solectrix
high end electronics solutions

Syncable Sensor Hub

Modular Platform for
Low-Latency Algorithmic Applications

Sensor Front-End for Ethernet and Data Processing Cards

Syncable Sensor Hub

Modular Platform for
Low-Latency Algorithmic Applications

Sensor Hub Module
+ Based on Xilinx Artix UltraScale+ AU20P
+ Remote sync support
+ Combine various input & output modules to provide the ideal interfaces for your use case
+ Ideal for tasks like image signal processing

Metal Housing
+ Thermal decoupling
+ Shielding for electromagnetic immunity
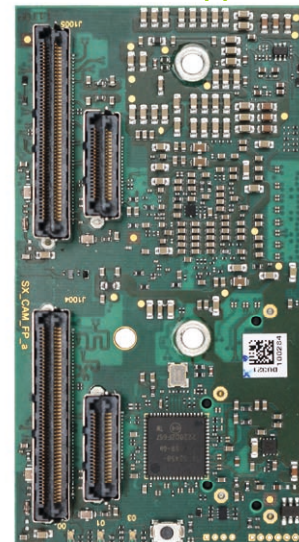+ Mechanical independence between sensor and electronics via cables or Starrflex PCBs

2× Application IF
+ each 4x 12G
+ two connector types each

Application module options:
+ Scientific device design, e.g.
  · OCT spectrometer
+ MIPI CSI-2 or SLVS-EC sensors
  · e.g., Sony IMX183 or IMX425
+ Other sensors, actuators, IFs over…
  · CML, LVDS, LVTTL…
+ Cameras via standard interfaces
  · HD-SDI
  · CoaXPress
  · FPD-Link
  · GMSL
  · more on request (CameraLink…)

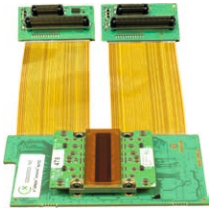**TOP**   **App side**

BOTTOM   **Host side**

1× Host IF
+ 4x 12G
+ two connector types

Host module options:
+ GigE Vision (1× 10G)
+ Aurora, XAUI (50G), e.g., as front-end for Alveo cards
+ PCIe over cable (x1 to x4)
+ DisplayPort
+ HDMI
+ Standard camera IFs
  · same as Application side
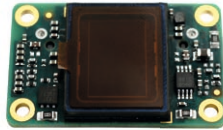
I/O Module Examples
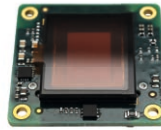
Sensor Modules

OCT
Line Sensor

Spectrometer
Line Sensor

Sony IMX183
(MIPI CSI-2)

Sony IMX425
(MIPI CSI-2,
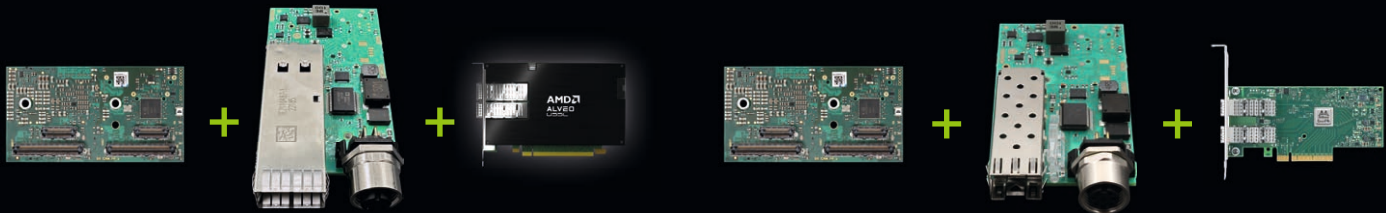SLVS-EC)

Host Interface

GigE Vision
(10G)

Aurora, XAUI
(50G)

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Use Case Examples

50G QSFP to Alveo Card

+ AMD Alveo accelerator card for image processing

+ XAUI or Aurora interface

+ 50 Gbps

10G Ethernet for GigE Vision

+ GigE Vision interface

+ Based on 10 Gbps Ethernet

+ Customized housing