



**If you want to go fast – go alone.
If you want to go far – go together!**

Steve Jobs

CEO's Note

Dear Reader,

Just before Christmas, we achieved a fantastic breakthrough. We were able to detect a (very) low reflecting object at a distance of over 100 meters with a LiDAR imager system based on our CCD/CMOS technology. And this with a vertical resolution of far more than 100 lines and more than 100 full frames per second. And, most important, at full sunlight on the target!*

The ingredients are very simple: Very high NIR QE (the experts understand these abbreviations 😊), high performance CCD and mixed signal CMOS in a monolithic design. However, it's like climbing a very high mountain. Say, the Mount Everest.



Mt. Everest in a unique view (Source: Jann Rageth 2019)

Many single elements have to match so the expedition becomes a success. A friend of mine who successfully climbed the Mount Everest in 2020 told me the whole story behind. The target is easily set: 8848m above sea level. But the way to go there is incredible.

Not just the logistics, but also the personal preparation, the skills, the endurance. So, for example, he slept for months in kind of a vacuum chamber with very low amount of oxygen. This to adapt his body to the very high altitude he will face.

Finally, he was on the summit and safely back. It's an incredible achievement. Congratulations my friend!

It took us also a while to achieve our Mount Everest in the form of this LiDAR imager. But with a great team that believes and supports the vision as well as hard and dedicated working, incredible things are possible. My deepest thank to all of them.

Beat De Coi

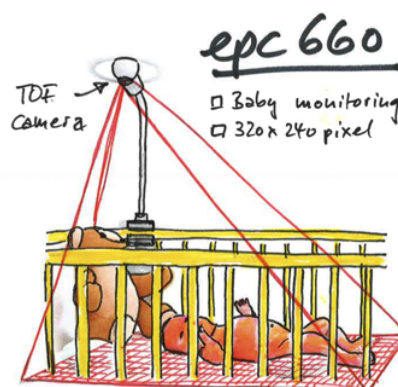
*My apologies, we cannot disclose more details in this current newsletter. Soon, more information will be distributed and products will show up on the market. Just this: A 900 vertical line imager will show up soon.

Protect one of the most important things in life with epc660

The epc660 chip is ideally suited for TOF camera sensors employed to monitor the movement of babies and infants in their cradles or playpens. The in-situ 3D data enables the sensor to recognize normal breathing patterns of sleeping babies, detect unnatural movement caused by spasms or epileptic fits or many other potential health problems of the monitored individual. Combined with early-warning algorithms this technology helps to prevent unnecessary pain or even potential injury caused by failing to detect warning symptoms. An application which is part of the ever increasing global smart healthcare market.

The heart of such a sensor is the epc660. A fully integrated 3D-TOF imager with a resolution of 320 x 240 pixels. As a system on chip, the epc660 contains next to the CCD pixel-field the complete control logic. The output of the chip is 12 bit DCS distance data per pixel, which is accessible through a high-speed digital video interface. Only few additional components are needed to build a complete 3D camera. Depending on illumination power and

optical design, a resolution in the millimeter range for distances up to dozens of meters is feasible. Up to 158 full frame TOF images are delivered in rolling mode. The extremely high sensitivity at 940nm allows the operation of the camera in the completely invisible wavelength domain for the human eye. And this at reduced illumination power. epc660 is based on the same technology and instruction set as the other TOF imagers from ESPROS. More information [here](#).



What are your responsibilities at ESPROS?

I'm working at the Production Engineering department. I develop test setups for the ESPROS chips. I'm also working in the team which is responsible for the testing and the characterization of the chips.

How long have you been working with ESPROS?

I have been with ESPROS since June 2020.

What do you like about your job and working for ESPROS?

I like the diverse challenges that the job entails and the combination of working with electrical circuits and software. It's great being part of a team which creates cutting-edge technologies.

Where do you come from?

I live in Kanton Glarus close to the Walensee.

Can you tell us about your hobbies?

I like hiking in winter, with snowshoes and snowboard. In summer I'm wake-boarding on the Walensee and I play regularly squash.



Be part of ESPROS as a Software Engineer

Our expertise in photonics and time of flight technology is revolutionizing the global sensor markets.

We are looking for software engineers which have completed studies in computer science, software engineering, electrical engineering or in similar fields.

Why not join the international ESPROS engineering team as a software engineer, reach your full potential in this virtually limitless world of application possibilities.

Your responsibility will be the design of software and controller firmware within an interdisciplinary product development team. The scope of activities range from embedded real-time software, TOF camera operating systems, filtering and compensation

implementation, image processing and applications software, depending on the skills and the personal disposition.

The products contain our unique CMOS/CCD TOF and LiDAR imagers.

The activities take place in close cooperation with research and development of the imagers as well as product management. In addition, there is also close cooperation with production and quality management, as the products are manufactured in large numbers according to international standards.

Get more information [here](#)



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