

# Application Specifics

## AEROFLEX COLORADO SPRINGS MIXED-SIGNAL ASIC SOLUTIONS

### SECURITY SCREENING

#### PROBLEMS =

- **Space** Photodiode inputs are spread out over a large area.
- **Low signal levels**
- **Slow scanning speed** Muxing analog signals through fewer ADCs limits scanning rate and resolution.
- **Noise susceptibility**
- **System cost** Standard product solutions for signal conversion are costly.
- **System migration cost** Standard product solutions are not scalable to a higher number of channels without major system re-design.

#### SOLUTION = AEROFLEX X-RAY SECURITY SCREENING ASICs

- **Integrated** signal amplification and conversion.
- **Low noise** Aeroflex CTIA input amplifiers handle fC charge signals.
- **Dedicated ADCs** Each channel has its own ADC for scanning rates independent of the number of channels.
- **No analog signal routing** Only digital signals and power are required for ASIC interface to system.
- **Low cost** per channel.
- **Scalable solution** Adding more channels only requires adding digital serial interfaces.

