

NV220 Video Enhancement Processor

1.0 Introduction

The NV220 is a single-chip, programmable video display processor, providing advanced features for progressive scan, high frame-rate DVD video output. It offers the following features.

1.1 Highly Integrated Video Processor

- Three, on-chip, 10-bit Digital-to-Analog Converters (DACs)
- Built-in memory controller supporting SDRAM or SGRAM
- 0.35 μ CMOS process
- 3.3V power supply with 5V tolerant I/Os
- Standard 208-pin PQFP

1.2 Video Input

- Multiple video input modes
 - Master/Slave
 - DVD Mode 0
 - DVD Mode 2
- Digital 8-bit YUV (ITU-R 656)

1.3 Noise Reduction

- Motion adaptive noise reduction filter

1.4 Color Processing

- Built-in color space conversion
- Selectable output color space: YUV or RGB

1.5 Video Processing

- Advanced non-linear video processing
- Motion compensated deinterlacing
- Programmable peaking
- Non-linear interpolation
- Background coloring
- Anti-flickering circuitry
- NTSC/PAL to SDTV 480p format conversion

1.6 Host Interface

- I²C interface
- No programming needed for default mode application

2.0 General Description and Applications

The NV220 is a single chip digital video processor for progressive and digital TV applications. It provides high quality video processing including video noise reduction, motion compensation, sharpness enhancement, and resolution enhancement. It also provides frame rate conversion and progressive scan conversion with deinterlacing.

The NV220 is a CMOS mixed signal circuit highly integrated with three, 10-bit digital-to-analog converters controlled by the I²C interface. The NV220 accepts 8-bit YUV (ITU-R 656). Additionally, NV220 supports DVD Mode 0 and DVD Mode 2.

Applications for the NV220 chip are listed here.

- DVD Players
- DSS Receivers
- Digital Televisions: DTV/HDTV ready
- Video Conference

3.0 Ordering Information

Part Number	NV220
Package	PQFP 208
Description	Plastic quad flat package, 208 leads
Version	1.0