Following its first introduction of a 3D structured light camera on the front of the Find X, last year, Oppo is now pioneering the use of 3D Time-of-Flight (ToF) in its Rx17 Pro. Lenovo did a similar integration on the rear of one of its products a few years ago, integrating a pmd/Infineon solution in a high-end phone. In doing this, Asus and Lenovo added an additional Near Infra-Red (NIR) Global Shutter (GS) camera, but Oppo doesn’t have such a dedicated NIR GS Camera. Instead, Oppo uses the latest generation of ToF camera technology from Sony Depthsensing Solutions, formerly known as SoftKinetic.

The rear optical hub is packaged in one metal enclosure and features several cameras and a flood illuminator. The complete system features a telephoto and wide-angle camera module and a 3D ToF camera. The distinguishing characteristic of the 3D depth sensing camera is the addition of a NIR flood illuminator.

This report focuses its analysis on the 3D depth sensing system. All components are standard and can be found on the market. That includes a BackSide Illumination (BSI) ToF image sensor featuring 10 µm x 10 µm size pixels and resolution of 46 kilopixel, developed by Sony Depthsensing Solutions. It also has one vertical cavity surface emitting laser (VCSEL) for the flood illuminator, coming from a major supplier. This is the first ToF imager found on the market featuring BSI technology, which is commonly used by Sony, coupled with Current Assisted Photonic Demodulation (CPAD) developed by Sony Depthsensing Solutions.

Along with the complete 3D depth sensing system, this report analyses the system’s cost and estimates its price. It also includes a physical and technical comparison with another 3D sensing system from Lenovo in the Phab2Pro, using the first generation pmd/Infineon ToF Imager. The comparison looks at system integration, the NIR camera module and the flood illuminator architecture.
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2.2 Some weeks prior to the release date the Seller can propose a pre-release discount to the Buyer

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2.3 The mailing of the Product will occur only upon the payment, in accordance with the conditions contained in article 3.

2.4 The mailing is operated through electronic means either by email via the sales department or automatically online via an email/password. If the Product’s electronic delivery format is defective, the Seller undertakes to re-deliver the Product within 48 hours of the date of the original delivery or receipt of the Product.

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4.7 The replacement is guaranteed for a minimum of two months starting from the delivery date. Any replacement is excluded for any event as set out in article 5 below.

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6. Price, invoicing and payment

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- Posting any Product to any other online service (including both bulletin boards and the internet);
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6.3 The Buyer shall be solely responsible towards the Seller of all infringements of this obligation, whether this infringement is committed by any company or trading name of the Buyer.

6.4 The Buyer will define within the Seller’s company point of contact for the needs of the contract. This person will be the recipient of each new report in PDF format. This person shall also be responsible for respect of the copyrights and will guarantee that the Products are not disseminated out of the company.

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