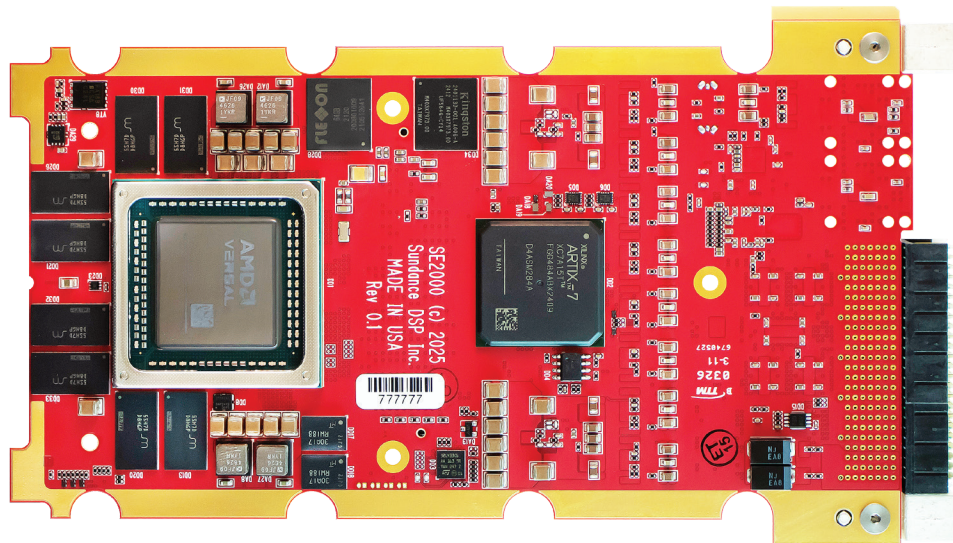




SE2000

VERSAL™ SOC BASED 3U OPEN VPX SOSA CARD



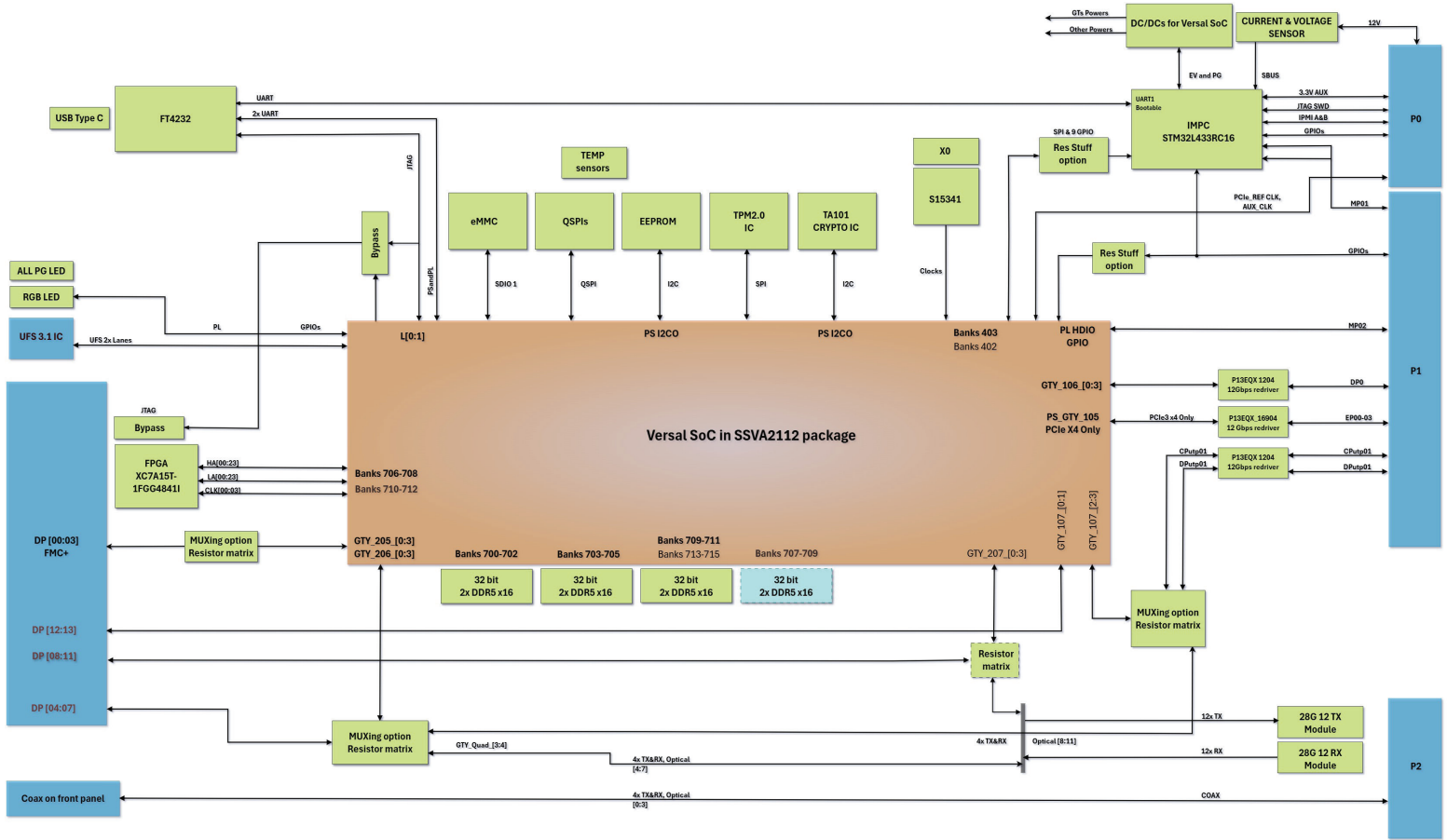
Abstract

This datasheet provides key features, a block diagram, and ordering information for a SOSA-aligned, OpenVPX PIC card from Sundance Digital Signal Processing Inc.: SE2000. The SE2000 is a 3U payload PIC card featuring the AMD Versal™ AI Edge Gen2 and pin compatible Prime Gen2 devices in the SSVA2112 package. The board is suitable for high-speed data processing, analysis, software defined radios, and AI, and is designed for a variety of ruggedized/military-grade applications.

Key Features

- Board form factor and profile, SOSA compatible: MODA3p-16.6.11-1-x
- SOSA slot profile SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11- x (various “dash” options are supported)
- Up to 20 transceivers (GTYF) with flexible routing options
- 16 GB eMMC for PS image and data storage (can populate up to 256GB, can be bootable)
- 64 GB of UFS for PS Image and user storage (can be 128GB)
- Two 1GB QSPI flashes for PS image and data storage, bootable
- TA101 Secure authentication IC connected to the PS for secure boot and encryption capabilities
- TPM2.0 for storage of encryption keys for the PS
- IPMC: STM32 series microcontroller
- Onboard clocking IC, 10 output, low jitter, configurable clocking IC provides fabric clocks
- Maintenance Ports, routed to the IPMC and to the Payload PS UART
- Contains re-drivers on Data, Control, and Expansion Planes signals to ensure interoperability in large VPX chassis
- Optical modules allow users to construct up to 3 x 100Gb Ethernet ports
- Voltage and current sensing ICs
- Temperature Sensing IC connected to the IPMC
- Onboard power, controllable according to VITA 65, via the IPMC
- FMC+ site with user-selectable transceiver allocation
- FMC+ VADJ voltage –1.8V, 2.5V, 3.3V are supported
- Compliant with Vita 48.2 (conduction) and 48.8 (air) cooling standards
- Maximum Power drawn 205W from 12V Rail (including FMC+)

SE2000



Ordering Information (create a valid part number)

SE2000-xxxxxx-yy where “xxxxxx” can be any of the options in Table 1: AMD Payload Options and “yy” can be any of the -n P2 connectors options shown in the Table 2: P2 Connector Options below.

Please note the early access board will be SE2000-2VE3858-0.

Table 1: AMD Payload Options

AMD Device Option	Description
2VE3504	AMD Versal™ AI Edge Gen-2 2VE3504 in SSV2112 package, 12GTYP XCVRS, 4APU cores, 4RPU cores, AIE-ML v2
2VE3558	AMD Versal™ AI Edge Gen-2 2VE3558 in SSV2112 package, 12GTYP XCVRS, 8APU cores, 10RPU cores, AIE-ML v2
2VE3804	AMD Versal™ AI Edge Gen-2 2VE3804 in SSV2112 package, 20GTYP XCVRS, 4APU cores, 4RPU cores, AIE-ML v2
2VE3858	AMD Versal™ AI Edge Gen-2 2VE3858 in SSV2112 package, 20GTYP XCVRS, 8APU cores, 10RPU cores, AIE-ML v2
2VM3558	AMD Versal™ Prime Gen-2 2VM3558 in SSV2112 package, 12GTYP XCVRS, 8APU cores, 10RPU cores
2VM3654	AMD Versal™ Prime Gen-2 2VM3558 in SSV2112 package, 20GTYP XCVRS, 4APU cores, 6RPU cores
2VM3858	AMD Versal™ Prime Gen-2 2VM3558 in SSV2112 package, 20GTYP XCVRS, 8APU cores, 10RPU cores
-TBD	Other options may be supported. Please contact Sundance DSP support for more information.

Table 2: P2 Connector Options

“-n” option	Description
-0	No P2 connector installed
-6	2 Style C and 10 NanoRF
-12	2 Style C and 20 NanoRF
-14	2 Style D
-TBD	Other options may be supported. Please contact Sundance DSP support for more information

Additional speed grades and temperature grades will become available as new parts are released. “-2MSI” speed and industrial temperature grade is default.

Fully Assembled Board with Clamshell Heatsink

