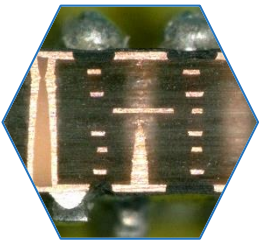
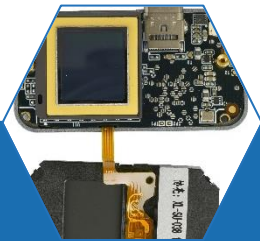




## IRay T3S Thermal Camera for Smartphone

*Deep dive analysis of the IRay T3S thermal camera for smartphone including structural and cost analysis.*



**Title:** IRay T3S Thermal Camera for Smartphone

**Pages:** 79

**Date:**  
August 2020

**Format:**  
PDF & Excel file

**Price:**  
EUR 3,990

**Reference:**  
SP20569

In the current context of the health crisis due to the COVID-19 virus, the demand for temperature measurement tools has exploded.

The T3S thermal camera by IRay Technology, has been developed for consumer or industrial applications. Such systems could mitigate the virus's spread by detecting people with fever symptoms. IRay's camera produces thermal images on a smartphone and provides local temperature measurements. It belongs to a portfolio of compact thermal camera plug-ins for smartphones, including the T2L and T3S PRO cameras. The T3S model integrates an RTD3172 Raytron microbolometer die with 17µm pixel pitch. It offers intermediate features between the T2L camera, which is more compact, and the T3S PRO camera, which is more accurate. These cameras are dedicated to industrial inspection, animal observation and electronic testing applications. IRay has developed a wide range of cameras with different resolutions and accuracies.

This full reverse costing study has been conducted to provide insights into technology data, manufacturing cost and manufacturer price of one thermal

camera for smartphone supplied by IRay Technology.

Along with the complete teardown analysis of the IRay T3S thermal camera, this report includes a complete Bill of Materials, PCB and lens module analyses, system block diagram, electronic board high-definition photos, and main Integrated Circuit (IC) and sensor die photos. Material costs are then estimated, as well as process assemblies, to deliver a complete cost analysis and an estimated manufacturer price of the thermal camera.

### COMPLETE TEARDOWN WITH

- Detailed photos
- Block diagram
- PCB cross-section and cost estimate
- Estimate for integrated circuit
- Complete and priced bill-of-material (BoM)
- Manufacturing process flow
- Manufacturing cost analysis
- Estimated sales price

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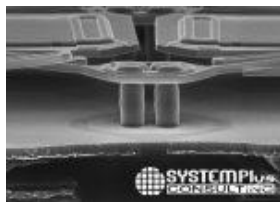
- Estimation of the Manufacturer's Price

## AUTHORS



*David Le Gac has joined System Plus Consulting as a cost engineer in 2013. He is in charge of reverse costing with a focus on boards and systems. He previously worked for Lacroix Electronics where he was in charge of components database. He holds a master degree in microelectronics from the University of Rennes.*

## RELATED ANALYSES



### FLIR Boson – a small, innovative, low power, smart thermal camera core

*Based on a high definition ISC1406L micro-bolometer, the FLIR Boson thermal camera aims at a wide range of markets: military, drones, automotive, security and firefighting.*

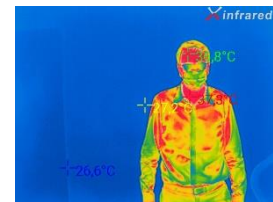
September 2017 - EUR 3,490\*



### Apple iPad Pro LiDAR Module

*The first 3D direct Time-of-Flight (dToF) CMOS image sensor from Sony with dedicated Lumentum VCSEL.*

June 2020 - EUR 3,990\*

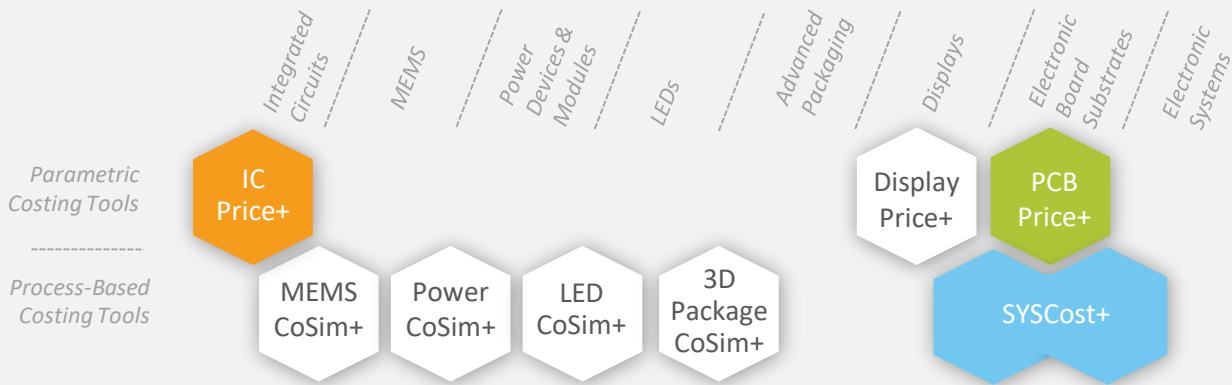


### iRAY T3S Thermal Camera Performance Analysis

*iRAY T3S thermal camera for COVID detection: performance analysis now released !*

November 2020 - EUR 6,490\*

## COSTING TOOLS



Our analysis is performed with our costing tools IC Price+, PCB Price+ and SYSCost+.

System Plus Consulting offers powerful costing tools to evaluate any process or device, the production cost and selling price, from single chip to complex structures. All these tools are on sale under corporate license.

### SYSCost+

Provides all component costs estimation including PCB, housing and connectors, and a simulation of the assembly cost and test process at the board and system level.

### IC Price+

Performs the necessary cost simulation of any Integrated Circuit: ASICs, microcontrollers, memories, DSP, smartpower...

### PCB Price+

Performs the necessary cost simulation of a large type of PCB substrates according to different technical characteristics such as the material, the metal layers, the type of Vias, etc.

## ABOUT SYSTEM PLUS CONSULTING

System Plus Consulting is specialized in the cost analysis of electronics from semiconductor devices to electronic systems. A complete range of services and costing tools to provide in-depth production cost studies and to estimate the objective selling price of a product is available.

Our services:

- **STRUCTURE & PROCESS ANALYSES**
- **TEARDOWNS**
- **CUSTOM ANALYSES**
- **COSTING SERVICES**
- **COSTING TOOLS**
- **TRAININGS**

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## WHAT IS A REVERSE COSTING®?

Reverse Costing® is the process of disassembling a device (or a system) in order to identify its technology and calculate its manufacturing cost, using in-house models and tools.



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# TERMS AND CONDITIONS OF SALES

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Buyer must note that placing an order means an agreement without any restriction with these terms and conditions.

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Prices of the purchased services are those which are in force on the date the order is placed. Prices are in Euros and worked out without taxes. Consequently, the taxes and possible added costs agreed when the order is placed will be charged on these initial prices.

System Plus Consulting may change its prices whenever the company thinks it necessary. However, the company commits itself in invoicing at the prices in force on the date the order is placed.

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System Plus Consulting responsibility will not be involved in non execution or late delivery of one of its duties described in the current terms and conditions if these are the result of a force majeure case. Therefore, the force majeure includes all external event unpredictable and irresistible as defined by the article 1148 of the French Code Civil?

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The Buyer is responsible for the use and interpretations he makes of the reports delivered by System Plus Consulting. Consequently, System Plus Consulting responsibility can in no case be called into question for any direct or indirect damage, financial or otherwise, that may result from the use of the results of our analysis or results obtained using one of our costing tools.

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