Mobile Phone
Visitor Guide

China International Optoelectronic Exposition 2019

Photonics technologies & applications in Mobile Phone
The innovation and development of smart phones are paying more and more attention to the improvement of hardware application speed. Full screen, fast charging, rotating camera, five-time lossless zoom, four-axis optical image stabilization, DSP image processing chip, invisible fingerprint recognition, virtual reality, etc. Related technologies have been applied to the field of mobile phones.

CIOE (China International Optoelectronic Exposition) is a professional exhibition covering the entire industrial chain of optoelectronics. It focuses on camera modules, 5G related technologies and products, virtual reality technology in the mobile phone and consumer electronics industries, focusing on optoelectronic technology in mobile phones. And the application and development of the consumer electronics industry is a one-stop service platform for mobile/3C electronics, home appliances, wearable devices, consumer smart robots and other companies looking for solutions and product market expansion.

**Exhibit Profile:**
Mobile phones and consumer electronics lenses and camera modules, image test light boxes, CMOS sensors, fiber optic sensors, optical processing equipment, fiber optic cables and filters, and other laser processing equipment, AR, VR, laser marking, cutting, welding, etc., artificial intelligence technology, 5G, VCSEL new applications on mobile phones;

**Visitor Profile:**
Mobile phone brands / OEM, ODM, IDH solutions, tablet and computer / audio-visual / digital electronics, 3C manufacturers, home appliance manufacturers, wearable devices companies, AR / VR, robots / drones and camera module related enterprise;
The world's first and the only mass production MOC packaging camera module. Replacing the traditional mirror base, the chip, gold wire, capacitor, resistance and other electronic components are sealed on the circuit board, so that the size, accuracy, reliability, intensity, heat dissipation, chip fouling and other pain points of the camera module have been improved tremendously. On this basis, the MOC dual photographic module was further developed and mass produced, which directly abandoned the heavy and expensive metal bracket that occupied the precious space of the mobile phone and achieved a smaller size while maintaining better strength.

Jiangxi Lianchuang Electronic Co.,Ltd

Mobile phone supporting products

Lianchuang Electronic Co.,Ltd has a complete set of mobile phone products, including mobile phone lens and module, iris identification module, structural light module, fingerprint identification module, etc. Main customers include: Huawei, Samsung, etc.

Phenix Optical Co.,Ltd

Mobile terminal camera module

The camera module has automatic focus function. The clear images of objects at different distances can be captured by automatic focusing, which is widely used in the high-end intelligent mobile terminals of customers.
Beijing Nedplusar Technology Co., Ltd  6E33

Free-form prism monocular display module (NEDFP02322)

Product parameters: monocular vision, 22° field Angle, 45 inches at 3 meters, 10mm exit pupil diameter, 21mm exit pupil distance, 30%-90% customizable light transmittance, 11mm lens thickness, 640*400 resolution ratio.

GUANGZHOU CHIOPT OPTOTECH CO., LTD  6C11

This corresponds to a 1/3.2-inch panoramic CQ0801A

Features: high resolution and super wide Angle 8 million pixel lens, 230° super Angle, more outstanding effect, more realistic color, durable, no deformation, no fog, surface oxidation treatment, no rust, no dust.

Shenzhen Lochn Optics Technology Co., Ltd.  6D70

Optical waveguide technology optical module

It is mainly composed of LCOS screen, optical waveguide and LED backlight and mainly used for AR augmented virtual reality near-eye display, which is a penetrating auxiliary information display.
Shenzhen Chuangxinshixun technology Co.,Ltd

High camera module

USB3.0 interface, in YUY2 mode, high resolution can also operate at high speed. Generally, MJPEG is adopted to achieve the optimal transmission speed degree. Compatible with USB2.0 interface; Auto-focusing speed, with incomparable fast stability; Special features like adjustable focal length (F), focus from 0 to 1023. It can ensure the operation of telephoto while having a particularly close range;

Shenzhen Anhua Optoelectronics Technology Co., Ltd

Kestrel (F11P) TI 0.47 "1080P DMD

Parameters: chip: TI 0.47 "1080P DMD; Physical resolution: 1080P (1920X1080); Light source: RGB 3 LED; Projection ratio: 0.8; Frame size: 50 "@0.885m; Contrast ratio (F0FO) : 700:1; TV distortion: <1%; Color saturation: 90% NTSC; Projection luminous flux: 700 lm; Size (mm) : 178X114X51;

Shenzhen Huynew Technology Co., Ltd

Coaxial surface scheme

Innovative curved reflection optical design is adopted to reduce the weight of optical components and improve the wearing experience of AR glasses while realizing large field Angle.
H.P.B Optoelectronics (Shenzhen) Co., Ltd

**Gesture recognition module**

Gesture recognition module is built in gesture control hardware and infrared light module to detect user gestures and then control devices, which can be easily integrated into consumer products without additional software burden.

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**SCHOTT AG**

**SaiXuan™ New generation (LAS) cover glass**

The product has been upgraded in strength, flexibility and reliability. The overall drop test shows that Saixuan™ Up. can withstand the drop height is twice the traditional aluminosilicate glass.

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**TRUMPF China Co. Ltd.**

**3D sensing VCSEL (Consumer Electronics)**

With stable product quality and abundant shipping capacity, TRUMPF consumer electronics has been adopted by the most mainstream mobile phone manufacturers at home and abroad. Up to now, it has achieved large volume sales for more than 5 years. Trumpf VCSEL, originated in Europe, serves the whole world.
CHENGDU JINGHUA OPTECH CO., LTD
Optical lens and camera module

Main product applications:
tablet/computer/peripheral, mobile phone,
wearable products, audio-visual/digital electronic
products, consumer electronics/entertainment,
automotive electronics, etc.

XIAMEN CLOUDTOP TECHNOLOGY CO., LTD
Custom camera module

Making customize lens modules of different Sensor
requirements according to customer requirements; At
the same time, making customized camera module and
according to Hisilicon solution and so on.

Zemax Technology consulting (Shanghai) Co., Ltd
Optical machine design software LensMechanix

LensMechanix is software intended for mechanical
engineers to design the structural form of an optical
product in CAD software. Mechanical engineers can
obtain the complete design data of the optical system
designed in the OpticStudio and design the mechanical
package immediately after loading the optical design. We
can make sure that the mechanical structure does not
affect the optical performance before the prototype is
made.
Shanghai Juyou Intelligent Technology Co., Ltd.

**OPN8008 3D Time of flight sensor**

OPN8008 is a 320x240 pixel 3D sensing time of flight (ToF) imaging sensor. OPN8008 delivers industry-leading precision at NIR wavelengths. OPN8008 is one of the key products in a series of OPNOUS ToF solutions that support the MIPI cs-2 interface and are compatible with other OPNOUS products by sharing similar SDK, module, and firmware functions.

Shanghai Ascore Technology Co., Ltd.

**940nm high power VCSEL epitaxial slice**

- Low threshold current - low beam divergence - high power conversion - high reliability - suitable for manufacturing single crystal tube and polycrystal tube emitter series (mass production in May 2019)

ESPROS Photonics AG

**epc6xx series**

3D-TOF imaging chips contain a certain number of pixels. Each pixel can measure the distance to its object point. This series of chips is based on our unique OHC15L CMOS/CCD process and complete on-chip system design as well as ultra-small CSP package. The process technology has excellent photosensitivity and extraordinary environmental light suppression ability.
Meridian Innovation Limited  

SenXor™

Patented CMOS hybrid thermal sensing structure & patented wafer level vacuum packaging (WLVP); Smaller pixel size than conventional thermopile, low-cost CMOS manufacturing, scalable to mass production.

Zhongshan HeTong Optics Electronic Technology CO., LTD

Structural light laser module for face/motion recognition

Infrared point-like adjustable products, used in various industrial laser modules, laser locator, point laser, one line laser, cross laser, parallel line laser, laser module, red line projector, laser emitter, infrared positioning lamp, infrared locator... And so on.

First Sensor AG

Hybrid module

First Sensor provides compact integrated solutions for photodiodes and amplifiers that match the specific performance of the detectors. Welcome to contact us for your specific sensor solutions that meet your specific application requirements.
ShenZhen Chotest Technology Co., Ltd

Optical 3D profilometer

Optical 3D profilometer is an optical measuring instrument that uses optical microscope technology, white light interferometric scanning technology, computer software control technology and PZT vertical scanning technology to measure and analyze various surface morphologies of the workpiece through non-contact measurement.

GUANGZHOU BIAOQI OPTOELECTRONICS TECHNOLOGY DEVELOPMENT CO., LTD

TMS-PRO Microtransmittance meter

Based on the test principle of the ordinary transmittance measurement instrument, the micro optical path and the imaging CCD are added to precisely locate the test area, and the phase/absolute transmittance of the tiny area of the sample is tested with a small size light spot (0.1mm). Compared with the traditional eyepiece focusing, it adopts digital camera video to focus more accurately and test faster, which is specially used to detect the transmittance of tiny areas such as IR hole, menu key and return key of the cover plate of mobile phone.

Shenzhen Threenh Technology Co., Ltd

Image test light box t90-7

Mainly used in camera test environment reflection light source, color and illuminance can be adjusted. Volume (width × depth × height): 1008 × 716 × 898mm. 2.7 kinds of light source, 4 groups of LED light source, 3 groups of fluorescent light source. 3. Display the use time name and switch times of each light source, and is able to adjust light.
Zhuhai Huaya Machinery Technology Co., Ltd. 6D69

Wide-angle camera module production line

Production line includes: automatic loading and unloading equipment, AA equipment, lock pay, automatic core, automatic focus glue adjustment, final inspection.

Guangdong Beichuang Optoelectronics Technology Co., Ltd 7G36

Spherical lens reflection through the integrated spectrometer

The all-in-one reflectance spectrometer is an addition to the microsphere spectrometer to measure the transmittance. An instrument can detect reflectivity and transmittance simultaneously. The switch between R and T is simple and has comprehensive functions.

Optical Gaging Products (Shenzhen) Co., Ltd 6D12

Spark Semi-Auto

Spark is a high-performance, semi-automatic measurement system used for manufacturing quality control. Over and above the fine measurement features, Spark offers a complete measure of parts using advanced optics and lighting, a high-resolution fixed lens optical system, a high-resolution digital pixel color camera, interchangeable objective lenses from 1.0 to 10 times, and three standard light sources.
TRUMPF China Co. Ltd.  2E21

TruMark 6030

Faster, more accurate and more flexible - increasing requirements for laser engraving, ablation, marking or annealing. TruMark 6030 has high power and excellent laser beam quality, which is required to achieve the best results in all industries. Through modern image processing solutions and high production efficiency to improve the marking effect and quality.

Han’s Laser Technology Industry Group Co., Ltd  2C11

Vacuum plasma cleaning machine

Purpose: integrated circuit lead stents, PCB blind hole drilling sewage, lithium-ion battery diaphragm, electronic connectors, speaker accessories, teflon PTFE material, motor electrical accessories, LCD ARRAY (glass processing), LCD’s CF (glass processing), aluminum foil, silver film, fingerprint module, camera module, headphones diaphragm, mobile phone box, ITO glass, sapphire substrate in plasma modified in addition to static electricity.

Shenzhen Dapeng Laser Technology Co., Ltd  3K21, 3H27

Optical fiber transmission welding machine series

High degree of automation of simple welding process, non-contact welding, clean, environmental protection, weld and large welding depth, high welding quality, real-time energy feedback, to ensure stable laser output power, output power can be set according to the welding materials, such as the shape, widely used in electronic components, mobile phones, medical, electronics, vibration motor for precision welding.
Shenzhen Inte Laser Technology CO., LTD

Green Laser Cutting Equipment

Mainly used in LED ceramics, precision metal, camera module, PCB, VCM, SD card, QFN, BGA and other microelectronics industry. The machine has the advantages of stable performance, beautiful appearance, low power consumption, compact structure, convenient operation, good man-machine interface, high precision CCD automatic positioning, automatic correction and so on.

Shenzhen Huize Laser Technology Co., Ltd

200W Laser Cleaning System

Non-contact cleaning, no damage to the base. Precise cleaning. It can achieve precise location, precise size selective cleaning. No need of chemical cleaning liquid, no consumable material, safe and environmental protection. Simple operation, power on, can be held or with the manipulator to achieve automatic cleaning. Cleaning efficiency is very high, saving time. The laser cleaning system is stable and requires almost no maintenance.

SYNTEC TECHNOLOGY CO., LTD

70SB Fiber Laser Marking Scheme

High degree of automation of simple welding process, non-contact welding, clean, environmental protection, weld and large welding depth, high welding quality, real-time energy feedback, to ensure stable laser output power, output power can be according to the welding materials, such as the shape set arbitrary, widely used in electronic components, mobile phones, medical, electronics, vibration motor for precision welding.
Raylight Precision Photoelectric Technology Wuxi CO. LTD

**Picosecond processing equipment**

Technical principle: using picosecond modified cutting technology, gathering the translucent wavelength laser beam in the glass, forming the starting point for segmentation, and then on the glass with external force to divide it into small pieces of glass.

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TONSON TECH AUTOMATION EQUIPMENT CO., LTD

**Vacuum plasma cleaning machine TS-PL200MA**

Plasma surface activation/etching, plasma surface modification suitable for complex samples, all round uniform cleaning; No pollution in the whole process; Imported precision CNC machine tool processing technology, and quality control through trilinear coordinates measuring instrument imported.

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Shenzhen Hydrolaser Technology CO., LTD

**HL500 Series**

The HL500 series water droplet laser uses nanosecond fiber laser, water cooling and laser integrated design, convenient operation and transportation process. The laser head weighs less than 2kg and can be quickly switched between handheld and manipulator modes. Efficient, non-contact cleaning and no damage to the base material, suitable for fixture and mold cleaning, mobile phone back shell paint removal, etc.
LEYBOLD OPTICS EQUIPMENT (BEIJING) CO., LTD

ARES Vacuum coating machine series

The series is derived from the SYRUSpro series from Buhler Alzenau, and its easy use combined with production-proven local components makes the ARES series a powerful tool based on 100% optical technology for cost-effective, round-the-clock mass production.

TRIOPTICS CHINA CO., LTD

ProCam® Align Smart

For the research and development of camera module assembly and adjustment system. By automatically aligning the module to be tested, an independent machining scheme with the highest optical performance can be provided for the module. After processing begins, the device automatically dispenses glue, and then calibrates the image to sensors or other devices. Calibration includes accurate translation, tilt, focus, and rotation for optimal image quality. Finally, the equipment will automatically complete the curing module, ending the processing process. By using replaceable assembly fixtures.

OPTORUN (SHANGHAI) CO., LTD

GENER-1300DBI

Vacuum chamber: SUS304, Φ 1300 x 1610 mm (H);
Workpiece frame: Φ 1200 mm; Workpiece revolving speed: 10rpm to 30rpm(variable); Optical film thickness control: hom2-r-vis400a (optional); Wavelength range of optical film thickness monitor: 400nm to 1100nm;
Reflection type/transmission type; The size is about 5000mm(W) x 6500mm(D) x 3500mm(H)
Satisloh Asia Co., Ltd

1200 PO

Satisloh offers a full range of precision optical deposition machines for physical vapor deposition of polymers, glass and infrared optics; The 1200-po Satisloh high volume coating machine maximizes productivity, reliability and energy efficiency.

Bruker (Beijing) Scientific Technology Co., Ltd.

Three dimensional optical microscope

Three dimensional optical microscope provides fast-talking, non-contact analysis of samples of different sizes from micro-scale such as MEMS to macro-scale such as engine cavities. Based on the original proprietary technology of Wyko®, innovations have been accumulated to ensure the high sensitivity and stability required for accurate 3D measurement in various application environments; And this challenge is often difficult to overcome by other measurement technology or measurement system.

Beijing High-precision Technology CO., Ltd

CGK-200 Horizontal ultra-precision CNC optical centering lathe

A special machine tool for CNC testing and processing of the deviation between the optical axis of the lens and the geometric axis of the frame; It can realize the processing, inspection, correction and measurement of optical lens and lens tube. The processing diameter range of 5mm to 200mm improves the overall imaging quality of the lens group; To solve the problem of self-inspection of high-end optical lens in China.
Shenzhen Agilebull Technology Co.,Ltd

**Zoom lens assembly line**

This production line is used for assembly production of zoom lens, including assembly of front main cylinder, front CAM, front group lens, rear main cylinder, back CAM, back group lens, sector gear, fixed grating, reducer and other parts.

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**DONGGUAN HCVAN TECHNOLOGY CO., LTD**

**AR+AF Sputtering coating machine**

It is specially designed for the coating production of optical thin film products with few layers but with high efficiency. It is suitable for the coating production of glass and plastic optical lens, eyeglass AF and AS film, AS well AS the preparation of color optical film of mobile phone window and plastic sheet material.

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**Suzhou Aview Image Technology Co., Ltd**

**Camera side by side quick focusing system**

In the fixed focus module and automatic focus module for smartphones, we provide precise focusing, dispensing, final testing, system-level testing and other equipment. We have ai-m100f focusing, dispensing, image testing all-in-one machine, ai-m100t far-focusing, near-focusing, white board, dark board testing all-in-one machine, ai-140f 4-axis synchronous focusing equipment, the speed is three times that of other single equipment. At the same time, also newly launched 6 axis active alignment equipment, perfect realization of optical axis adjustment, to ensure product quality.
Shanghai Fanuc Robot Co., Ltd

M-2iA

New robot, fist robot two
Fully sealed construction (IP69K), high pressure jet cleaning
High speed handling and assembly robot. It is used in assembling, picking up, packing, logistics handling and material processing.

Launch Digital Technology Co., Ltd

PCB Quick diagnosis instrument

PCB quick diagnostic instrument is the first in the world to use dual-spectrum interwoven positioning technology. By using PC terminal analysis software and intelligent algorithm, the operating temperature data of each chip, resistor and capacitor of the detected motherboard can be displayed in real time on the software, and the operating state of the motherboard can be determined by temperature data. In addition, the software can realize one-click kill leakage detection, quickly locate the maintenance mainboard leakage location; In addition, the software side can quickly find out the abnormal problem points through the mode analysis function of normal/abnormal mainboard comparison.

Xiangtan Hongda Vacuum Technology Co., Ltd

Multi-functional continuous coating equipment

This series of coating line is mainly used for coating on plate glass, acrylic, PC, PET and other substrates, various metal film, dielectric film, dielectric metal composite film, transparent conductive film, CF and other film layers. The company can provide design according to customer requirements, provide a full set of equipment, responsible for the process, according to the "turnkey" engineering services. (here links to "turnkey" engineering services page)
After a successful first edition, Yole Développement is proud to collaborate once again with the China International Optoelectronic Expo (CIOE) to organize the Second Executive Forum on 3D Sensing for Consumers. It will take place on September 5, 2019 in Shenzhen, alongside the 21st CIOE. This event will present applications and technologies within the 3D sensing industry, and more specifically consumer-oriented solutions.

In the past two years 3D sensing has become a major technology for consumer electronics. In 2017 the iPhone X brought a major disruption with a touchless biometric interface using a 3D structured light camera. The full consumer electronics industry is now in motion to adopt 3D sensing as a new touchless user interface. In the process new technologies are entering, such as Time of Flight cameras and Active Stereo Vision. As space and bill-of-material dollars are scarce resources on the front sides of phones, 3D sensing is now entering the rear sides of phones and expanding into tablets, smart assistants, and payment devices.

Join us for this event and participate in discussions about this transformational technology for the consumer electronics industry!

Key reasons to be here!
A half-day dedicated to 3D Sensing for Consumers
6 high level presentations
Unique access to leading players and experts
Networking time to discuss with your peers

Don’t miss this opportunity to exchange with key players!
Full Agenda
About CIOE
A new formula! CIOE 2019 (through its 6 sub-expo- Optical Communication, Precision Optics, Laser, Infrared, Sensing and Photonics Innovation) creates a holistic business platform that addresses the converging ecosystems of Photonics and Optoelectronics. The interconnectivity of this mega-event lets you network with like-minded peers from tech industries, which includes information processing, consumer electronics, advanced manufacturing, sensing & measurement, energy, semiconductor, medical, lighting & display, defense & security.

Network with key industry players
Expect more networking, more showcases, and more content on the show floor with participation from key industry players such as Innolight, Hisense, YOFC, II-VI, SCHOTT, KYOCREA, ULIS, Thorlabs, Newport, HIK Vision, Go Edmund, Sunny Optical, Panasonic, Fanuc, Maxell, Velodyne, Innoviz, Hamamatsu, Robosense, Han’s Laser, Raycus and 2,000 more. Stay tuned for Exhibitors List.

Gain industry insights from the leading research affiliates
Presenting a knowledge powerhouse with more learning opportunities for the industry as CIOE secures strong partnerships with leading business intelligence and research affiliates such as YOLE DÉVELOPPEMENT, System Plus Consulting, Knowmade, Ovum, Light Reading, MEMS Consulting

Wide array of onsite activities and workshops
More than 50 Seminars, Workshops, Activities to keep you at the forefront of tech advances, including 5G Xperience zone, Smart Cities Arena, AI Village and more. View all activities

Useful Link:
Exhibitor List
Event Website
Register Now for CIOE 2019 (September 4-7, 2019; Shenzhen Convention & Exhibition Center)