

## APPLICATION BULLETIN – SENTRIC2

### STATION MONITORING SYSTEM

To: CWCEC Sales Organization

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#### OVERVIEW

Curtiss-Wright Embedded Controls RTV&G were recently approached by a large US based organization to provide 20 'Station Monitoring Systems' (SMS). Though most of the system is largely based on CWCEC COTS parts, the differentiator for this particular application was the need to be able to record up to 12 mono audio input channels alongside the video data from 2 operator stations and have this remotely accessible for review at a later time.

The system is to be based around a 2U rack mounted system, and in many ways is similar to the specification of the proposed VRD-1-xx (see Fig. 1, which is an Advanced Development Model) COTS product with the addition of an Audio Input Panel (AIP). The AIP must accept 12 RJ11 connections, which will enable the system to record audio input from local telephones and field based two way radio communications.

Playback of either video channel is expected to be in synchronization with a selection of 1 to 4 of the recorded audio channels to +/- 1 second, and that the SMS be able to play back two channels of video whilst still recording video input. The SMS must be capable of unmanned 24/7/365 operation, with auto overwrite of the oldest data after 24 hours. In addition, the operator should be able to not only remotely control the SMS but also be able to view recordings via LAN/WAN.



Figure 1 - Sentric VRD-1-ADM

#### SOLUTION

The solution proposed by CWCEC is shown in the block diagram shown in Fig. 2 over. MPEG4, and therefore the SPMC-281 are chosen as this allows more efficient decode in software to allow viewing over LAN using RTP streaming (VLC is a suitable application for this).

Built into a third party rugged 19"/2U enclosure the SMS will have DVI I/O for the input from the monitors (2 channels of 1280 x 1024 @ 30 fps). Recordable media will be in the form of 2 removable 1TB HDD caddies, and these will have enough capacity to allow continuous recording for up to 24 hours, at which point they will start to overwrite the oldest data.

The key area of difference for this application is the ability to record 12 channels of mono audio. This requires the development of an additional PWB with RJ11 connectors and a low latency switch, which will then be controlled by the Sentric2 software to capture the audio and write it to disk.

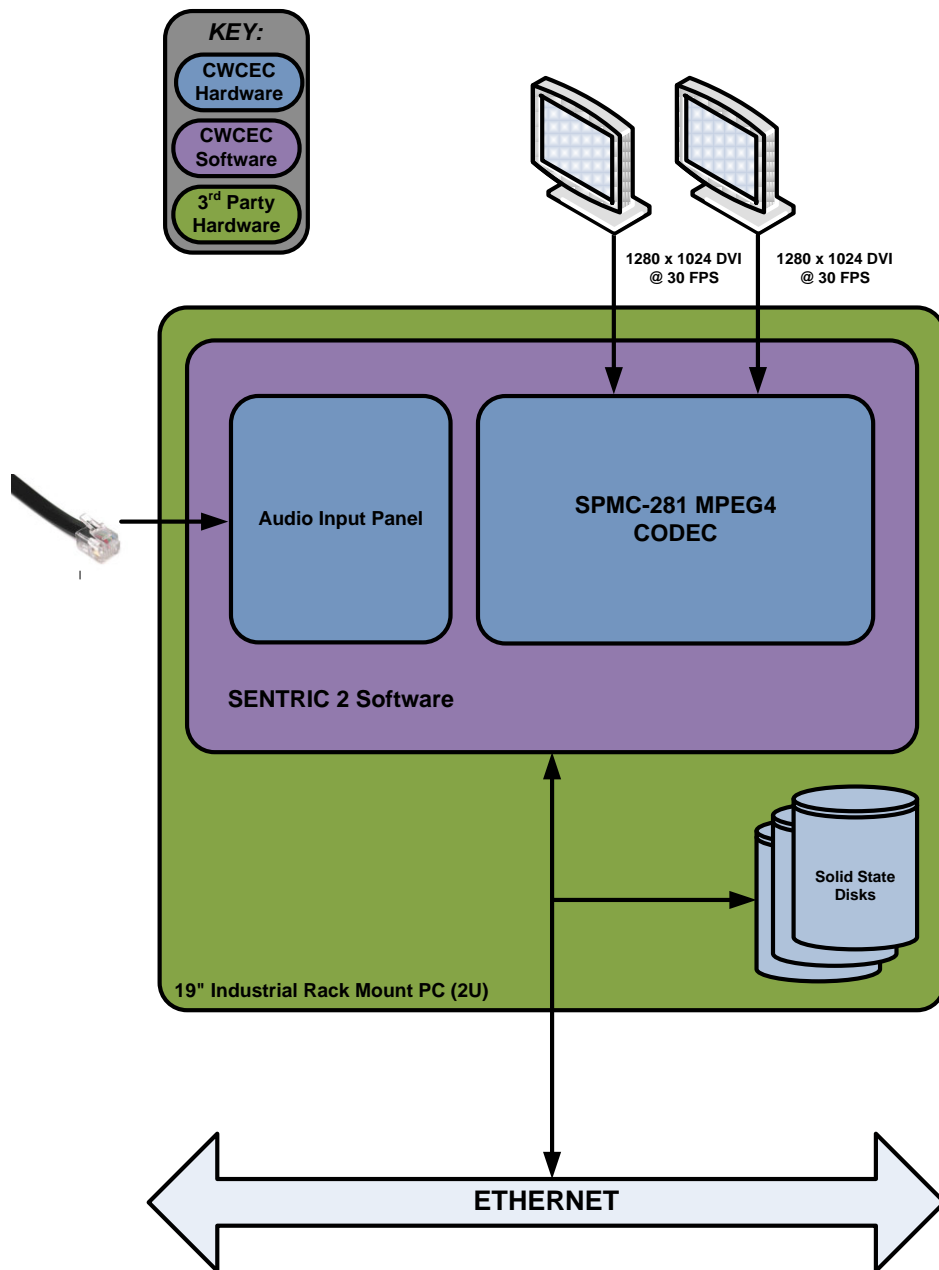


Figure 2 - Proposed System Block Diagram

Finally the system will be completed with the addition of a standard 1Gb Ethernet connection to allow remote operation of the SMS as well as remote viewing of recorded data. Local control of the SMS will be via standard USB connections provided on the PC based controller card.

## FEATURES

- Turnkey 2U 19" Rugged Rack Mounted Unit
  - L0 Environment
- 2 Channels Simultaneous Record and Playback of 1280x1024, 30fps DVI Video
  - Use MPEG4 Part 10 (H264) Codec
- 12 Channels 16bit, 44.1KHz Audio Record
  - Dedicated RJ11 Connector Board
- Remote Control Via LAN, Remote View Via LAN
  - Gigabit Ethernet
- 24 hour Record
  - 2 x 1 TB Removable HDD