

# Fusion solutions

## Cherub

ITS BV offers a range of fusion solutions, depending on your needs. In development is a compact fusion core “Cherub” which combines two sensors (CMOS and Thermal) to one core with embedded Linux and a highly innovative, extreme low latency fusion core based on smart fusion at FPGA level. Release of this core is scheduled Q1 2019. This core saves time to market and is easy to integrate. A large amount of fusion options are available as well as thermal only or CMOS only mode. The core offers “smart” fusion on a pixel by pixel basis and ultimate FPN reduction as well as a shutterless Non Uniformity Correction. It comes either with a QVGA or a VGA Ullis (PICO) Microbolometer. Scaling and outlining are supplied and the output is a full HD, HD-SDI. Other outputs are available as well. This core also has an SXGA OLED display integrated for handheld and wearable integration. It’s entirely modular and both sensors and OLED can be tethered as well.



Figure 1 Cherub

## Indigo

The second platform ITS offers for Fusion is a platform called “Indigo”. This platform is based on ITS’ Cobalt camera platform with a dual sensor input. Any thermal core can be connected to this platform

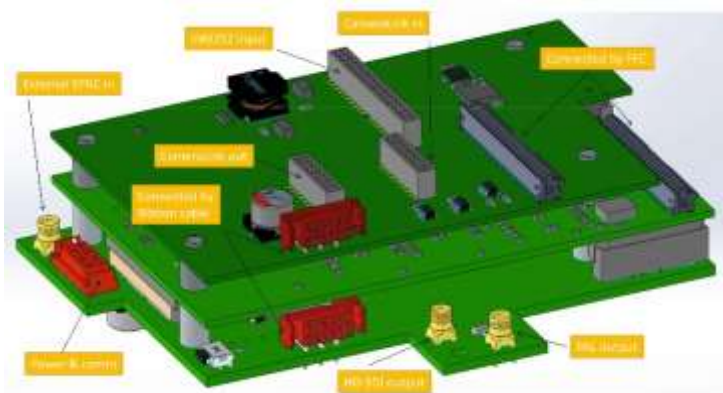


Figure 2 Indigo

but it comes with Tamarisk 640 as default thermal core. For the second sensor the platform can either be equipped with a CMOS 3.1MP sensor or the ITS Pulsatrix (ICMOS) night vision core. This platform runs also embedded Linux and the powerful ITS fusion algorithms. Shutterless NUC and unique FPN reduction are implemented as well. This platform can be used in both situational awareness camera systems as well as (driver) vision systems because of the

extreme low latency.

## Ruby

The latest development, in combination with the above mentioned “Cherub” is called “Ruby”. This core has the same form factor as the “indigo” platform however the Cobalt is replaced by a powerful SoC. This platform support the connection of up to 3 sensors at the same time. CMOS, ICMOS and Thermal can be combined into a single system with this platform. It utilizes the same low latency fusion technology, shutterless NUC and FPN reduction as all the other platforms and again running embedded Linux. All platform can be supplied with an API and ICD to tailor these platforms to your needs

## Quartz

With Quartz ITS also offer a platform that drives an OLED display so both Indigo and Ruby can be fitted with an OLED as well. But also any other camera core, like Pulsatrix or a DRS Tamarisk 640 can be connected to Quartz to create a small handheld Thermal or night vision device.



Figure 3 Quartz

*ITS fusion platforms are a range of comprehensive platforms for OEM's and Tier 1 manufacturers wishing to develop high end, state of the art fusion camera systems with short time to market!*