

AVC8000nano - 8x D1 Video Capture Card for Mini-PCIe on Gateworks SBC



This card is a mini-pcie video capture card that can be used with Gateworks Single Board Computers. From the manufacturer's webpage: *The AVC8000nano is a high-performance 8-channel video capture and overlay controller on a single Mini PCIExpress card. The AVC8000nano provides a powerful and flexible solution for capturing up to eight concurrent analog video inputs for local system display or software analysis and processing, ideal for embedded Situational Awareness systems in the most demanding environment.*

Gateworks has a driver built in to their [gateworks_fsfc 3.14 1.0.x_ga](#) kernel branch that supports this card on the Ventana Family of Single Board Computers. Allowing for 8 video inputs is very useful!

Highlights

One of the things about this card that Gateworks is so excited about is the fact that one can directly capture frames through DMA (meaning increased performance and decreased latency). Gateworks currently supports this capability in the `gststreamer-imx` plugin: `imxv4l2videosrc`, which is in the 1.8 and master branches in Yocto. This allows for capabilities to scale all 8 (dependent on the processor used) video frames individually, rotation, cropping etc.

For anyone doing surveillance applications or some other application requiring more than our standard 2 video inputs, this card may prove to be something worth looking into, especially since it's now supported out of the box (if using Gateworks Yocto BSP).

Example Usage

This card can be used to capture 8 camera inputs and then either display them on a local monitor or stream them over the network.

- The [OpenCV](#) software library could be used to stitch the different inputs together to create a seamless panorama



Figure 1: Screen capture of 8 analog cameras displayed on a monitor using the Gateworks Ventana SBC



Figure 2: Eight analog video cameras mounted in a circular fashion for a panoramic capture

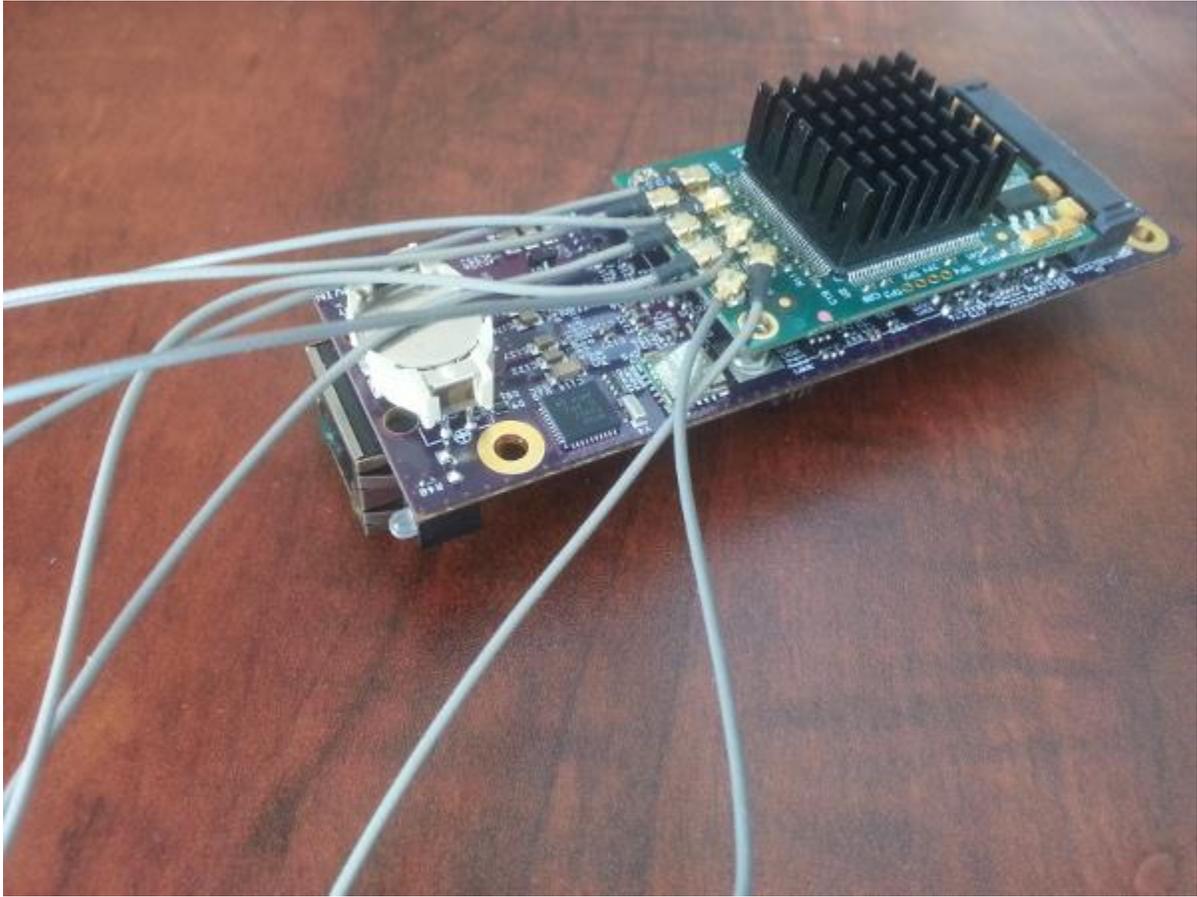


Figure 3: The AVC8000nano installed on a Gateworks Ventana SBC with 8 analog cameras connected

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