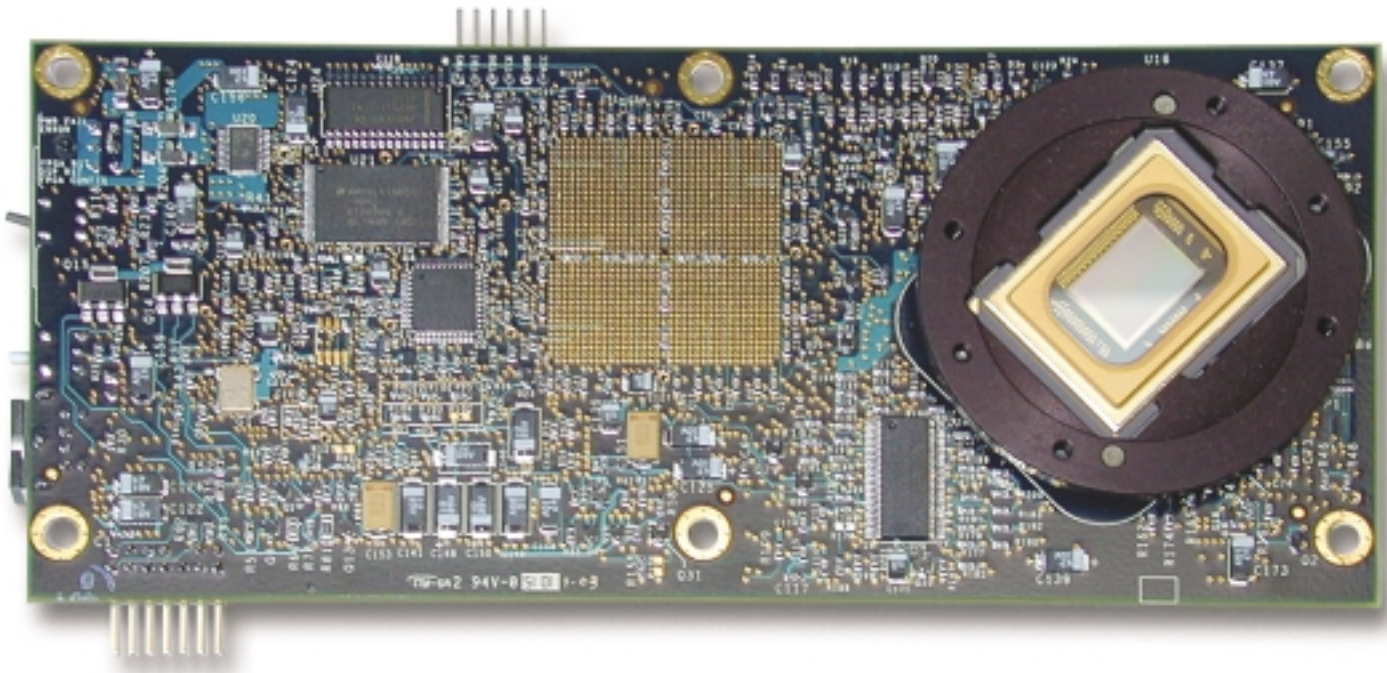


# Optical Signal Processing For Today's Dynamic Networks

OVER 1 MILLION DLP™ SYSTEMS IN THE MARKET TODAY!

## **BLAZE EVALUATION KIT**



### **DLP™ BLAZE Evaluation Kit Applications**

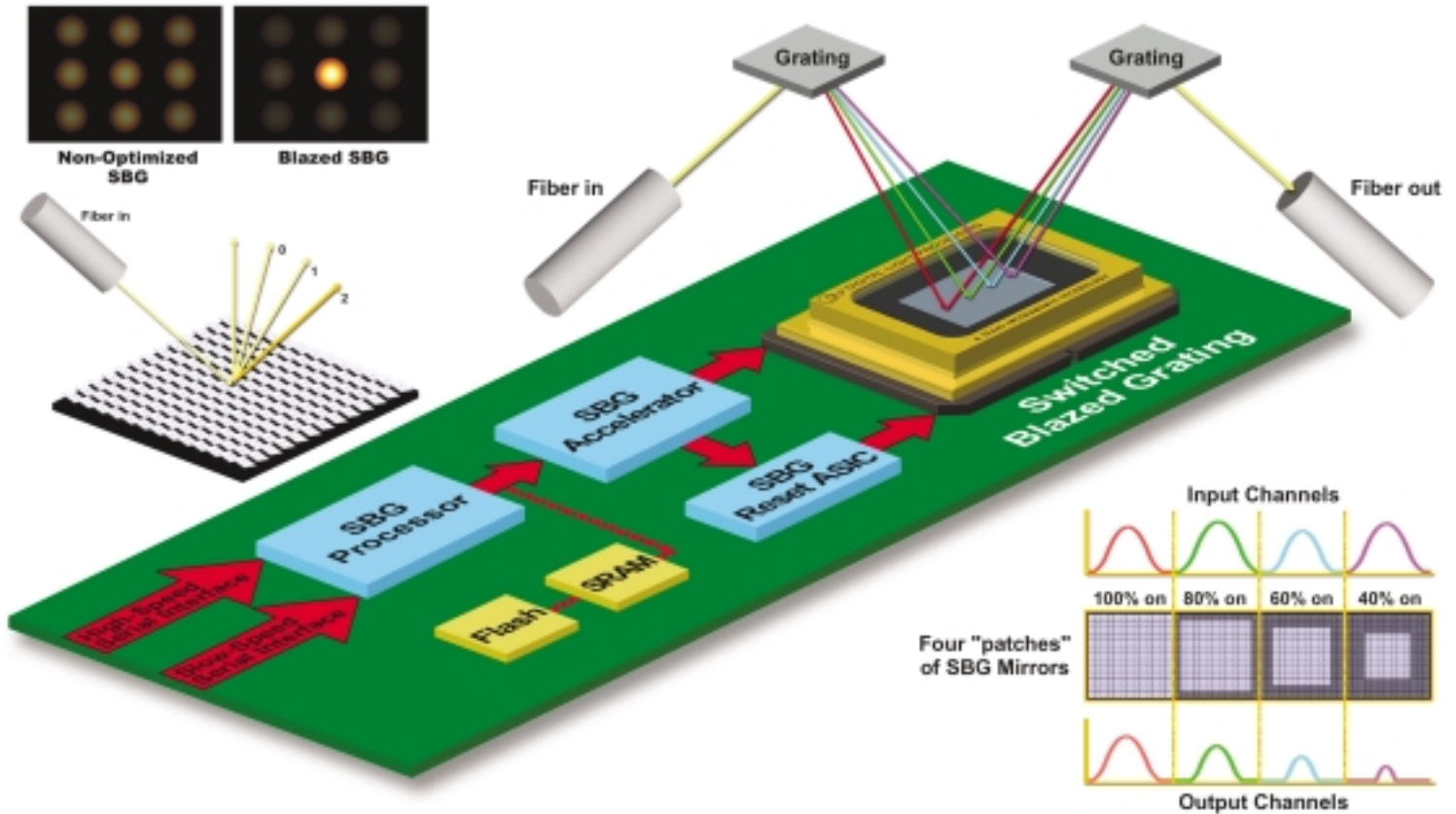
- Dynamic Filters
- Blocking Filter
- Dynamic Provisioning
- Optical Performance Monitor
- ... to name a few
- ROADM
- Programmable Source

### **Demonstrated DLP™ BLAZE System Performance**

- In-System Reprogrammable
- HSSI / SSSI
- Fast Switching Speed (15µs)
- Channel Count Independent
- Power Penalty < 0.1 dB
- Insertion Loss < 2 dB
- PDL < 0.02 dB
- Accuracy < 0.1 dB
- Max Attenuation > 35 dB
- Resolution < 0.1 dB

### **DLP™ Reliability**

- > 100,000 Hours Lifetime
- > 2 Trillion Mirror Cycles
- Currently Undergoing GR-1221 Qualification
- Current Device Qualification Exceeds Most GR-1221 Requirements



Texas Instruments invites you to discover the possibilities of DLP™ technology for optical networking.

With the introduction of the *BLAZE* Evaluation Kit, a whole new world of dynamic optical networking applications becomes possible.

The *BLAZE* Evaluation Kit is a high-performance solution for equalization, filtering, modulation, and control of DWDM signals.

At the heart of this chipset is TI's Switched Blazed Grating (SBG). Based on TI's time-proven and reliable

DLP™ technology, the SBG provides 786,432 individually switchable 13.8µm square mirrors. These mirrors have been optimized for optical networking applications operating in a blazed condition.

Packaged behind a hermetically sealed window, this array of switchable mirrors provides less than 2 dB of insertion loss and less than 0.02 dB of PDL (C-band).

Control of the SBG is achieved by way of a parametric control interface to the Processor (a custom programmed TI - TMS320VC5416 DSP).

This parametric interface allows OEM's to create customized solutions, thus differentiating end-products to suit the needs of various markets and applications.

The *BLAZE* Evaluation Kit is designed to speed OEM product development. As such, the Kit provides interconnects for both stand-alone and daughter-board operation. A convenient GUI allows quick and easy control of the SBG from your PC or laptop.

And the on-board flash supports in-system reprogramming of both the Processor and Accelerator.

## Switched Blazed Grating (SBG) Chip Set Highlights

### SBG Processor

- Calculates mirror control patterns based on parametric inputs
- Two default serial interfaces
  - High-Speed (160 MHz bursts)
  - Slow-Speed (RS232)
- Custom programmed TMS320VC5416 DSP

### SBG Accelerator

- Provides the processor with a high speed, configurable interface to the SBG device

### Switched Blazed Grating

- 786,432 individually addressable mirrors
- Mirror size = 13.8µm
- Bistable ±9.2° tilt angle
- Insertion loss < 2 dB\*
- PDL < 0.02 dB\*
- Applicable to S, C & L bands
- Hermetic package
- \*C-band