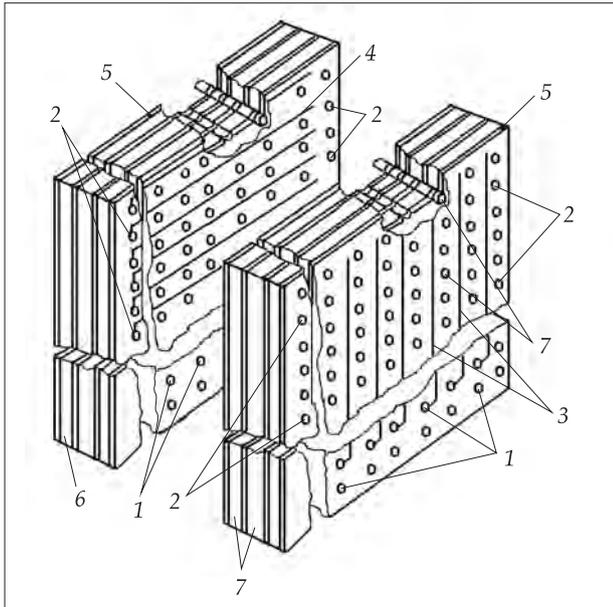


## 3D CROSSBAR SWITCHING SYSTEM WITH OPTICAL SWITCH



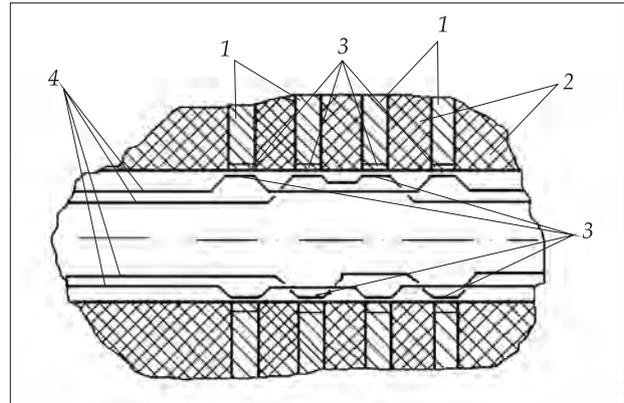
3D crossbar switching system with optical switch  
 1 – input, 2 – output, 3 – input bus, 4 – output bus,  
 5 – layers of input and output buses, 6 – dielectric,  
 7 – optic fiber with contacts

### Areas of Application

The switch is to be used in computer systems for interblock data transfer. The product is aimed at developers of new computer equipment

### Advantages

The existing crossbar switches involve  $n$  out of  $n^2$  switching points for simultaneous connection. In order to minimize the number of switching points located on the surface of crossbar switch its configuration has been optimized by reducing the number of matrix rows and columns and by placing buses on parallel surfaces. As a result, the crossbar switch has a multilayer structure



Electro-optical connector 1 – layers of input and output buses, 2 – dielectric, 3 – electro-optical contacts, 4 – optic fiber

### Specification

The switch is a matrix containing inputs and outputs. The area occupied is minimized due to its multilayer structure. Each layer is made of dielectric with orthogonal buses at the intersection of which there is the optical connector common to all layers, which is designed as electro-optical switch

### Stage of Development.

#### Suggestions for Commercialization

IRL2, TRL2

Sketch of 3D crossbar switching system configuration and computing circuit is provided upon request

### IPR Protection

IPR3

### Contact Information

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