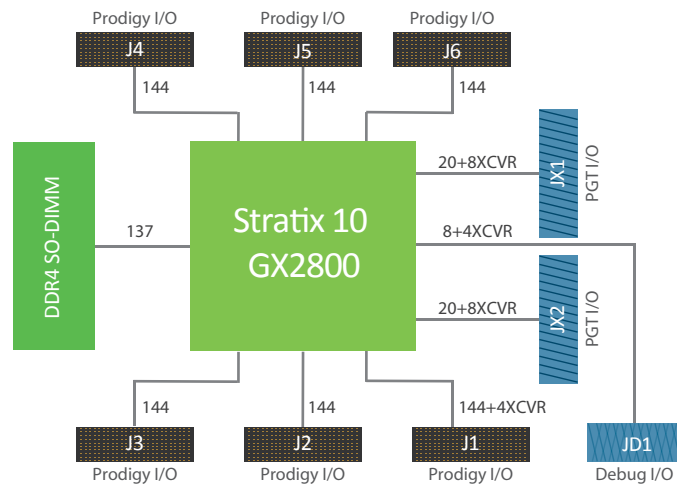


Single S10 2800 Prodigy™ Logic Module

The Single S10 2800 Prodigy Logic Module is based on Intel's Stratix 10 GX2800 FPGA. The system has 904 general purpose I/Os and 20 high-speed transceivers on 8 high-speed connectors. The Single S10 2800 Prodigy Logic Module is well suited for medium to large SoC designs. S2C's 6th generation Player Pro™ software technology enables users to perform an array of runtime features remotely through both Ethernet and USB. Users also have access to S2C's vast library of over 80 daughter cards to quickly build prototyping targets.

Highlights

- Large Capacity and Scalability with 2,753K Logic Elements, 229Mb memory and 5,760 DSP resources with ability to connect multiple boards together for even greater capacity
- 20 high-speed transceivers that can run up to 16Gbps
- 864 high-performance I/Os through 6 Prodigy Connectors that support a variety of daughter cards
- Compact, sleek, all-in-one chassis for clean, portable, and well-organized work environment



Single S10 2800 Prodigy Logic Module I/O Architecture

Features

Large Capacity & Scalability

- 2,753K Logic Elements
- 229Mb M20K memory
- 5,760 DSP resource
- Multiple Logic Modules can be conveniently connected together to expand capacity through the use of interconnection modules or cables
- Footprint is compatible with the S10 5500 FPGA to offer an easy path to upgrade (S10 5500 FPGA must be purchased separately)

High Performance

- Up to 100W of power for an FPGA
- Equal trace length for I/Os from same I/O connector
- 20 high-speed Transceivers can run up to 16Gbps

Flexible & Powerful I/Os

- 864 high-performance I/O pins and 4 high-speed transceivers through 6 Prodigy Connectors
- I/O voltage can be adjusted to 1.2V, 1.35V, 1.5V or 1.8V through runtime software in GUI with 4 status LEDs on-board to indicate I/O voltage
- 16 high-speed transceivers and 40 GPIOs through 2 PGT I/O connectors

High Reliability

- Screw-lock design to high-speed I/O connectors
- Self-Tests – Isolate design issues from board issues conveniently with a software GUI
- Monitoring of on-board voltage, current and temperature with a software GUI
- Automatic shut-down upon detection of over-current, over-voltage or over-temperatures

Features

Advanced Clock Management

Standalone Mode

- 6 Global clocks to be selected from
 - 6 programmable clock sources (0.16 ~ 350MHz)
 - 5 pairs of external clocks through MMCX connectors
 - 1 OSC socket
- 3 design clock outputs through 3 pairs of MMCX connectors
- Two dedicated LVDS TDM clocks when using pin-multiplexing through S2C Player Pro software, one clock is fixed to 200MHz and the other clock is adjustable (0.16 ~ 350MHz)
- 2 global resets sourced from push button or MMCX
- 1 global reset sourced from runtime software in GUI

Multi-System Mode

- 6 Global clocks to be selected from
 - 6 local programmable clock sources (0.16 ~ 350MHz)
 - 6 global clock resources
- 3 feedback clocks can be output to global clock sources
- Dedicated LVDS TDM clock(s) when using pin-multiplexing through S2C Player Pro software
- 2 global resets sourced from global reset sources

Ease-of-Use

- Multiple FPGA configuration options through Ethernet port, USB port, JTAG and micro SD card
- Remote power on/off/recycle through Ethernet
- Auto detection of daughter cards and cables
- Virtual SWs & LEDs for simple tasks such as changing a setting or indicating a condition remotely
- User Test Area – LEDs, Push Buttons, Switches and Pin Headers for testing and debugging
- On-board battery charging circuit makes FPGA bin file encryption easy
- Optional ProtoBridge™ AXI software to co-model with software/simulation models at the transaction-level
- Optional S2C design implementation & debug software
- Optional Prodigy Multi-Debug Module (MDM) for the concurrent debugging of multiple FPGAs
- Compatible with S2C's off-the-shelf pre-tested daughter boards

Modular and Portable Architecture

The Single S10 2800 Prodigy Logic Module Chassis is a compact, sleek, all-in-one system that includes all components – FPGA board, extendable power control module, and power supply – for maximum flexibility, durability, and portability. The modular system can be extended and upgraded into a dual or quad system.

- Flexible extension to securely attach accessories without increasing physical profile or intruding other parts of system
- Open chassis concept allows better heat dissipation
- Secure connections to daughter cards and other S10 Logic Modules
- Compact form factor : 310mm * 275mm * 94mm (L * W * H)



45 degree view of S10 2800 Enclosure System