Summary
The Triconex General Purpose System is a TÜV certified SIL2 Safety Instrumented System platform based on redundant high-availability architecture. It offers a lower-cost entry point into Triconex market-leading safety system product line and provides a robust, reliable and powerful solution for critical control applications and SIL2 safety applications.

Business Value
Triconex safety systems help customers protect their production assets and comply with rigorous environmental standards. In turn, customers meet or exceed production targets by maintaining maximum process uptime by safely operating their plants.

Triconex General Purpose Safety System (SIL2)

BEST OF THE BEST – TRICONEX FOR CRITICAL CONTROL AND SIL2 SAFETY APPLICATIONS
The Triconex® General Purpose (Tri-GP) System is the latest addition to the Triconex product line and provides a cost-effective entry point into the market-leading Triconex Safety System product line. The Triconex line allows clients to optimize the choice of safety platform or critical control platform for their specific requirements, enabling them to meet the latest safety standards, counter global competition and address cost pressures by lowering investment and lifecycle costs.

A powerful, scalable design with assurance of continuous operation, the Tri-GP System complies with international standards such as IEC61508:2010 edition and fulfills the requirements for safety applications such as Emergency Shutdown (ESD), Fire and Gas Protection (F&G), Burner Management (BMS), and Turbomachinery Control (TMC). The triplicated architecture design provides high availability and reliability that is ideal for clients looking to achieve high process uptime, as well as meeting environmental targets.

Based on proven Triconex technology, the Tri-GP system is an extension of the field-proven Trident safety system. It is certified to Safety Integrity Level 2 (SIL2) where, until now, price concerns had kept processes tied to the operating restrictions of lower availability architectures. The Tri-GP breaks through budget barriers and provides customers with a powerful, cost-effective solution and an alternative control strategy to maximize both high reliability and high availability applications.

CLIENT BENEFITS
- Helps meet production goals by maximizing process uptime
- Enables seamless inter-connectivity with third-party devices through OPC UA open communication protocol
- Maximizes profitability with high availability and reliability
- Helps reduce maintenance costs and overall cost of ownership
- Complies with international safety standards
- Helps clients meet safety and environmental targets
- Mitigates environmental impact
- Assists you in avoiding penalties or fines for non-compliance
- Enables you to achieve competitive advantage in your markets
COMMUNICATION CAPABILITIES
The Tri-GP system provides communication capabilities through open communication protocols that allow the system to seamlessly interface with third-party devices. The Tri-GP system is capable of interfacing with third-party systems using industry open communications protocols such as Modbus TCP, Modbus serial and HMI via DDE server.

KEY PRODUCT CAPABILITIES
• Support for X.509 certificates for enhanced security messaging
• Built-in security with access control to comply to cyber security standards
• TÜV certified for SIL2 applications in accordance with International standard IEC61508:2010
• Capable of interfacing with third-party systems using industry open communications protocols
• On-line module replacement ensures plant availability by hot-swapping of modules
• Continuous operation even in degraded mode of operation
• 1mS SOE on Digital Inputs
• Application program execution at millisecond speed for critical control applications

SMALL FOOTPRINT / BIG BENEFITS
Tri-GP is appropriate for smaller plants or applications that are not less critical in nature, but whose scale doesn’t require all the I/O and process power of a full-scale Triconex Tricon TMR system. With the robustness of our programming languages, it is ideal for use in small batch and continuous processes and other smaller High Integrity Pressure Protection Systems (HIPPS) as well as Furnaces, Boilers, and Heaters.

HIGH RELIABILITY AND HIGH AVAILABILITY
The Tri-GP is based on the field-proven Trident Safety Instrumented System platform. It provides the hardware necessary to meet processes in critical control and safety up to Safety Integrity Level 2 (SIL2).

The proven redundant technology that has led the industry coupled with the unparalleled support that our clients have come to expect from Triconex is readily available with this solution at an unbeatable value. The Tri-GP provides error-free, uninterrupted control in the event of hard failures of components or transient faults from internal or external sources.

A client’s process will benefit from the flexibility of the high availability and safety rating for critical control and safety applications. Additionally, client’s plants will meet or exceed production targets thanks to the highest system availability and reliability at a low cost of ownership.

The Tri-GP offers:
• High availability fault tolerance
• On-line module replacement without process interruption and without complex wiring exchange
• Physical, Electrical and Mechanical module separation
• No time restriction in degraded mode of operation