



“GOLDEN-EYE III” S902R

Rugged, Small, Lightweight, Dual/Quad Core i7® System w/ Removable Drive

- Up to 2.5GHz Dual Core i7® processor with 6MB of L2 Cache
- Up to 2.3GHz Quad Core i7® processor with 6MB of L2 Cache
- Up to 16GB of 1600/1333MHz DDR-3 memory with ECC
- Support for up to four fixed or removable 2.5" SATA SSDs up to 1TB each
- Optional removable SSD cartridge with ultra-high mating design up to 4TB
- mSATA Flash for OS Boot w/ secure erase and write protect up to 512GB (Optional)
- Support for up to four SAM™ sites for custom I/O
- Up to five GigE ports with TCP/IP Offloading Engine (TOE)
- Up to six USB 2.0 ports
- Up to four Serial Ports with RS-232/422/485 options
- Dual DVI/HDMI ports and one RGB video port
- NTSC/PAL composite video out (Optional)

- Eight buffered General Purpose I/O lines
- Trusted Platform Module (TPM) (Optional)
- Trusted Execution Technology (TXT) for secure system operation (Optional)
- Supports Intel Virtualization Technology (VT-x/VT-D2) for best performance
- Full HD-Audio support with onboard 1W mono amplifier
- Full power management control for Sleep/Hibernate operation
- Real Time Clock (RTC) with field-replaceable battery
- CPU temperature and voltage monitoring for safe operation
- Reset and power On/Off switch with suspend support
- Support for Windows®, Linux® and VxWorks®
- Ultra-small and lightweight at 5.38" x 6.88" x 2.13" and 3.25 lbs. (single drive)
- Ultra-low power requirements as low as 25W total



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Powering the Embedded Market Since 1979

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General Description

The S902R Golden-Eye III is a fourth generation, ultra-rugged, small, lightweight computer system. It is designed to provide the highest level of workstation performance possible in a fully ruggedized, conduction cooled, fully sealed system, operating over a full -40°C to +85°C without throttling. The Golden-Eye III is targeted for applications where an ultra-rugged computer is needed to provide the best possible performance per dollar per watt, utilizing 38999 rugged interconnects to provide a fully sealed system.

The Golden-Eye III utilizes the latest Intel i7 Core processors with up to four physical CPU cores, Hyperthreading for a total of 8 logical cores, each operating at up to 2.5GHz and the ability to TurboBoost. To harvest this incredible CPU performance, the CPU is coupled with up to 16GB of SDRAM organized in two banks supporting Error Correcting Code (ECC). The ECC RAM provides two bits error detection and one bit error correction and supports up to 1600 Mega Transfers / Second (MTS) between CPU and memory.

The I/O subsystem for Golden-Eye III is designed to support a wide array of standard and custom I/O functions. The S902R standard configuration supports up to five Gigabit Ethernet channels with TCP/IP offloading engine, six USB 2.0 ports, up to four removable 2.5" SSDs, eight buffered digital I/O lines, dual video, four COM ports with RS232/422/485 options, and an audio headset jack with a one-watt audio amplifier to drive an 8-ohm speaker directly. Optional additional I/O functions such as, mSATA with write protect and secure erase as a Boot device, Quad Video capture, CANbus, MIL-STD-1553, Wi-Fi, Bluetooth, FireWire, GPS for data time stamping, and many other I/O functions utilizing the four SAM™ sites provided.

Applications

The Golden-Eye III is designed to provide the ultimate rugged computer for defense and UAV applications, as well as, industrial and commercial applications. The Golden-Eye III is widely deployed in Army vehicles, unmanned robots for hazardous applications, where the computer is exposed to the harshest possible environments, and flying UAVs, where power, weight and size are the main considerations. The Golden-Eye III is ideal for outdoor applications, where it may be fully exposed to rain, sun, dirt and radiation. The S902R may be ordered from the factory with operating systems such as Windows 7, Linux or VxWorks pre-installed.

Technology Used

The Golden-Eye III utilizes the most powerful Dual/Quad Core i7 processors from Intel. The i7 Ivy Bridge® CPU is a 3rd generation i7 Core with a fully integrated memory controller for the best memory performance possible. This CPU is considered the workhorse of the workstation market with many added security functions, such as Intel's 2nd generation Virtualization Technology VT-x and Trusted Execution Technology (TXT) for secure computing. Also, the graphic engine has the best performance of any integrated video in the market with outstanding performance in 2D and 3D rendering. Ivy Bridge® is linked to the Panther Point System I/O controller to provide the fastest possible and new security functionality.

Cooling

The Golden-Eye III is equipped with the most unique cooling system in the industry and is the only system that operates from -40°C to +85°C at full load! Its patent pending cooling approach provides the lowest thermal resistance to the case while providing the highest shock specifications known in the industry. The S902R is a fan-less system for reliable operation and can be mounted directly to a metal surface or be used as a stand-alone system.

Full Environmental Specs

The full environmental specifications for this product can be found on our website at www.gms4sbc.com.

Additional Views and Variations

S902R (Showing removable storage)



Product Variation

S902R-4 With four removable drives up to 1Tb each.

