

# 14 Gbps FIREFLY™ FMC DEVELOPMENT KIT

VITA 57.1-COMPLIANT FMC CONNECTS FPGAs TO FIBER OPTIC CABLES UP TO 100 m

Samtec's 14 Gbps FireFly™ FMC Module provides up to 140 Gbps full-duplex bandwidth over 10 channels from an FPGA to an industry-standard multi-mode fiber optic cable. The FireFly™ optical engines provide adjustable power levels to support cable lengths up to 100 m. The Samtec 14 Gbps FireFly™ FMC Module supports Data Center, High Performance Computing and FPGA-to-FPGA protocols including Ethernet, InfiniBand™, Fibre Channel and Aurora.

As a VITA 57.1 FMC, the Samtec 14 Gbps FireFly™ FMC Module can be used for optical data communication on any FPGA development board supporting high-speed multi-gigabit transceivers. It can run system data or BERT testing on all channels in parallel. This makes evaluation and development with an FPGA much easier.

## FEATURES:

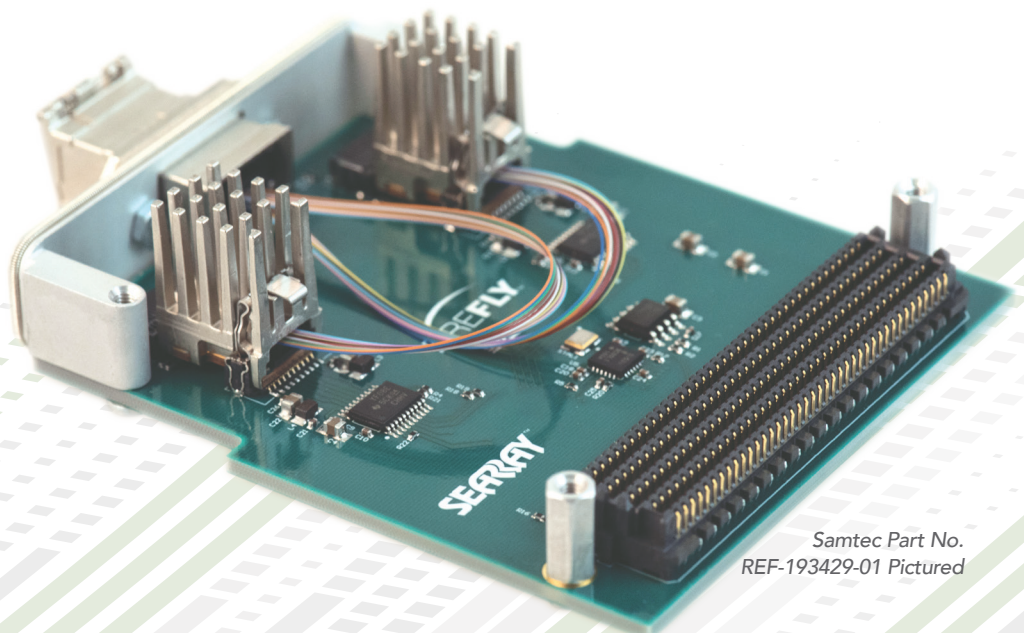
- VITA 57.1 FPGA Mezzanine Card (FMC) form factor
- High Pin Count (HPC) VITA 57.1 FMC connector (Samtec P/N: ASP-134488-01)
- Two (1 TX/1 RX) FireFly™ two-piece SMT connector systems (UCC8/UEC5 series)
- Uses Samtec FireFly™ optical engines operating at 850 nm
- Features optimized SI performance via Samtec Final Inch® BOR PCB trace routing for FireFly™ and FMC connectors
- Supports up to 10 high-speed, multi-gigabit transceivers (TX and RX) operating at up to 14 Gbps per channel
- Industry-standard 24 fiber \*MTP®/MPO connector
- Default Reference Clock Frequency = 100.00 MHz

## APPLICATIONS:

- High performance computing
- Servers
- Storage
- Data/Telecommunications
- Networking switches and routers
- Test and Measurement
- High resolution imaging (ie. Medical)
- Broadcast video/audio

## KIT INCLUDES:

- 14 Gbps FireFly™ FMC Module
- MPO Loopback Module
- Quick Start Guide
- Optical Connector Cleaners

Samtec Part No.  
REF-193429-01 Pictured

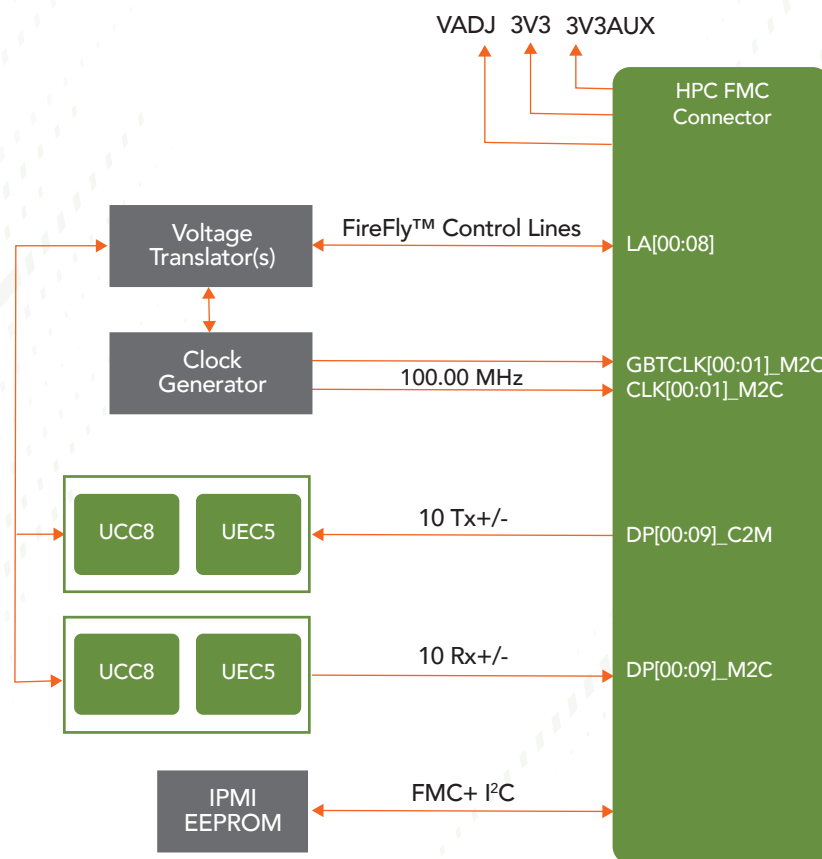
\*MTP® is a registered trademark of US Conec Ltd.

# 14 Gbps FIREFLY™ FMC DEVELOPMENT KIT SPECIFICATIONS

For additional information or support on your next generation FireFly™ design, please visit [www.samtec.com/14g-firefly-fmc](http://www.samtec.com/14g-firefly-fmc) or contact [FireFly@samtec.com](mailto:FireFly@samtec.com).

- VITA 57.1 FPGA Mezzanine Card (FMC) form factor
- High Pin Count (HPC) host maps 10 multi-gigabit transceivers
- Low Pin Count (LPC) host maps 1 multi-gigabit transceiver
- I<sup>2</sup>C configuration interface
- Reset and Interrupt signals
- Optional attenuation on transmit electrical signals
- Power Dissipation: ~2W typical, including both FireFly™
- FMC I/O voltage: VADJ=1.2V, 1.5V, 1.8V, 2.5V or 3.3V (FPGA carrier card dependent)

## 14 Gbps FIREFLY™ FMC DEVELOPMENT KIT BLOCK DIAGRAM



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