Our company is a recognized specialist in high-speed signals and images acquisition. Our expertise is focused on real-time processing.

We simplify high-end technologies’ adoption by designing ready-to-use embedded solutions that reduce R&D time and cost to system integrators. Our products are of the highest quality, designed with our know-how in the field gained over 15 years.

Based on the latest FPGA technologies, our modular and versatile products are the result of engineering activities and R&D efforts carried out in close collaboration with our Defense and Avionics customers.

All our solutions meet international standards and are designed to adapt to the widest range of industrial environments. Our goal is to provide the industrial sectors – Defense, Avionics and Industrial Production – with advanced cost-effective solutions. We provide the highest quality of customer service and support before, during and after sales.
FPGA Mezzanine Cards (FMC)

100% compliant with VITA 57.1 & VITA 57.4 standards

**ANALOG**
- Up to 8 channels
- Up to 125 MHz

**VIDEO**
- 3 or 4 cages
- Up to 10 Gbps

**DIGITAL**
- Up to 4 cages
- Optical or copper links

**Support all communication protocols**
- Several protocols on one board at the same time
- Front or rear connexion

**Industrial range**
- Up to 12 optical links @ 12 Gbps
- SAMTEC FireFly™ technology
- MTP or MT ferules connexion
- Temperature range: -20°C ➔ +70°C

**Rugged range**
- Up to 24 optical links @ 12 Gbps
- RADIALL D-Lightsys® technology
- MTP or C-MTITAN connexion
- Temperature range: -40°C ➔ +85°C

**TigerFMC product line**
- CoaXPress, GigE Vision, 10GbEth, ADC, DAC, sFPDP, SpaceWire, ESD

**WildcatFMC product line**
- FPGA Carrier
FPGA-PROCESSING BOARDS WITH FMC INTERFACE

Open architecture thanks to FMC or FMC+ interface

FPGA TECHNOLOGY

- Xilinx Kintex-7 FPGA
- FMC or FMC+ connector
- PCIe x4 Gen2
- DMA scatter / gather

SoC TECHNOLOGY

- Xilinx Zynq UltraScale+ System on Chip
- ZU7CG & ZU11EG SoC
- FMC+ connector
- FireFly™ optical slot
- PCIe x4 Gen3
- DMA scatter / gather

ADVANCED DEVELOPMENT TOOLS FOR FPGA BOARDS

Optimize FPGA solutions integration in an equipment

- TECHWAY Development Kit
- FPGA Development Kit
- Software Development Kit
- Dedicated support for TECHWAY’s products

RADAR, COMINT, SIGINT, Satellite test bench, Communications, GNSS equipment
MULTI-CHANNEL ACQUISITION SYSTEMS WITH INTEGRATED FPGA-PROCESSING

ANALOG ACQUISITION SOLUTIONS
- Analog to 10GbEth converter
- Multi-channel acquisition system
- Integrated FPGA processing
- Pre-programmed filters
- WEB/SNMP interface for CMD/CTRL
- 10GbEth output

COST-EFFECTIVE SOLUTION

EASY-TO-USE

REDUCE R&D COST AND TIME

CUSTOMIZABLE

FPGA PROCESSING UNIT

Example

LVDS, 10GbEth, ADC, DAC, ARINC 818, SpaceWire, Aurora
INTEGRATED VISION PROCESSOR PLATFORM

- PCIe x4 Gen2
- Up to 4 GigE Vision cameras
- Onboard FPGA
- Real-time processing
- GigE Vision switches
- Windows & Linux support

Deep learning, 3D, High-resolution applications, Multi-camera applications

Frame grabber and FPGA-based image processing

Deep learning, 3D, High-resolution applications, Multi-camera applications

INCLUDED DEVELOPMENT KIT

- TECHWAY support
- Firmware development kit
- Software development kit
- Xilinx Vivado IP Integrator compliant

GUI: User-friendly starting GUI

Vivado HLS interface: Xilinx IP creation accelerator (C and C++)

IP integrator: Xilinx block-based IP Integration tool

Deep learning, 3D, High-resolution applications, Multi-camera applications

Open FPGA

- Processing unit: Filter, Bayer, ...
- Real-time
- Low latency

Open resources Dedicated for your application

COST-EFFECTIVE

OPEN TO CUSTOMIZATION

CPU-FREE SOLUTION

DETERMINISTIC

85%
ARINC 818 SOLUTIONS

Development tools for test bench

**GENERATION**
- PCIe or XMC boards
- ARINC 818 / DVI conversion
- Up to 4.25 Gbps
- Up to 15 ICD

**ACQUISITION**
- PCIe boards
- ARINC 818 / DVI / HDMI conversion
- Up to 8.5 Gbps
- Up to 15 ICD

**CONVERSION**
- Stand-alone conversion module
- ARINC 818 / DVI / VGA

**SWITCHES**
- 10 inputs / 10 outputs
- Up to 4.25 Gbps
- WEB/SNMP for CMD/CTRL
- Double rate virtual configuration

**TUNER**
- In-depth analysis of ARINC 818 protocol
- Implement any ICD quickly for ARINC 818 research
- Robustness testing

**ANALYZER**
- In-depth analysis of ARINC 818 protocol
- Up to 8.5 Gbps
- Analysis of link timing

**CONVERSION / ACQUISITION / VELOCITY**
- 3 channels converters
- ARINC 818 / DVI

**MATRIX**
- HS SAM
- 10 inputs / 10 outputs
- Up to 4.25 Gbps
- WEB/SNMP for CMD/CTRL
- Double rate virtual configuration

**SPIDER**
- 4 inputs / outputs
- Up to 4.25 Gbps
- Only one rate

**COMPUTER**
- Remote Access
- Web/SNMP Server
- Ethernet Link

**VIRTUAL SWITCH A**
- 4x4

**VIRTUAL SWITCH B**
- 6x6

**OPTICAL INPUTS**

**OPTICAL OUTPUTS**

**WEB/SNMP**

**PANTERA**

**SPIDER**

**VELOCITY**

**TUNER**

**ANALYZER**

**CONVERSION**

**ACQUISITION**

**VELOCITY**

**TUNER**

**ANALYZER**

Development, Simulation, Test, Laboratory, Engineering
ARINC 818 SOLUTIONS

- Compressed or uncompressed recording
- ARINC 818 playback
- Up to 8 hours of recording
- IRIG or GPS datation

RECORDERS

- Rugged compact systems
- 1 to 2 channels
- Development, robustness testing & flying test
- Recording and debrief station
- 5 to 16 channels
- Multi-ICD
- Customizable

FLYABLE

- Rugged flyable converter
- ARINC 818 / DVI / VGA / Analog
- DO-160 & DO-254
- Multi-channel flyable converter
- ARINC 818 / Multiples protocols
- DO-254
- DO-254 IP Core
- Reception ARINC 818 IP
- Transmission ARINC 818 IP
- Complete package: development tool and support

Flyable, Demanding applications
INTEGRATION
KNOW-HOW

RECORDING SOLUTIONS

Fitting with your needs:
- Channels’ number
- Storage capabilities
- Compressed / Uncompressed
- Dating: NTP, IRIG, GPS
- Replay/playback station
- All form factors: 1U to 4U or transportable station
- Use: development, mission feedback
- All protocols

PROJECT INTEGRATION

- Multi-channel LVDS acquisition
  - 48 channels
  - Open FPGA for user
  - 10G pre-programmed IP

- Optical development platform
  - PCIe x4 Gen2
  - For development or qualification
  - Up to 4 full duplex links @ 10 Gbps
  - All protocols
  - Stand-alone or PC mode

- 4 sFPDP channels
  - PCIe x4 Gen2
  - VITA 17.3 compliant
  - Open FPGA architecture
  - Windows and Linux drivers
  - Serial FPDP example design

- 4 HOTLink II Data channels
  - PCIe x4 Gen2
  - Rugged optical connectors
  - Gigabit Ethernet I/O interfaces

ARINC 818 | 10GbEth | sFPDP

GigE Vision | Camera Link | CoaXPress