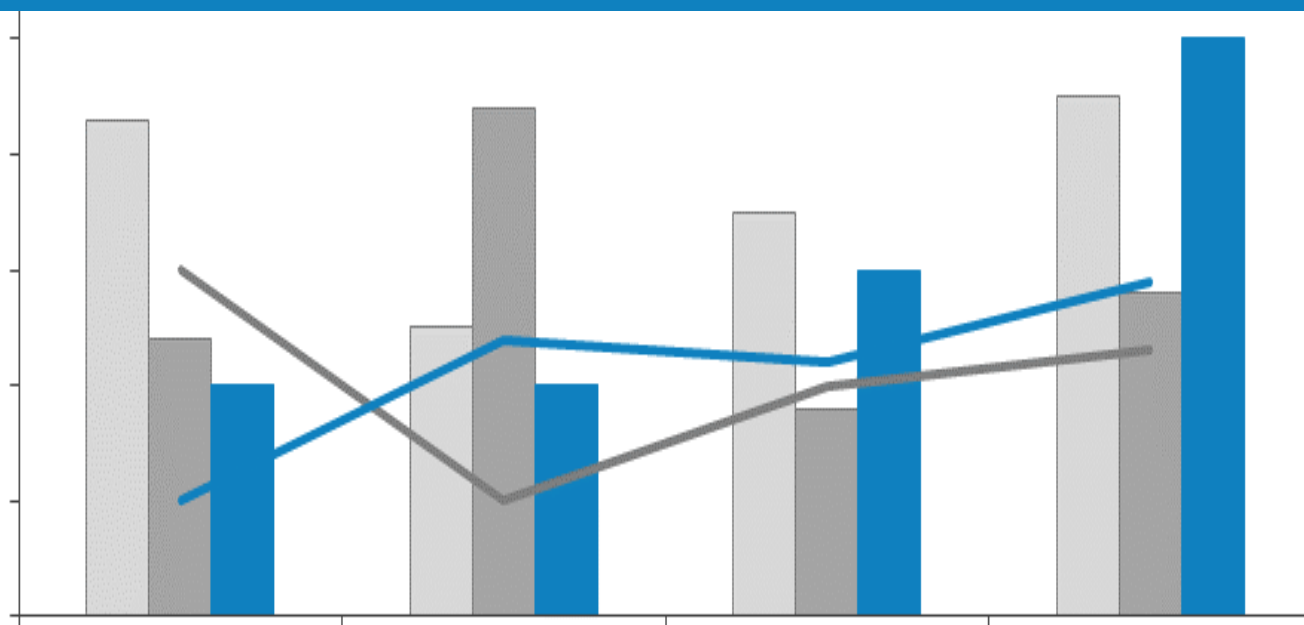




## Analytical report

### DISCOVERY RESEARCH GROUP

## Russian market of thermographic (infrared) cameras and thermographic devices



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## Summary

Marketing agency DISCOVERY Research Group completed the research of Russian market of thermographic (infrared) cameras and thermographic devices on December of 2016.

A thermographic camera (also called an infrared camera or thermal imaging camera) is a device that forms an image using infrared radiation, similar to a common camera that forms an image using visible light. Instead of the 400-700 nanometre range of the visible light camera, infrared cameras operate in wavelengths as long as 14,000 nm (14  $\mu\text{m}$ ). Their use is called thermography.

In 2012 world market of thermographic devices reached 2,183 billion dollars, in 2015 – 3,24 billion dollars. In 2020 it will reach 5 billion dollars.

In 2015 volume of thermographic (infrared) cameras in Russia reached 4 878 devices. The projection from Discovery Research Group says that in 2016 the volume of Russian market will reach 5 989 devices; compared to 2015, the volume will increase by 23%.

Infrared cameras import volume reached 3 832 devices in 2015; compared to 2014, it has decreased by 26%.

In the first half of 2016 infrared cameras import volume reached 2 279 devices. The projection from Discovery Research Group says that in 2016 the volume of import infrared cameras in Russia will reach 4 950 devices.

In 2015 the largest share of imported infrared cameras (in value terms) belongs to Thales Group.

## Chapter 1. Methodology of the research process

### Research objective

To describe current situation and prospects on thermographic (infrared) cameras and thermographic devices market in Russia.

### Research tasks

1. To calculate volume and value of the Russian market of thermographic (infrared) cameras and thermographic devices.
2. To describe main trends on the world market of thermographic (infrared) cameras and thermographic devices.
3. To calculate volume and value of the import and export on the thermographic (infrared) cameras and thermographic devices Russian market.
4. To calculate volume and value of the import and export on the thermographic (infrared) cameras and thermographic devices Russian market in the categories:
  - cooled and uncooled;
  - hand-operated and stationary;
  - able and unable to measure temperature with high accuracy;
  - for observation and diagnostics.
5. To learn trends and prospects on the Russian market of thermographic (infrared) cameras and thermographic devices.
6. To investigate factors on the Russian market of thermographic (infrared) cameras and thermographic devices.
7. To describe main characteristics of thermographic (infrared) cameras and thermographic devices.
8. To monitor and calculate prices on thermographic (infrared) cameras and thermographic devices in Russia.
9. To describe competition situation on thermographic (infrared) cameras and thermographic devices in Russia.
10. To provide information about key players on on thermographic (infrared) cameras and thermographic devices in Russia.

### Research object

Market of thermographic (infrared) cameras and thermographic devices in Russia.



### Research method of data collecting

Monitoring of materials from printed and electronic business and specialized publications, reviews of the market; Internet resources; materials of marketing and consulting companies; results of previous researches made by DISCOVERY Research Group.

### Research method of data analysis

1. Databases of the Federal Customs Service data, Rosstat (Federal State Statistics Service).
2. Printed and electronic business and specialized editions, analytical reviews.
3. Internet resources in Russia and the world.
4. Materials of domestic and world markets players.
5. The results of researches of marketing and consulting agencies.
6. Materials of branch establishments and databases.
7. Materials of United Nations Statistics Division: Commodity Trade Statistics, Industrial Commodity Statistics, Food and Agriculture Organization, International Monetary Fund, World Bank, World Trade Organization, Organization for Economic Cooperation and Development, International Trade Centre, Index Mundi.
8. Results of previous researches made by DISCOVERY Research Group Research.

### Sample size and structure

Content analysis of documents does not involve the calculation of the total sample. Researchers analyze available documents and information.

The report is accompanied by processed and ready to use database. **This database includes detailed information about import to Russia and export from Russia Russian market of thermographic (infrared) cameras and thermographic devices.** The database includes indicators:

1. Product category;
2. Product group;
3. Manufacturer;
4. Brand;
5. Year of import/export;
6. Month of import/export;
7. Companies-receivers and companies-senders of goods;
8. Countries-receivers and countries-senders of goods;
9. Volume of import and export of goods;
10. Value of import and export of goods.

Database provides you an opportunity to get any additional information contained in the database and not included in the report.

## Chapter 2. Classification and main characteristics of thermographic cameras and thermographic devices

### Infrared camera: description

A thermographic camera (also called an infrared camera or thermal imaging camera) is a device that forms an image using infrared radiation, similar to a common camera that forms an image using visible light. Instead of the 400-700 nanometre range of the visible light camera, infrared cameras operate in wavelengths as long as 14,000 nm (14  $\mu\text{m}$ ). Their use is called thermography.

...

...

...

...

## Infrared cameras classification

### *By measurement functions*

Modern infrared cameras can ...

...

...

### *By method of imaging*

...

...

### *By spectral range*

...

*Stationary and portable*

...

*Cooled and uncooled devices*

...

...

**Applications of infrared cameras**

...

...

...

**How it works**

...

...

...

## Chapter 3. World market of thermographic cameras and thermographic devices

### World market of infrared cameras

In 2012 world market of thermographic devices reached ...

...

...

...

### World market tendencies

To boost sales many manufacturers try to create ...

...

...

...

## Chapter 4. Production of thermographic cameras and thermographic devices in Russia

...

...

...

**Table 1. Production volume of infrared cameras in Russia, 2011-2016 , units and % of increase**

Index	2011	2012	2013	2014	2015	2016
Production						
% of increase						

Source: Discovery Research Group

To calculate value of ifrared cameras production in Russia ...

...

...

**Table 2. Production value of infrared cameras in Russia, 2011-2016 , thousand dollars and % of increase**

Index	2011	2012	2013	2014	2015	2016
Production						
% of increase						

Source: Discovery Research Group

Five year ago in Russia ...

...

...

## Chapter 5. Volume, value and growth rates on the Russian market of thermographic cameras and thermographic devices

In 2015 market volume of thermographic cameras and thermographic devices in Russia reached ... units; compared to 2014, the market has ... by ...%. Main role plays ...

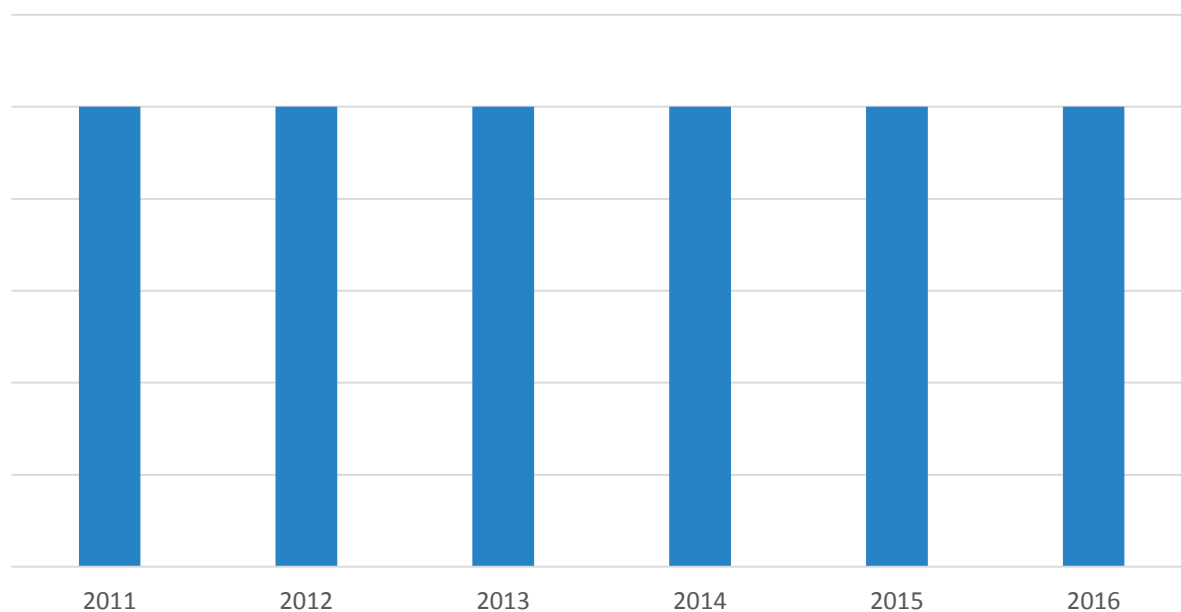
In 2016 volume of market will reach ...

**Table 3. Volume and growth rates on the thermographic cameras and thermographic devices market in Russia, 2011-2016, units and % of increase**

Index	2011	2012	2013	2014	2015	2016
Production						
Import						
Export						
<b>Market volume</b>						
<b>% of increase</b>						

Source: Discovery Research Group

**Figure 1. Volume on the thermographic cameras and thermographic devices market in Russia, 2011-2016, units**



Source: Discovery Research Group



In 2015 market value of thermographic cameras and thermographic devices in Russia reached ...

...

...

In 2016 value of market will reach ... thousand dollars.

*Note: not all of customs declarations are shown in database from FTA (foreign trade activities) because of hidden FTA codes (access is provided only for people who are allowed to know the secrecy of military information).*

**Table 4. Value and growth rates on the thermographic cameras and thermographic devices market in Russia, 2011-2016, thousand dollars and % of increase**

Index	2011	2012	2013	2014	2015	2016
Production						
Import						
Export						
<b>Market volume</b>						
<b>% of increase</b>						

Source: Discovery Research Group

## Chapter 6. Import of thermographic cameras and thermographic devices to Russia and export of thermographic cameras and thermographic devices from Russia

Most of imported infrared cameras are used for ...

*Note: not all of customs declarations are shown in database from FTA (foreign trade activities) because of hidden FTA codes (access is provided only for people who are allowed to know the secrecy of military information).*

### Import

Import of infrared cameras to Russia in 2015 reached ... units; compared to 2014, the import volume has ... by ...%.

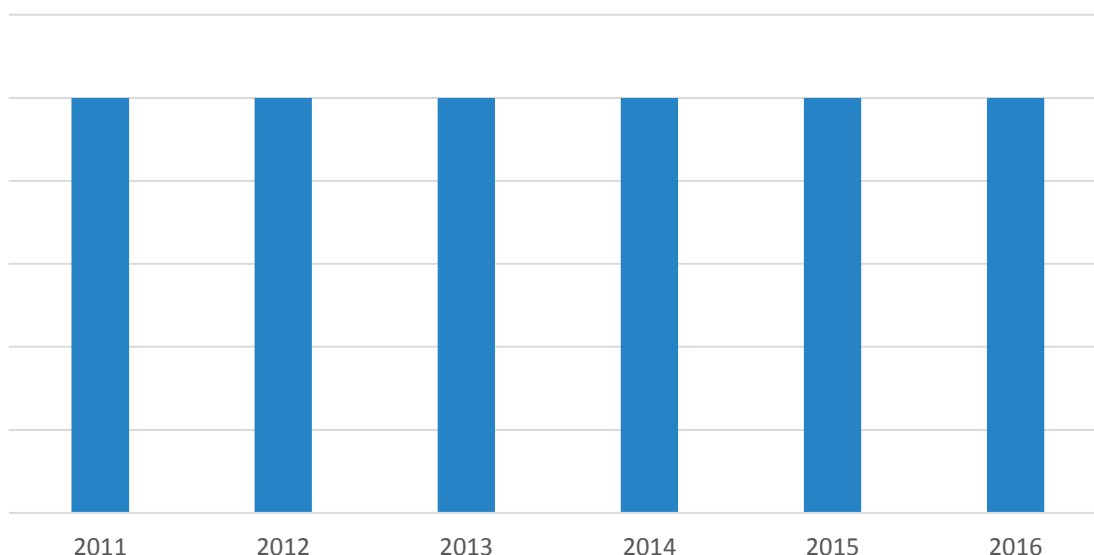
In 2016 import will reach ... units.

**Table 5. Import of thermographic cameras and thermographic devices to Russia, 2011-2016, units and %**

Index	2011	2012	2013	2014	2015	2016
Import						
% of increase						

Source: the DISCOVERY Research Group calculations of FCS data

**Figure 2. Import of thermographic cameras and thermographic devices to Russia, 2011-2016, units**



Source: the DISCOVERY Research Group calculations of FCS data

Table 6. Import of infrared cameras to Russia by manufacturers, 2011 - I half 2016, units

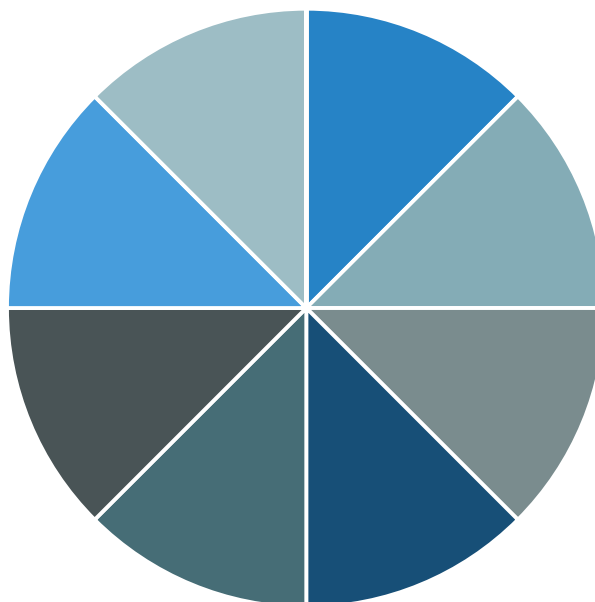
Manufacturer	2011	2012	2013	2014	2015	First half of 2016
Axis						
TOTAL						

Source: the DISCOVERY Research Group calculations of FCS data

• • •

...

Figure 3. Import volume of infrared cameras to Russia by manufacturers, 2015, %



Source: the DISCOVERY Research Group calculations of FCS data

*Import by countries of origin*

*Import of cooled and uncooled infrared cameras*

*Import of cooled and uncooled infrared cameras by manufacturers*

*Import of infrared cameras for observation and diagnostics*

*Import of infrared cameras with or without high accuracy temperature measurement*

*Import of hand-operated and stationary infrared cameras*

## Export

Export of infrared cameras from Russia in 2015 reached ...

...

...

*Export by manufacturers*

*Export by countries of destination*

*Export of cooled and uncooled infrared cameras*

## Chapter 7. Thermographic cameras and thermographic devices Russian market forecast

## Appendix 1. Key players profiles

*FLIR Systems, Inc.*

*Fluke Corporation*

*Thales Group*

*Testo AG*

*Nippon Avionics Co., Ltd (NEC)*

*Sagem*

*SAT Infrared*

*OAO «Tsiklon»*

*OAO «Pergam-Inzhiniring»*

*ООО «NPO AMB»*

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