



# High-Speed Video Applications

## Automotive

- **Design and Development**

By allowing engineers to record and measure events that the eye cannot see, high-speed video can significantly shorten the development cycle for new products. Design engineers can record a high-speed operation, make adjustments, re-record the event and immediately analyze the cause and effect relationships. Typical development applications within the automotive industry include:

- ◇ Transmission and engine design
- ◇ Combustion studies
- ◇ Valve train dynamics
- ◇ Transmission design
- ◇ Belt and pulley analysis

- **Manufacturing**

Manufacturing output can often be increased by allowing production engineers to clearly see and understand complex electro-mechanical interrelationships as machine speeds are increased. An increase in productivity not only lowers unit costs but may also help eliminate or defer the need to purchase new equipment. Common manufacturing applications include:

- ◇ Engine assembly and machining
- ◇ Automated PCB assembly
- ◇ Stamping operations
- ◇ Machine tool feed optimization
- ◇ Automated transfer operations

- **Product Testing**

High-speed video is widely used for product testing at both the component and assembly level. Impact, vibration, stress, penetration and air flow testing are just a few typical examples. Potentially costly design or manufacturing flaws can be corrected before the product gets to your customers, while thorough packaging testing can help keep shipping damage and expensive warranty adjustments to a minimum. Typical applications include:

- ◇ Crash and sled testing
- ◇ Air bag testing
- ◇ Spring and switch testing
- ◇ Door assembly testing
- ◇ Materials testing