

## NEW SOLUTIONS FOR RUGGED OPTICAL COMMUNICATION

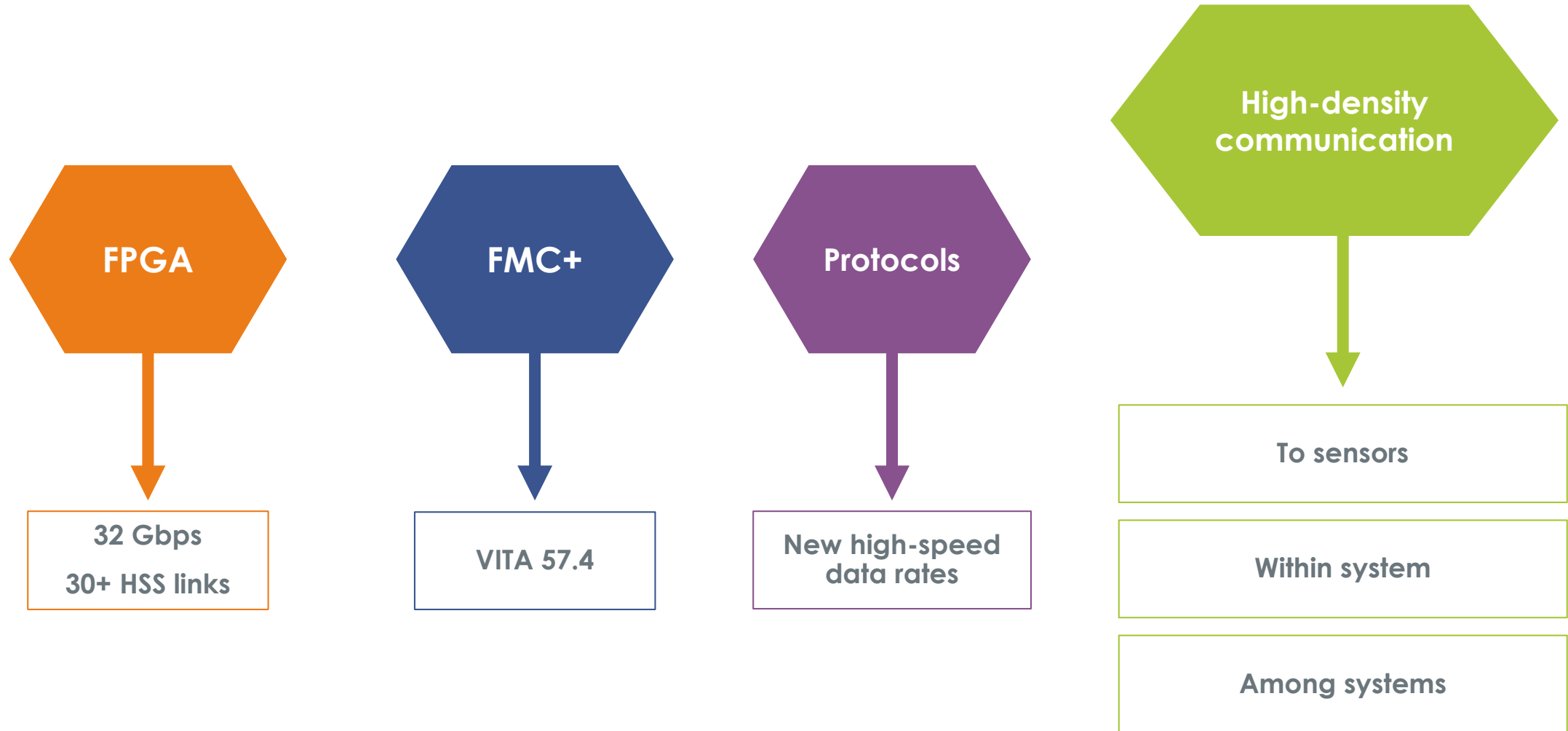
EMBEDDED TECH TRENDS 2019



The background features a light gray grid of thin lines that curves and recedes into the distance, creating a sense of depth and motion. A large, white, trapezoidal shape is positioned in the center, serving as a backdrop for the text.

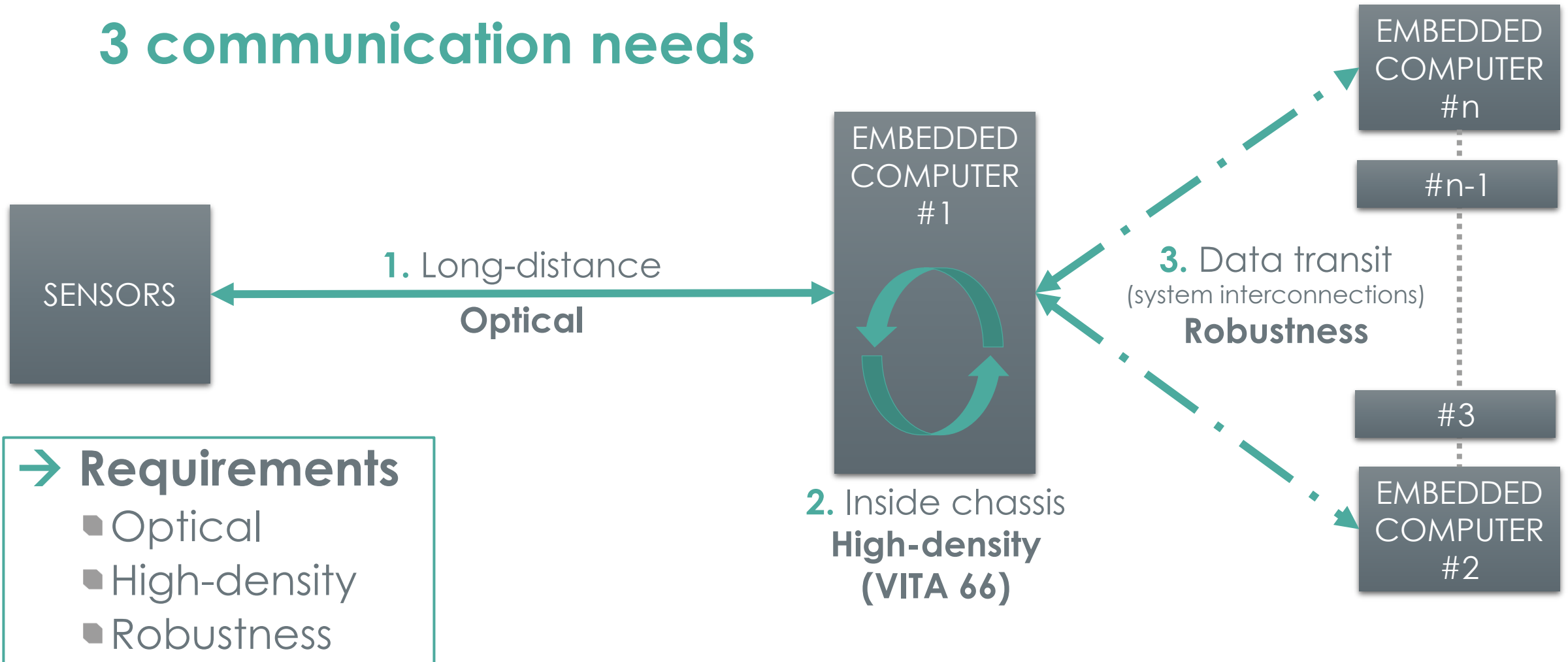
ALL IS MOVING TO HIGH-SPEED SERIAL  
IN EMBEDDED SYSTEMS

# TRENDS OBSERVATION



# HOW TO DEAL WITH HIGH-SPEED DATA FLOW ?

## 3 communication needs

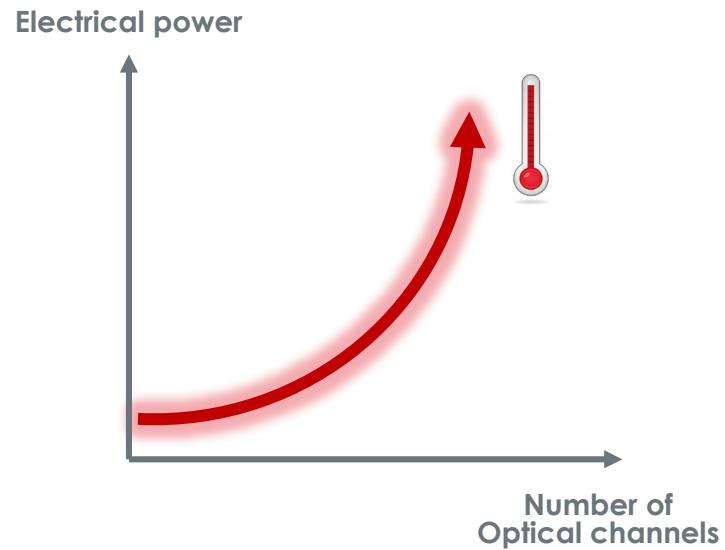




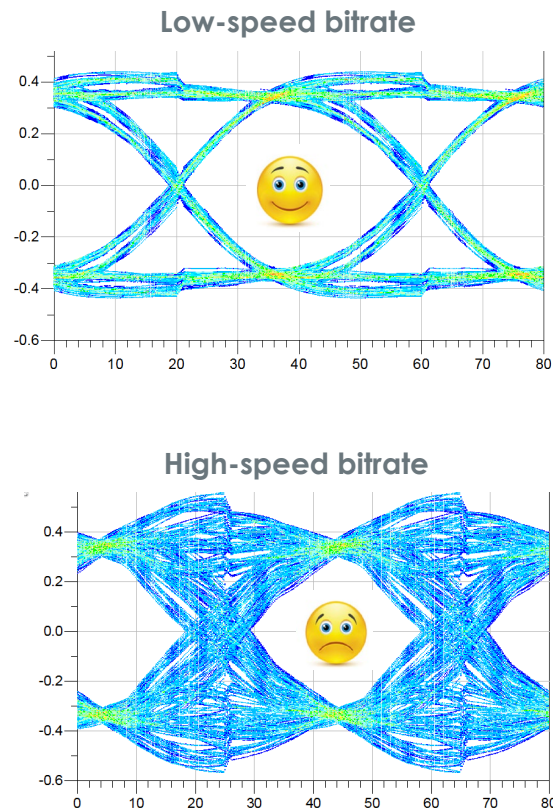
# CHALLENGES FOR RUGGED EMBEDDED SYSTEMS

# 3 MAJOR CHALLENGES

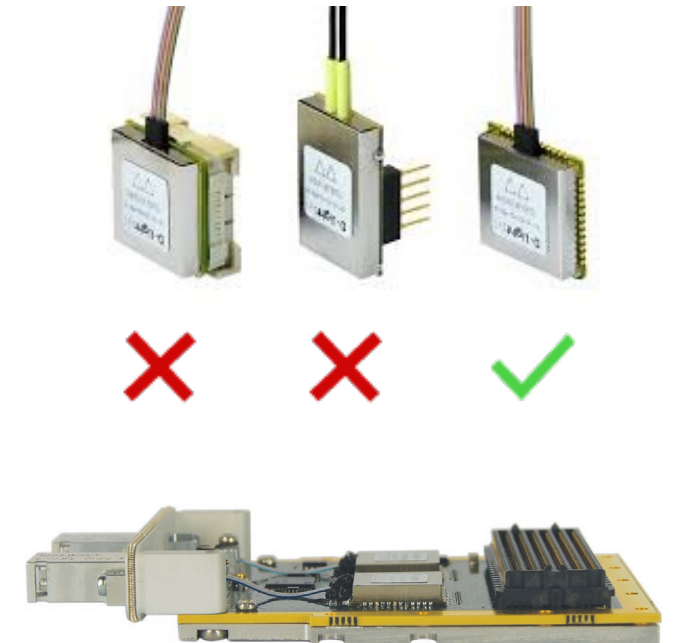
## 1. Thermal vs Density



## 2. Speed bitrate



## 3. Component height





The background features a light gray grid of thin, intersecting lines that create a sense of depth and perspective. A white trapezoidal shape is positioned in the center, containing the text.

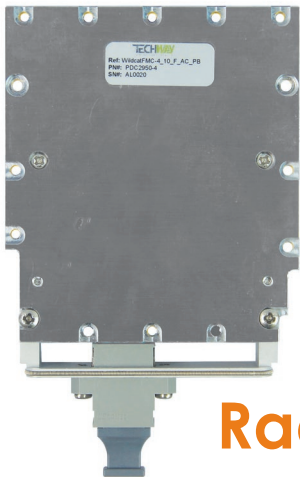
TECHWAY SOLUTIONS

# INNOVATIVE OPTIONS

## ■ Leverage FMC standards

### ■ WHY ?

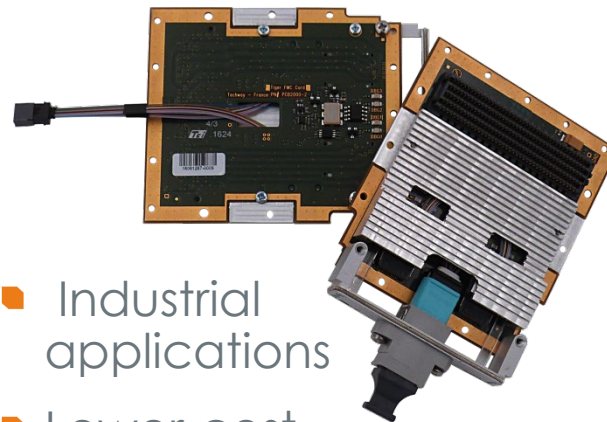
- Access to FPGA
- Available on embedded systems



- Robustness
- Low-profile
- High-density

### Radial choice

## SAMTEC choice



- Industrial applications
- Lower-cost



- VITA 66.1

### Unique rear I/O option

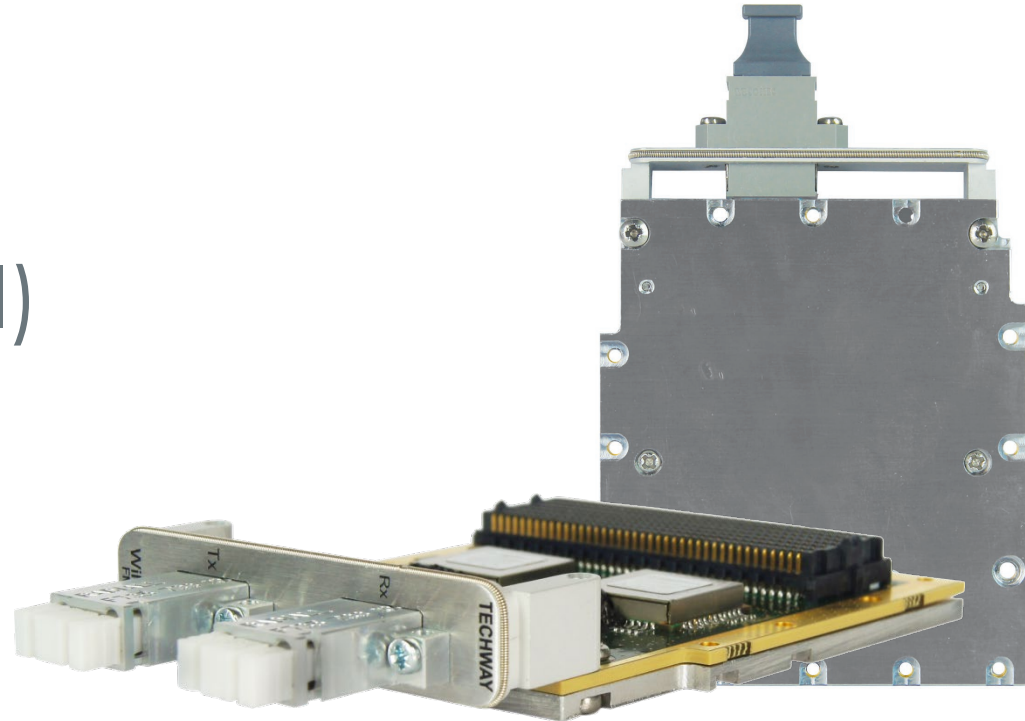


# BASED ON VITA TECHNOLOGIES

- **VITA 57.4** (FMC+)
- **VITA 66.X** (VPX)
- **VITA 47** (Environmental)



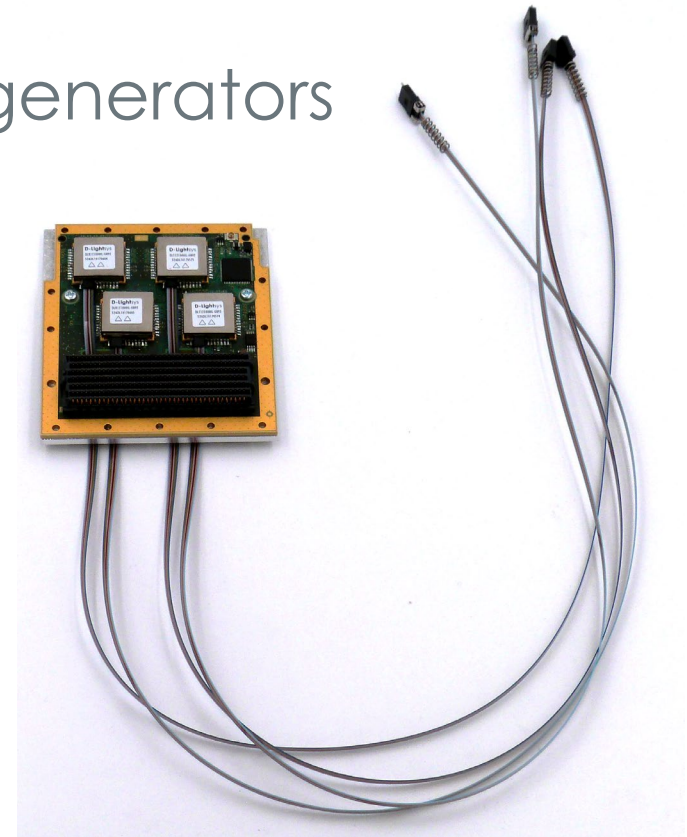
- Air Cooled (AC)
  - MPO connector
  - EAC5 / EAC6



- Conduction Cooled (CC)
  - C-MTITAN module  
(Radiall technology for rugged optical connectors)
  - ECC4

# ADVANCED FEATURES OF TECHWAY'S FMC

- Highest-density
  - Up to **24 Full duplex** optical links @ **12 GBPS** on one single FMC+
- Up to 6 independent programmable clock generators
  - Ease implementation of **any protocols**
    - (10GE, ARINC 818, JESD, sFPDP, etc.)
  - Allow **multiple protocols** on the same board
- Unique **rear I/O** option
  - VITA 66.1
- **Rugged**



# FMC ROADMAP

Total bandwidth (Gbps)

1576



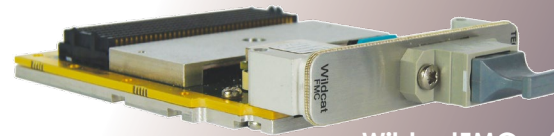
WildcatFMC - 24 links

888



WildcatFMC - 12 links

224



WildcatFMC - 4 links

## 12 GBPS Link speed

AVAILABLE

**Thanks for your attention**

**Any questions ?**



**Patrick MECHIN**  
CEO

**Eric MAZUIR**  
CTO

**info@techway.fr**

**www.techway.fr**