

Nokia Lumia 920 Camera Module with OIS

REVERSE COSTING ANALYSIS – MAY 2013

The first smartphone's camera module integrating Optical Image Stabilization (OIS) realized with a dual-core 3-axis MEMS gyroscope and a floating lens technology

While Digital Still Cameras commonly use optical image stabilization, it was not included in smartphones. The Nokia Lumia 920 is the first smartphone featuring an OIS function.

To perform Optical Image Stabilization, the camera module includes a floating lens technology which consists in moving the 5-elements lens module in perfect synchronization with the camera movement.

The camera movement is measured with a dual-core 3-axis gyroscope from STMicroelectronics included in the camera module. Instead of using two dedicated sensors, Nokia chose to integrate a single gyroscope for both gesture recognition and camera image stabilization, allowing cost and board space savings.

The camera module of the Nokia Lumia 920 also provides true 16:9/4:3 aspect ratios by the use of a custom CMOS Image Sensor (CIS) manufactured by Sony. The CIS features a 8.7 megapixel resolution, 1.4µm pixel size, and uses a Back-Side Illuminated (BSI) technology.

This report provides a complete teardown of the camera module with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow
- In-depth manufacturing cost analysis
- Supply chain evaluation
- Selling price estimation

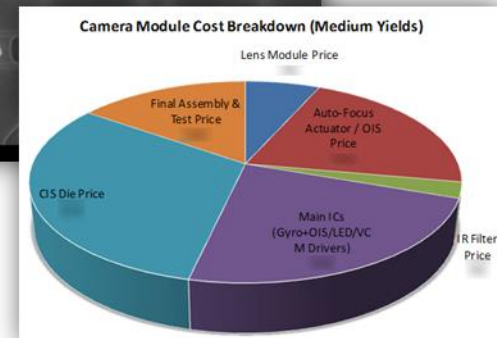
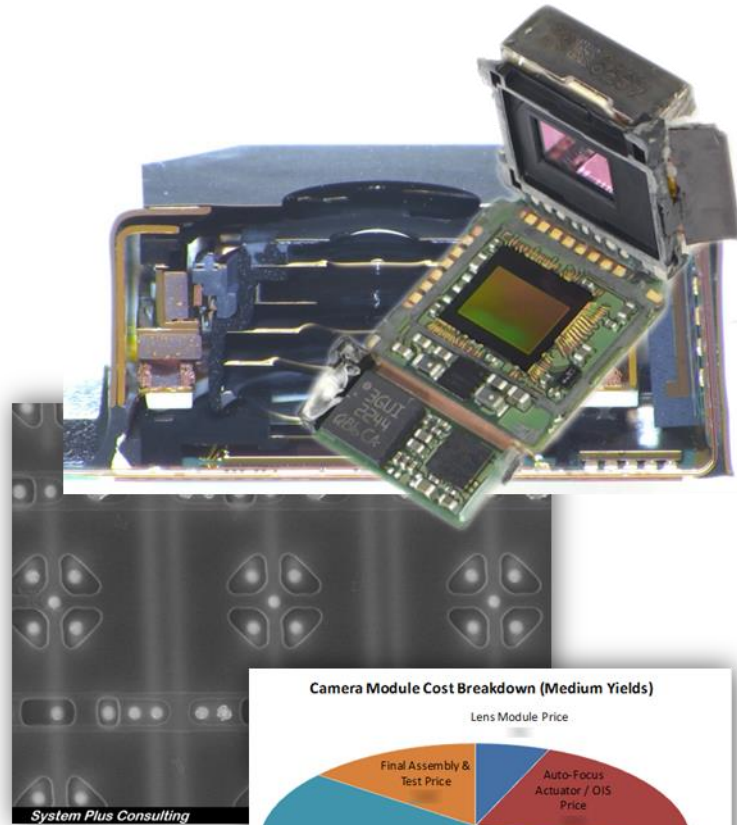


TABLE OF CONTENTS (100 pages)

Glossary

Overview/Introduction

CMOS Image Sensor Market

Nokia Lumia 920 Teardown

Physical Analysis

- Physical Analysis Methodology
- Camera Module with flex
- Camera Module Views & Dimensions
- Camera Module X-Ray
- Camera Module Disassembly
- CIS Views & Dimensions
- CIS Resolutions
- CIS Pads
- CIS without Microlenses
- CIS Pixels
- CIS Technology node
- CIS Memory
- Camera Module Cross-sections
 - ✓ Housings
 - ✓ PCB
 - ✓ Lenses
 - ✓ Auto-focus actuator/OIS
 - ✓ IR Filter
- CIS Cross-sections

Manufacturing Process Flow

- Global Overview
- CIS Process Flow
- BSI Detailed Process Flow
- Description of the CIS Wafer Fabrication Unit

Cost Analysis

- Synthesis of the Cost Analysis
- Main Steps of Economic Analysis
- Supply Chain
- Yields Hypotheses
- CIS Front-End : Hypotheses
- CIS FEOL + BEOL Cost
- CSI BSI Cost
- CIS BSI Cost per Process Steps
- CIS BSI : Equipment Cost per Family
- CIS BSI : Material Cost per Family
- CIS Front-End Cost
- CIS Back-End 0 : Test & Dicing
- CIS Wafer Cost (Front-End + Back-End 0)
- CIS Die Cost & Price
- Camera Module Assembly - Hypotheses
- Lens Module Cost
- Auto-Focus Actuator / OIS Cost
- Main ICs and IR Filter Cost
- Final Assembly Cost
- Camera Module Cost

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