

nanoQuad

4 input Video Mixer on miniPCI-express



The nanoQuad is a low-power, real-time video mixing controller on a miniPCI-express form factor. It is capable of displaying up to four simultaneous live PAL/NTSC video channels and provides flexible positioning, sizing and display to a composite PAL/NTSC output.



The nanoQuad undertakes the processor-intensive video mixing operation. Any of the 4 video inputs may be resized, cropped and repositioned on the processed mixed output. The processed channel is output as high-quality composite PAL/NTSC signal suitable for driving a wide range of display devices.

The nanoQuad is a USB HID class device on miniPCI-express form factor. The USB interface allows control of the video windows and for configuration of video input parameters such as brightness, contrast and saturation.

The nanoQuad is supported by SDKs for Windows and Linux.

PRELIMINARY INFORMATION (Rev A.00)
Subject to change without notification

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Mix up to 4 live
PAL/NTSC/RS-170
video inputs

Single PAL/NTSC
composite output

nanoQuad

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**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS



Single full screen channel

Quad channel



Picture-in-Picture

Applications

- Law Enforcement
- Crime Scene Recording
- Remote Video Surveillance
- Multi-camera Security Application
- Asset Monitoring
- Traffic Monitoring and Control

Position, size,
crop and zoom
up to four live
video windows

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PC/104

Embedded PC Modules

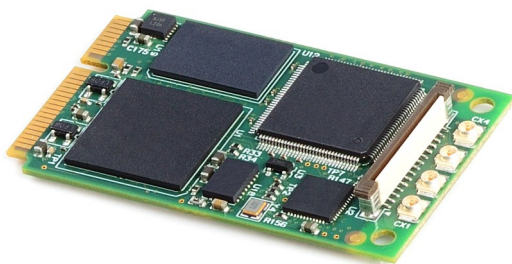
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THE EMBEDDED VIDEO EXPERTS



*Image is for illustrative purposes only.
Please refer to product description*

SWaP optimised

solution on

compact

miniPCI-express

form factor

Features

4 concurrent PAL/NTSC composite video sources

Composite PAL/NTSC video output

Resize and reposition 4 live video windows

SDK and drivers for Windows, Linux

USB HID Device

Very small footprint miniPCI-express form factor

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PC/104

Embedded PC Modules

USB HID Interface

USB 2.0 Full speed interface
Configuration of video window position and size

Analog Video Input

Up to 4 concurrent composite PAL / NTSC / RS-170 video inputs
Four 10-bit Analog-to-Digital converters
Anti-aliasing filters on inputs

Video Input Formats

Standard CCIR601-NTSC, CCIR-PAL
RS-170
NTSC-M
PAL-B/D/G/H/I

Video Windowing

Arbitrary sizing, cropping and positioning of 4 video windows
Arrange channels as Fullscreen, Quad, PIP etc.
Vertical and horizontal mirroring per channel

Video Input Adjustments

Contrast (luma gain) adjustable from 0-200% of original value
Saturation (chroma gain) adjustable from 0-200% of original value
Brightness (luma level) adjustable from 0-200% of original value

Analog Video Output

Composite PAL / NTSC video output

System Requirements

Host Computer with spare miniPCI-Express socket with USB support

Miscellaneous

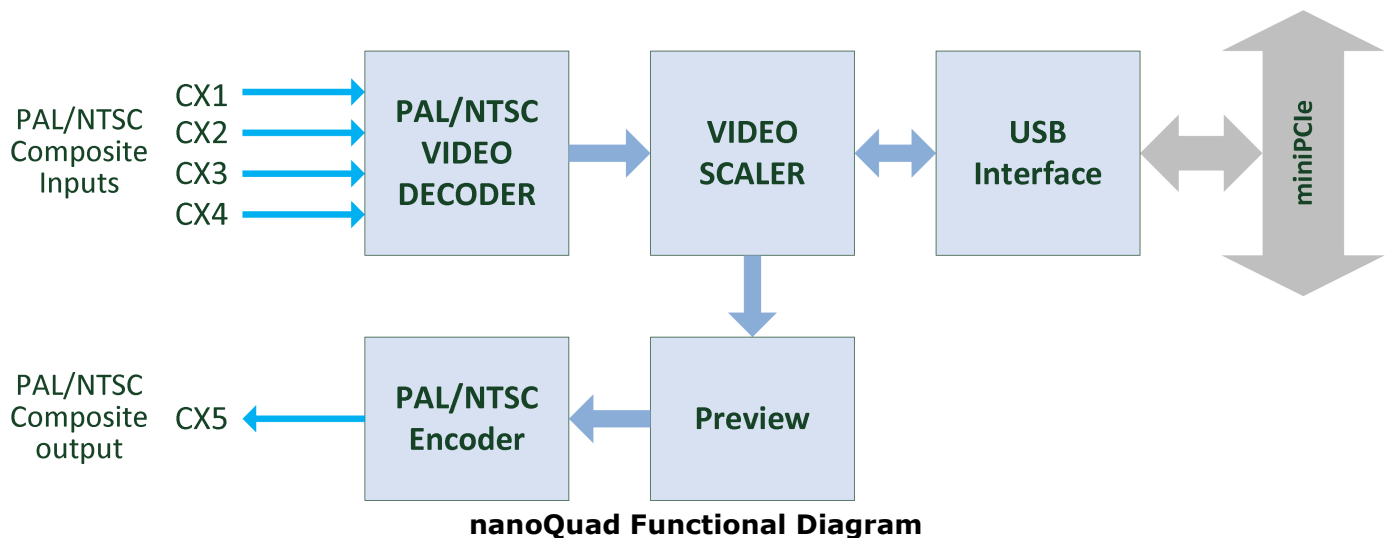
Standard full height miniPCI-Express form factor
Operating temp 0°C to 60°C
Operating temp -40°C to +85°C (extended temp option)

Software Drivers

Drivers for Windows and Linux (other OS by request)
Sample video mixing application in C/C++ source code

Ordering Information

nanoQuad	Video Mixer (0 to 60°C)
nanoQuad-Ext	Video Mixer (-40°C to +85°C)



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