# ElectroniCast Consultants

**PHOTONIC SWITCH & SWITCH MATRICES**
**GLOBAL MARKET FORECAST (2007-2012)**

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Photonic switches implement technologies that switch signals purely in the optical domain. The ElectroniCast Photonic Switch & Switch Matrices Global Market Forecast provides the historic year of 2007 and a 5-year (2008-2012) forecast of the consumption value of photonic switch & switch matrix (systems), segmented into the following geographic regions:

- North America
- Europe
- Asia Pacific Region (APAC)

This is the report of the ElectroniCast study of conventional optical switch modules and optical switch matrices used for selected fiber optic-based communication applications or for the purpose of the manufacturing of components to be used (consumed) in the selected communication applications.

The global consumption value of photonic switches and switch matrices in 2007 was $5.69 billion. The consumption value is forecast to increase to $22.7 billion in 2012, with strongly rising quantity growth partially offset by a continuing decline of average selling prices (ASPs). This DRAMATIC growth will be driven by the expansion of fiber optic transport and access networks, mainly in telecommunications. The private data network as well as the specialty/instrumentation and military/aerospace market segments will also continue to be major switch users.

The forecast for each switch type in each region is in terms of:

- Quantity (unit x 1,000)
- Value (US$ Million)
- Average price (dollars per each unit)

The category list of each of the switch types is presented in the databases (Microsoft Excel) spreadsheet is presented in Table 1. The category list of each of the selected applications reported in this market forecast study is presented in Table 2.

**Table 1**
**Photonic Switch Product Categories**

Photonic Switches & Matrices
- Optomechanical Conventional Switches
  - Singlemode
    - 1X2
    - 2X2
    - 1XN
      - 1X4
      - 1X8
      - 1X16
      - 1X32
      - 1X64
      - 1X128
      - 1X >128
    - Dual Bypass (Quad Ring)
  - Multimode
    - 1X2
    - 2X2
    - 1XN
      - 1X4
      - 1X8
      - 1X16
      - 1X32
      - 1X64
      - 1X128
      - 1X >128
    - Dual Bypass (Quad Ring)
- Nonmechanical Conventional Switches
  - 1X2
  - 2X2
  - 1XN
    - 1X4
    - 1X8
    - 1X16
    - 1X32
    - 1X64
    - 1X >128

**Table 1**
**Photonic Switch Product Categories**
**- Continued -**

- Optomechanical Matrix Switches
  - Singlemode
    - Balanced Matrix (NXN)
      - 2X2
      - 4X4
      - 8X8
      - 16X16
      - 32X32
      - 64X64/72X72
      - 128X128
      - 256X256
      - 1024X1024 & Larger
    - Unbalanced Matrix (MXN)
      - 2X4
      - 4X8
      - 8X16
      - 16X32
      - 32X64
      - 64X128
      - > = 128X256
      - (Other than 1:2 Ratio)
  - Multimode
    - Balanced Matrix (NXN)
      - 2X2
      - 4X4
      - 8X8
      - 16X16
      - 32X32
      - 64X64
      - > = 128X128
    - Unbalanced Matrix (MXN)
      - 2X4
      - 4X8
      - 8X16
      - 16X32
      - 32X64
      - > = 64X128

**Table 1**
**Photonic Switch Product Categories**
**- Concluded -**

Nonmechanical Matrix Switches
- Balanced Matrix (NXN)
  - 2X2
  - 4X4
  - 8X8
  - 16X16
  - 32X32
  - 64X64/72X72
  - > = 128X128
- Unbalanced Matrix (MXN)
  - 2X4
  - 4X8
  - 8X16
  - 16X32
  - 32X64
  - > = 64X128

**Table 2**
**Fiber Optic Fusion Splice Application Categories**

- Telecommunications
- Premises data networks
- Cable TV
- Military/Aerospace (Commercial and MIL-SPEC)
- Specialty (intra-enclosure, test and measurement, laboratory, other)

# Photonic Switch & Switch Matrices
# Global Market Forecast
## Table of Contents



**Market Forecast Data Base – Excel Spreadsheets:**

Global
North America
Europe
APAC