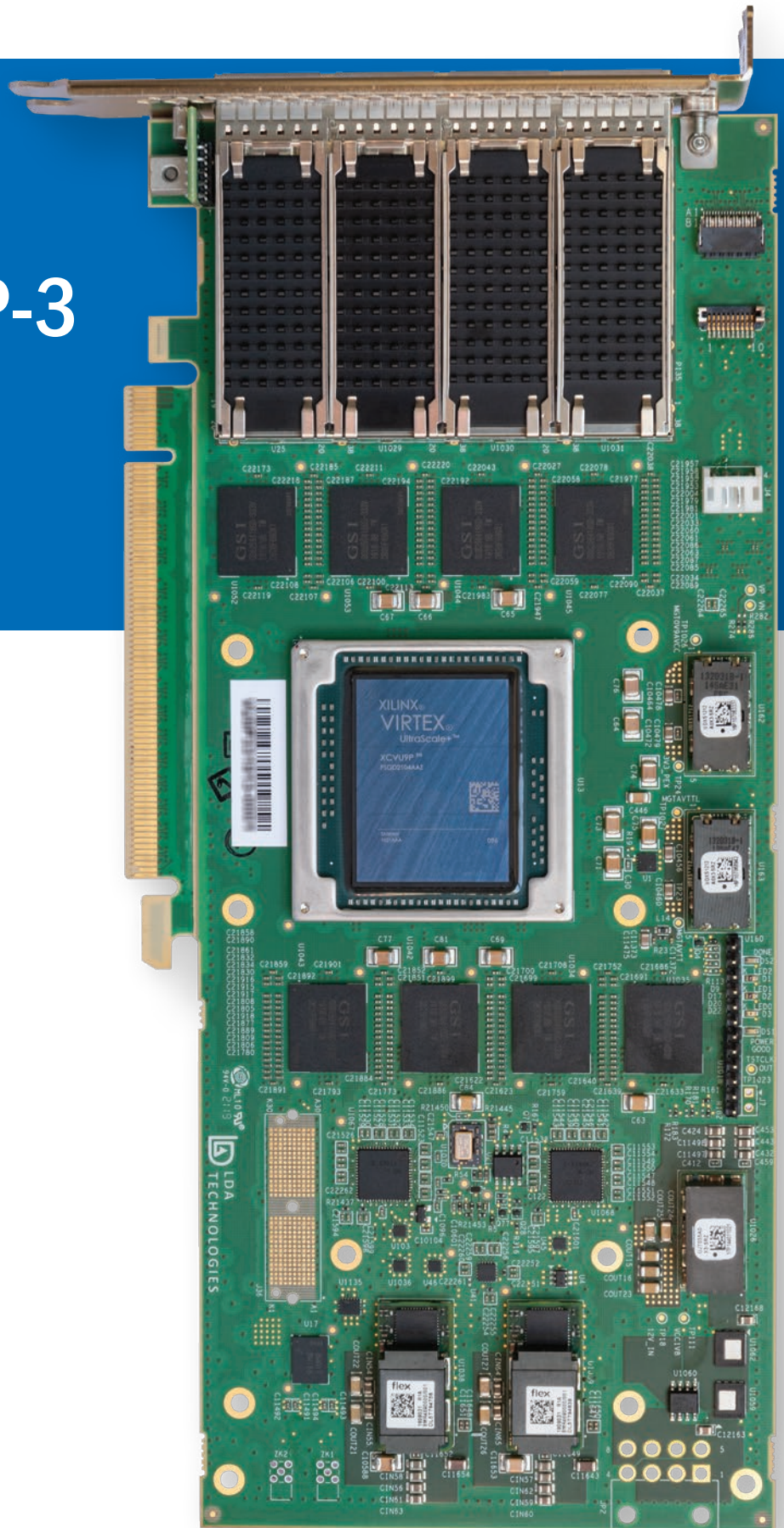
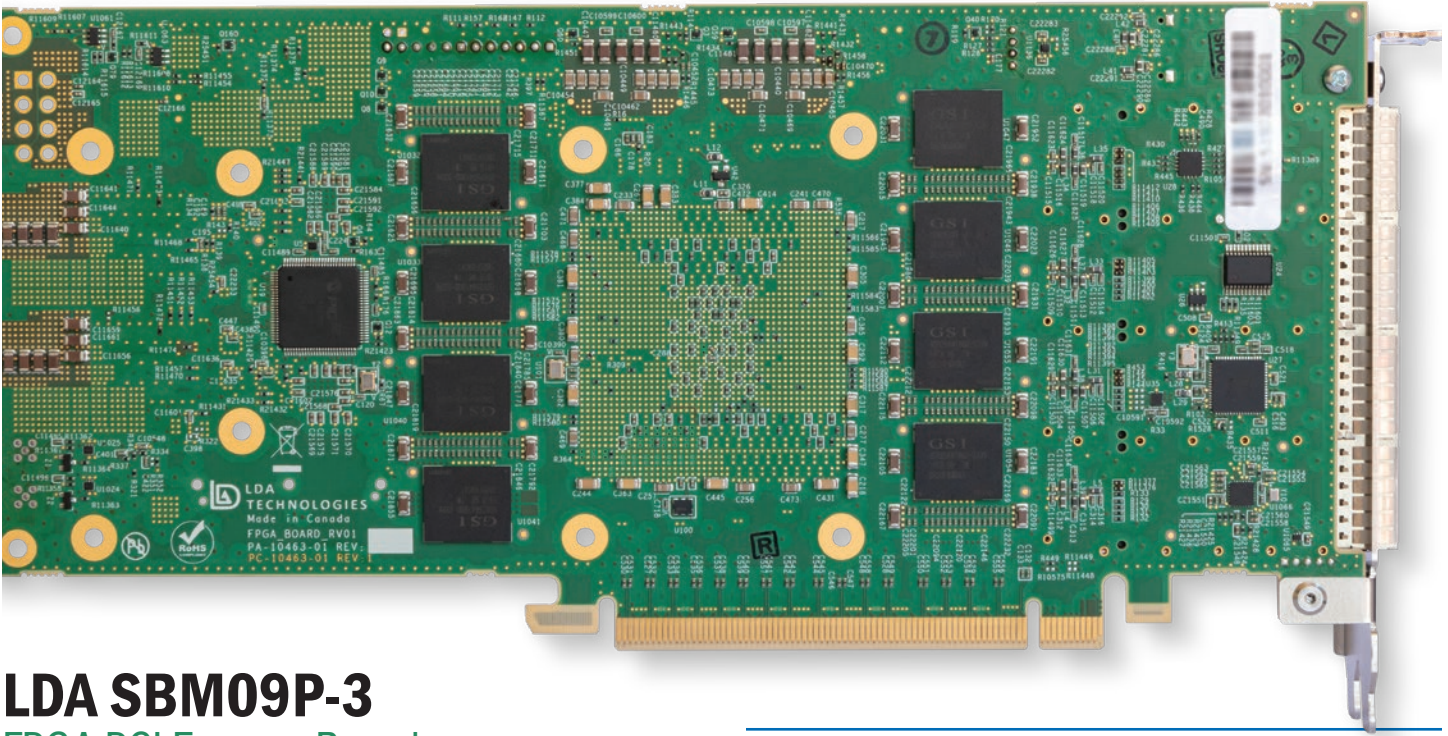


# LDA SBM09P-3

## DATASHEET





# LDA SBM09P-3

## FPGA PCI Express Board

LDA SBM09P-3 card is a full width, ¾ length, single- or dual-slot PCI Express board with Xilinx Virtex UltraScale Plus -3 (Fastest grade) FPGA and 16 SyncBurst® SRAMs. The board is targeted for ultra-low latency memory access applications (such as High Frequency Trading) and provides 4.6 Gb of memory with a total access latency of 9 ns for write and 12 ns for read.

### FPGA

- Xilinx Virtex UltraScale Plus XCVU9P-3 (Fastest Speed Grade)
- 1 Gbit SPI x4 Boot Flash

### MEMORY

- 4.6 Gbit (576 MBytes) 333 Mhz SyncBurst® SRAM (2 clock cycle latency). 16 chips soldered to the board

### CLOCKING

- 2x SI5395 ultra-low jitter cleaner clock generators.
- 0.28ppm TCXO clock source. Stratum 3 compliant

### COMMUNICATION

- 4x QSFP28 ports supporting 16x 25 Gbps, 4x 100 Gbps, 16x 10 Gbps, 4x 40 Gbps Ethernet channels
- x16 Gen3 PCI Express
- 1x Samtec Z-Ray expansion connector (20x serial channels) supporting up to 14.2 Gbps data rates
- 1x Samtec Firefly expansion connector (4x serial channels) supporting up to 28 Gbps data rates
- 2x MMCX PPS Input ports

### MANAGEMENT

- Onboard USB JTAG
- Management controller with onboard CLI and API
- Micro USB or PCIE SMBUS communication
- Onboard QSFP Diagnostics software

### MECHANICAL

- PCIE standard width, ¾ length, 1- or 2-slot height card

### POWER

- Up to 225 W total power (160 A Vccint rail)
- PCIE edge connector (up to 75 W)
- 8 pin PCIE GPU Pinout Power connector (full power)

### COOLING

- 1-slot height passive (limited power)
- 2-slot height active dual 80 mm speed-controlled fan (full power)

### BSP

- LDA proprietary SRAM Memory Controller
- Memory, Serdes, PCIE x16 XDMA test design

