

AN OPTOELECTRONIC VLSI TECHNOLOGY

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Optoelectronic VLSI Technology combines the processing power of electronics with the communications power of optics. As an example of the potential of such an approach, this report will describe the design, the fabrication, and the operation of an optoelectronic chip used as the core of a 256x256 ATM switching fabric prototype. The chip demonstrates that hundreds of Gigabits of information can pass through a chip and be processed on it every second.