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MANTYSS-32G

Zynq UltraScale+ Synopsys HAPS Prototyping Module

mantyss™ 32G

The Fidus Mantyss-32G integrates a Xilinx® Zynq® UltraScale+™ with multiple Arm® processors, 32Gbps transceivers, and a collection of other real-world IO peripherals onto a daughter card designed specifically for the Synopsys HAPS prototyping solution. With direct connections to your HAPS system through its HapsTrak™ 3 connectors, Mantyss provides an integrated way of prototyping high speed links and designs containing an Arm processor.

Features

Xilinx Zynq UltraScale+ ZU19EG MPSoC

- Quad-core Arm® Cortex-A53 platform with huge FPGA fabric (PL)
- -3 speed grade, verified to 32 Gbps operation

High Speed Links

- Samtec FireFly™ 1, 4 lanes x 32Gbps (GTY)
- Samtec FireFly 2, 4 lanes x 32Gbps (GTY)
- Samtec FireFly 3, 4 lanes x 16Gbps (GTH)
- Samtec FireFly 4, 4 lanes x 16Gbps (GTH)
- FMC+, 8 lanes x 32Gbps (GTY), 16 lanes x 16Gbps (GTH)

I/O Interfaces

- FMC+ (VITA 57.4), 4 x FireFly (optical or electrical), USB3.0
- GigE, microSD, SD, UART-over-USB serial port
- Xilinx JTAG, Arm JTAG, Arm Trace (MICTOR-38)
- MMCX clock IO, PMOD, Synopsys PB/LED header

HAPS Connection

- Directly connects to HAPS using six HT3 connectors
- HT3 connections pinned out to the HP banks on the PL
- Provision multiple Mantyss modules on HAPS

Memory

- SO-DIMM, 16GB x72, Dual Rank, resource PS
- SD slot, for memory or SD peripherals, PL resource
- USB3.0 port, for additional storage

Benefits

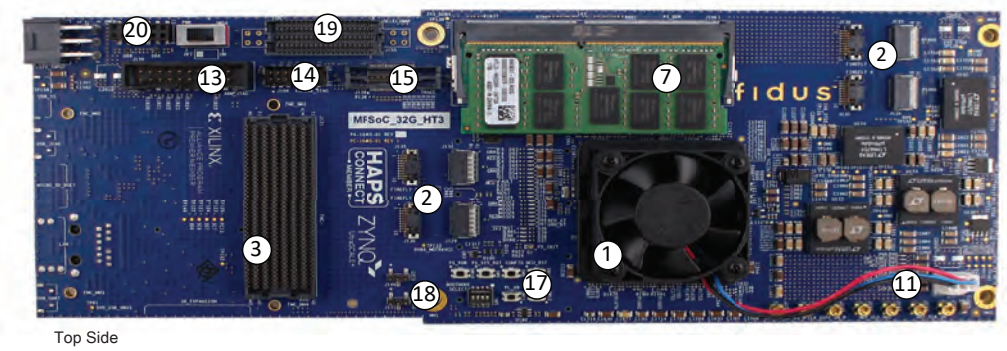
- **Connects directly to the HAPS-70 and HAPS-80 Systems** with interoperability verified by Synopsys
- Enables prototyping of numerous high-speed links at **rates up to 32Gbps**
- Quickly adds a quad-core **Arm Cortex-A53** processing sub-system to your prototyping environment
- The ultimate in **flexibility** and convenience with support of common interfaces and debugging ports
- Quick-start your program with available **example designs**

Fidus is uniquely positioned, as a Xilinx Alliance Program Premier Partner and Synopsys HAPS Connect Member, to provide the expertise in product design and support for prototyping that pushes the limits.

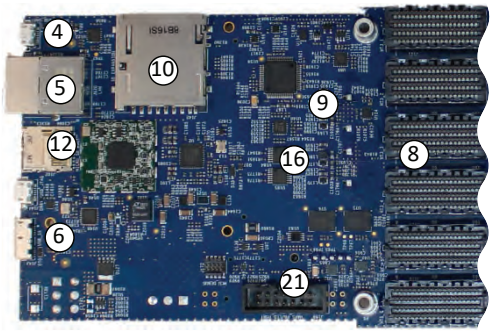
HAPS CONNECT MEMBER

XILINX® ALLIANCE PROGRAM PREMIER MEMBER

Solution



Top Side



Bottom Side

① Zynq UltraScale+ MPSoC ZU19EG
② Samtec FireFly connecters (support for electrical and optical)
③ FMC+ (VITA 57.4 compatible)
④ UART-over-USB serial port
⑤ Gigabit Ethernet Port
⑥ USB 3.0, host or device configurable
⑦ DDR4 - SO-DIMM, 16GB x72, Dual Rank @1866MT/s on PS
⑧ HapsTrak 3 connectors
⑨ Board Controller (control, power and thermal monitoring)
⑩ SD expansion port
⑪ MMCX clock inputs and outputs
⑫ microSD boot programming port
⑬ Arm JTAG port
⑭ Xilinx JTAG port
⑮ Arm trace port
⑯ Multi-clock generators and jitter attenuators
⑰ Local pushbuttons
⑱ Bootmode select
⑲ HAPS additional connection
⑳ PMOD interface
㉑ Synopsys pushbutton / LED port

In the box:

- Mantyss-32G circuit card assembly
- microSD Memory Card
- Desktop Adapter
- Cables (ethernet, USB, power)
- Mounting screws

Sales and Support

For additional information, questions or request for quotation, visit: mantyss.fidus.com

Customize your Mantyss

For additional information, questions or request for quotation, visit: design@fidus.com

About Fidus

Fidus Systems, founded in 2001, specializes in leading-edge electronic product development with offices in Ottawa and Waterloo, Ontario, and San Jose, California. Our hardware, software, FPGA and signal integrity teams architect, design, and deliver next-generation products for clients in emerging technology markets. We build long-term relationships by consistently exceeding expectations.

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