19-4720; Rev 0; 7/09

# Laser Driver for Projectors



## General Description

The MAX3600 laser driver for projectors supports video imaging with red, blue, and green lasers. Each output includes a 10-bit video digital-to-analog converter (DAC) with programmable gain and offset. For operation with synthetic green lasers, the driver includes a periodic off function and a fourth output with a random-noise generator.

The MAX3600B/R/G are monochrome drivers for blue, red, and green lasers. The MAX3600A guarantees higher full-scale output currents than the MAX3600.

## Applications

RGB Pico Laser Projector

Up to WXGA and 1080p Resolution Projectors

Monochrome Blue, Green, or Red Pico Laser Projector

***Typical Operating Circuits and Pin Configuration appear at end of data sheet.***

## Features

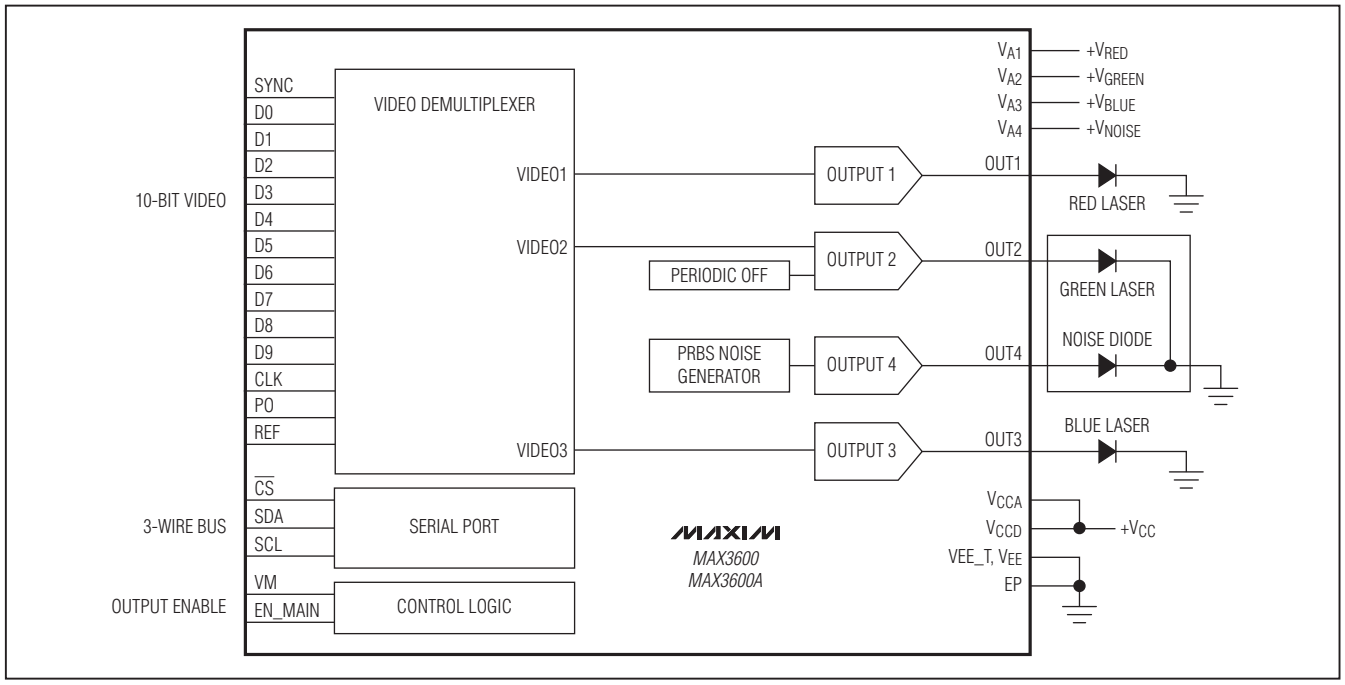
- **Integrates Four Current-Output Laser Drivers**
- **Compatible with Red, Blue, and Green Lasers**
- **10-Bit Video DACs, $f_{CLK}$ = 1MHz to 160MHz**
- **8-Bit Gain and Offset DACs**
- **2ns Output Switching Time**
- **Serial Port Control**
- **Laser Enable**
- **Random-Noise Generator and Periodic Off**
- **5mm x 5mm, 40-Pin TQFN Package (0.4mm Pitch)**

## Ordering Information

| PART | TEMP RANGE | PIN-PACKAGE |
|---|---|---|
| MAX3600CTL+ | 0°C to +70°C | 40 TQFN-EP* |
| MAX3600ACTL+† | 0°C to +70°C | 40 TQFN-EP* |
| MAX3600RCTL+† | 0°C to +70°C | 40 TQFN-EP* |
| MAX3600GCTL+† | 0°C to +70°C | 40 TQFN-EP* |
| MAX3600BCTL+† | 0°C to +70°C | 40 TQFN-EP* |

*+Denotes a lead(Pb)-free/RoHS-compliant package.*
**EP = Exposed pad.*
*†Future product—contact factory for availability.*

## Simplified Functional Diagram




**Note to readers:** This document is an abridged version of the full data sheet. To request the full data sheet, go to **www.maxim-ic.com/MAX3600** and click on **Request Full Data Sheet**.



***For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.***