



Bureau of Industry and Security Thermal Imaging Industry Brief

Study of the U.S. Imaging and Sensors Industry

The U.S. imaging and sensors industry is a critical part of the U.S. high-technology and defense industrial base. Increasing global competition in most overseas markets for defense and commercial products has raised some concerns about the long-term competitive position of the U.S. industry and its ability to maintain technological leadership. To better understand these concerns and the potential implications for U.S. defense production capabilities, the U.S. Army Night Vision & Electronic Sensors Directorate supported a Bureau of Industry and Security (BIS) assessment of the competitiveness of the industry. BIS conducted an extensive survey, which resulted in the following findings and conclusions:

1. A Growing Commercial Market

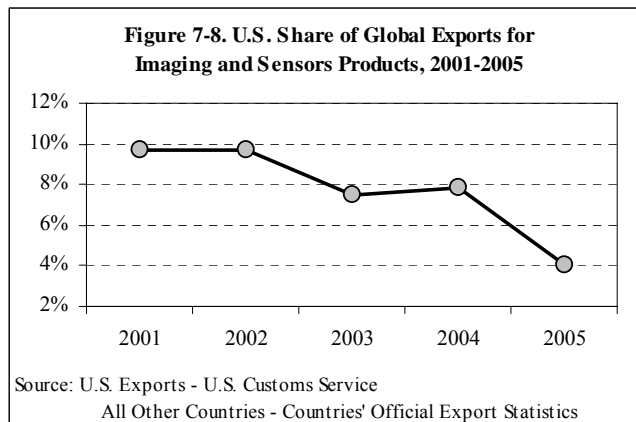
- Defense sales once accounted for nearly all revenues, but commercial sales now account for 29.8 percent of the total market. The overall commercial market for imaging and sensors grew by over 55 percent between 2001 and 2005.
- There are new and growing commercial applications for imaging and sensors technology, including astronomy, fire fighting, medical imaging, hunting, and wildlife observation. For example:
 - Swiss authorities used thermal imaging sensors to check the structural integrity of the Kitzsteinhorn tunnel following a deadly train fire in 2000.
 - China used thermal imaging sensors to monitor the temperatures of incoming travelers to help contain the SARS outbreak.

2. Heavy R&D Investment and Strong Employment

- From 2001-2005, U.S. manufacturers invested \$1 billion in R&D. Internal funding, rather than Defense Department investment, now represents the majority of R&D spending.
- The industry has created 3,000 new jobs since 2001, with total employment reaching almost 11,000 in 2005.

3. Positive Overall Trade Balance, but International Competition Increasing

- Industry reports that U.S. exports of all imaging and sensor products have increased steadily, from \$280 million in 2001 to \$462 million in 2005.
- However, worldwide customs data show that there is increasing competition in commercial products from the European Union (EU), Japan, and China.
- As a result, total U.S. share of global exports for imaging and sensors products declined between 2001 and 2005 according to Census Bureau data (see figure 7-8).



4. Sharp Decline in One Key Category

- Industry reports a sharp decline (about 64%) in the export of uncooled infrared (thermal) imaging cameras.
- These cameras are used in the commercial electronics, medical, and automotive industries, and also for fire-fighting, search and rescue, and industrial safety.
- U.S. manufacturers cite overly restrictive U.S. export controls as a key reason for this decline, arguing that competitors face far less restrictive licensing requirements.

Major U.S. firms producing uncooled thermal products said they have set up or are considering setting up manufacturing capabilities offshore to take advantage of other...States' less restrictive export controls on thermal imaging exports.

5. Majority of U.S. Licenses Issued to NATO Allies and Japan

- The U.S. requires a license for the export and reexport of uncooled cameras to all destinations except Canada.
- In Fiscal Year 2005, licenses for thermal imaging cameras were the single largest category of licenses issued by the Department of Commerce.
- Between 2001-2005, 67 percent of all licenses approved by the Department of Commerce were for exports to the EU and Japan.

For more information, call the Bureau of Industry and Security Office of Congressional and Public Affairs at 202-482-2721.