Video processors that do not support network control via RJ45 (IPv4) will not be accepted.
57. Video processors must allow control via 3rd party controllers using freely available API. Video processors that do not allow control via 3rd party controllers using API will not be accepted.
58. Video processors must support REST API providing multi-user communication to the device. Video processors that cannot support REST API providing multi-user communication to the device will not be accepted.
59. Video processors must support subscribing to events using WebSockets providing real-time feedback to automatically monitor the operation of the video processor and respond accordingly. Video processors that cannot support subscribing to events using WebSockets providing real-time feedback to automatically monitor the operation of the video processor and respond accordingly will not be accepted.

Security:

60. Video processors must support secure communication HTTPS. Video processors that cannot support secure communication HTTPS will not be accepted.
61. Video processors must have a hardware video processing layer that is completely separated from any network control layer, ensuring that no video signal can be internally transferred between the video layer and the control layer. Video processors that do not have a hardware video processing layer that is completely separated from any network control layer, ensuring that no video signal can be internally transferred between the video layer and the control layer, will not be accepted.