



**Step up your process
safety and profitability**

8

**SAFETY
NONSTOP**



HIMA highlights

- The world's leading and only independent designer & provider of automated safety solutions
- More than 40 years of experience
- In over 80 countries more than 25,000 systems installed – a lot more than any other safety systems manufacturer
 - No 1 in Germany & Europe
 - Two-digit sales growth in the last 10 years
 - Aim: No 1 worldwide
 - Long-term commitment of a 100-year-old, family-owned company

HIMA highlights

- More TÜV-certified safety specialists than any other safety systems manufacturer
- World's first TÜV-certified safety system in 1970
- Industry's largest range of flexible and scalable product platforms
 - Proven system integration with any DCS and automation environment
 - 100% made in Germany



Competence worldwide – The HIMA group of companies



Headquarters in Brühl, Germany



SAFETY
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Process Safety. Nonstop.

Experience with

- Oil and gas industry
- Power generation
- Petrochemicals
- Chemicals
- Pharmaceuticals



Process Safety. Nonstop.

Safe and uninterrupted operation for

- Steam crackers
- Polyethylene, polypropylene and PVC production
- Fertilizer plants
- Onshore and offshore facilities and platforms
- Pipelines
- Tank farms and gas storage facilities
- Loading stations
- Refineries
- Burner and combustion plants
- Turbines and compressors
- Batch processes



Process Safety. Nonstop.

Solutions for every safety-critical application

- ESD
- BMS
- F&G
- HIPPS
- TMC
- Pipeline automation and protection



Customers

- AFC
- Agip
- Air Liquide
- Aventis
- BASF
- Bayer
- Borealis
- BP
- Celanese
- Chevron
- Clariant
- DOW
- DSM
- ENI
- E.ON
- Evonik

- ExxonMobil
- Hoffmann-La Roche
- HOLBORN
- Huntsman
- INEOS
- KOC
- LANXESS
- LyondellBasell
- MAN Turbo
- Mauell
- MERCK
- MiRO
- Pequiven
- PDVSA
- PetroBras

- PDO
- Pemex
- PETRONAS
- QP
- RWE
- SABIC
- Sanofi-Aventis
- SASOL
- Shell
- Statoil
- Thai Petrochemical
- TOTAL
- Uhde
- UNICAL
- Vinnolit
- Yara

Innovation. Nonstop.



1970 | 1st TÜV-certified safety system: Planar

1986 | 1st TÜV-certified PES: H50

1991 | 1st TÜV-certified reverse compiler

1997 | 1st TÜV-certified 2004/QMR-system:
H41q/H51q

1997 | 1st TÜV-certified safety-related
communication via Ethernet:
safeethernet

2002 | Fastest certified safety system:
HIMatrix

Innovation. Nonstop.

2002 | 1st manufacturer awarded IEC 61508 safety certification “Functional Safety Management”

2004 | 1st TÜV-certified SIL 3 intrinsically safe analog isolator & HART data extraction combined with 1st SIL 3/ATEX HART multiplexer

2005 | 1st intrinsically safe **ethernet** communication in Ex-Zone 1

2006 | Leader in development of FF-H1-SIS

2007 | 1st Subsea High-Integrity Pressure-Protection system certified by TI Norway and TÜV

2008 | 1st TÜV-certified nonstop safety system

2009 | Achilles Level 1 security certificate for HIMax



SAFETY
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One technology – always the right solution



SIL 3

HIMax



SIL 3

HIQuad



SIL 3

HIMatrix

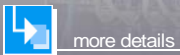


SIL 4

Planar4

- Industry's largest range of flexible and scalable safety systems
- Based on the same, proven safety technology
- Selection based on individual requirements for perfect technical and commercial fit
- Solutions for any type and any number of I/O points
- Centralised and distributed applications via **safeethernet**
- Integrates with any DCS

HIMax highlights



- World's most advanced safety system
- Ideal for mid-size and large applications
- Designed to improve plant output, productivity and profits
- Nonstop operation to achieve maximum plant uptime
 - XMR[®] technology: no single point of failure, no spurious trips
 - Changes, additions and maintenance without stopping the plant
 - Unique common cause failure protection
- Lifetime configuration flexibility to reduce CAPEX and OPEX
- Intuitive platform and software features to make safety simpler

HIQuad highlights

- Highest reliability, proven in thousands of facilities
- Ideal for small and mid-size applications
- Maximum safety and fault-tolerance
- SIL 3 in single-channel configuration
- Scalable redundancy and broad range of I/O modules: perfect fit
- Hot swapping & online program changes: maximum availability
- Small footprint and proven 19" technology
- For use in Ex-Zone 2



HIMatrix highlights



- One of the world's fastest safety systems
- Ideal for networked and time-critical applications in which fault tolerance is provided by the process
- Broad range of compact controllers and remote I/O modules for flexible adoption
- Extremely cost-effective solution for a few I/O points to several hundred
- Replacement for safety relays
- For use in Ex-Zone 2



[more details](#)

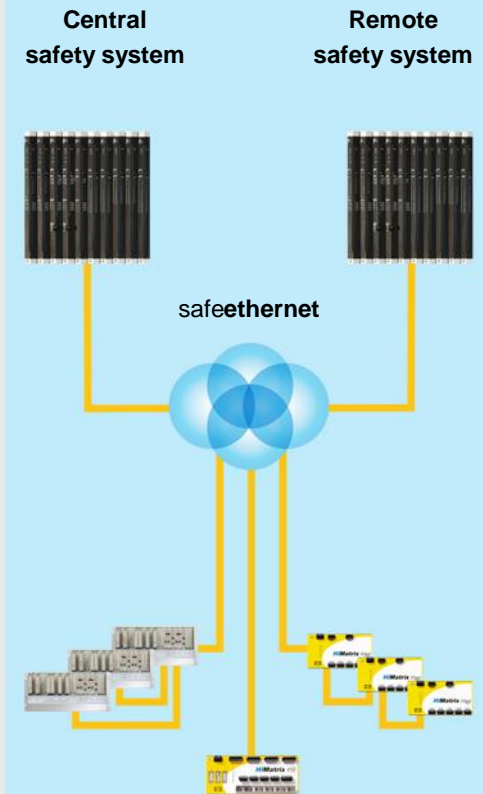
Planar4 highlights

- World's only fully certified SIL 4 system
- Ideal for highest-risk automated processes
- Hard-wired system that integrates inputs, logic processing and outputs on every module
- Programming with various wiring techniques
- Scalable redundancy to increase availability or for cost-effective adoption of the application
- Extremely robust: MBTF > 200 years
- Very fast: Switching time 2-10 ms
- Monitoring for open and short circuits
- Small footprint and proven 19" technology



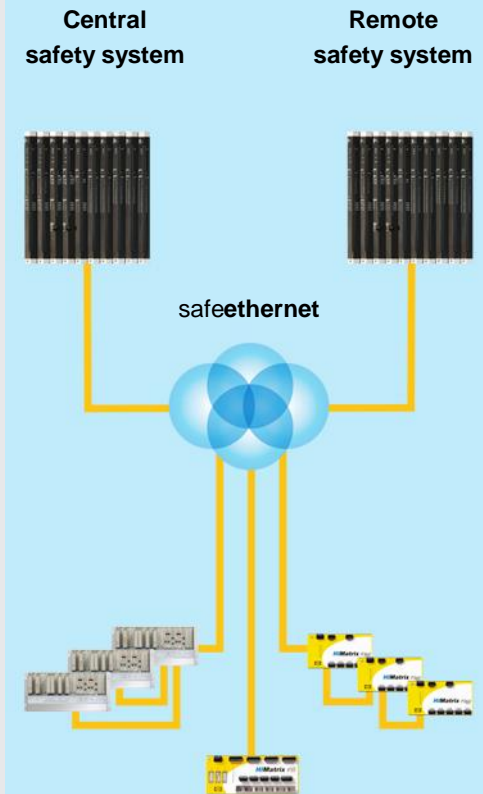
safeethernet: Reliable and powerful safety networks

- SIL 3-certified, proven worldwide since 1997
- For HIMax, HIQuad, HIMatrix systems
- Based on standard Ethernet technology
- High levels of flexibility and transparency
 - Standard Ethernet components and functions for safety applications
 - Diverse transmission media, from copper to satellite
 - Different network topologies: line, tree, star and ring structures
 - Vertical integration and transparency across all levels
 - Network participants can access each another, enabling centralised programming, diagnosis and visualisation

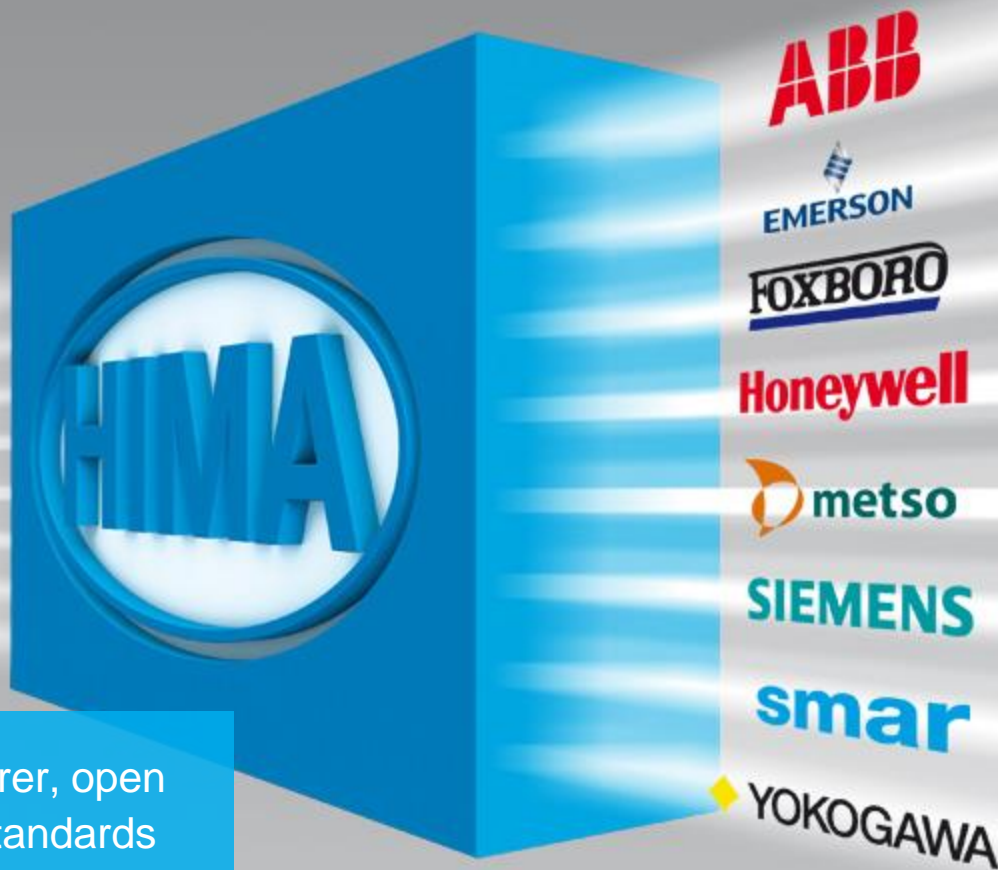


safeethernet: Reliable and powerful safety networks

- Highly economical
 - Can be integrated into existing Ethernet networks
 - One network for safety-related and standard data
 - Cost-effective standard components and future-proof solutions
 - Redundancy concepts assure uninterrupted system operation
 - Economical remote diagnostic and maintenance concepts
- Fast response times even for networked applications
 - Networking up to 255 HIMA systems on each segment
 - Data transmission at 100/1,000 Mbit/s
 - No limitations on physical separation



HIMA systems integrate with all leading DCS



Cross-manufacturer, open communication standards



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Full integration in the DCS operating and monitoring environment

- HIMA system advantages – including nonstop operation – with all leading process control systems
- HIMA guarantees the achievement of the required functionality including the coordinating and creating solutions with DCS suppliers
- Fully MIV/MAC capable: One-stop shopping including HIMA solutions
- Competence Team tests all integration options and develops efficient integration tools and software components



Sample functionalities

- Integration of alarms and events into the alarm management of the DCS
- Integration of faceplates for operating and monitoring
- Transfer and visualisation of diagnostic data from HIMA systems
- Transfer and visualisation of process data and safety-related locking states
- Transfer of time-stamped data
- Maintenance overwrite switch (MOS)
- Partial stroke test (PST)
- Start-up bypass (SUB)

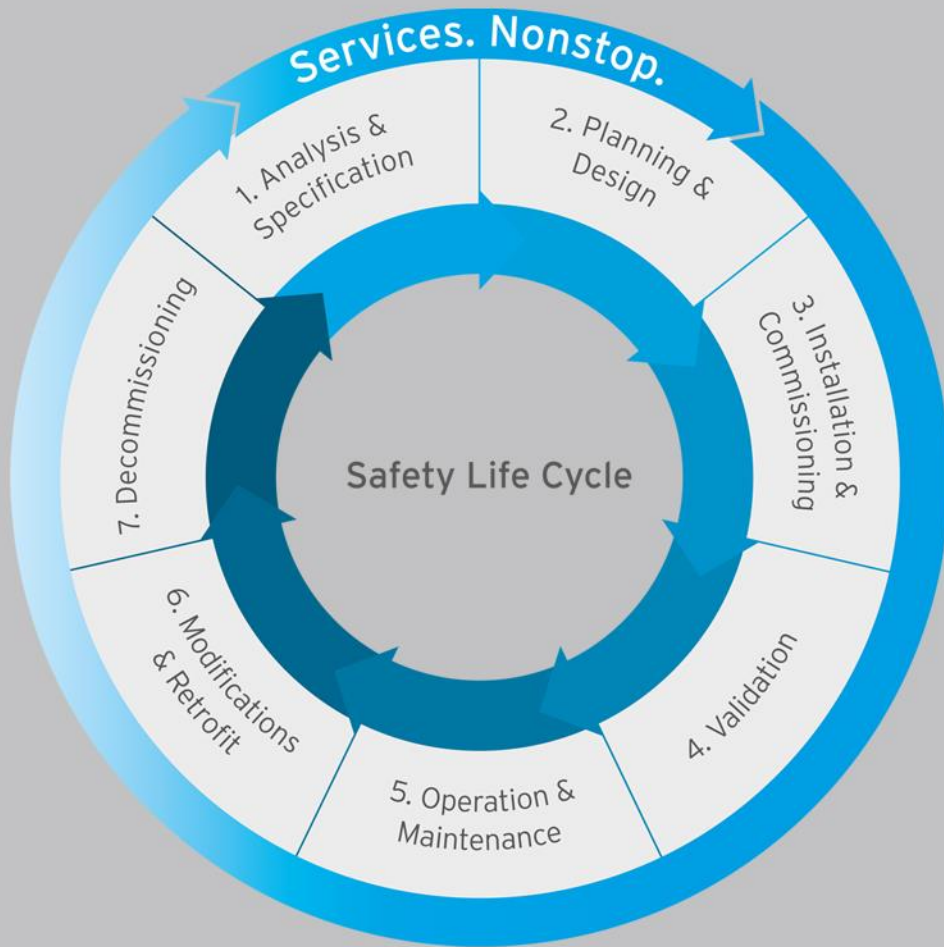
Protocols & interfaces for integrated solutions

- OPC DA and OPC A&E
- Modbus TCP Master & Slave
- Modbus Master & Slave RS485
- PROFIBUS DP Master & Slave
- Foundation fieldbus H1*
- PROFINET
- Send & Receive TCP
- HART Protocol
- ComUserTask, programmable protocols



* Details are subject to change

Safety life cycle services. Nonstop.



- Help you achieve compliance, safety and profitability
- Cover all phases of the safety life cycle
- Available worldwide
- Performed by safety experts

Safety Consulting: Start smart

- World's largest resources of certified safety consultants
- Solutions for compliance with your legal, financial and moral responsibilities
- Best possible protection for your plant, people and the environment
- More profitability by protecting against production stops while reducing investment and life cycle costs
- Consulting services include:
 - Hazards and risk analysis
 - Safety Integrity Level (SIL) analysis and verification
 - Specification and tender documentation
 - System design and integration
 - Functional Safety Management



Fertiliser plant/Malaysia



- ESD systems for ammonia plant, urea plant and process steam generation
- 4 H51q systems
- 2,000 I/Os
- Interfacing via Modbus to the Yokogawa control system
- Customer: Asean Bintulu Fertilizer Company Sdn Bhd, Malaysia

Toluene diamine production plant/Germany



- ESD and BMS systems
- 10 H51q HS systems
- 6,800 I/Os
- Interface to Emerson DeltaV via Modbus RTU
- Customer: Bayer MaterialScience AG, Germany

Ethylene cracker/The Netherlands

- ESD, F&G and BMS systems
- 17 H51q systems
- 2,500 I/Os
- Coupling via Modbus TCP to the Yokogawa process control system
- Customer: Shell Nederland Chemie B.V.,
The Netherlands



Ethylene pipeline/Germany



- Safety-related automation of an ethylene pipeline
- 12 H41q and 2 H51q systems
- 6,110 I/Os
- Interface to ABB control system via OPC
- Customer: InfraServ GmbH & Co. Gendorf KG, Germany

Multi burner system/Germany

- BMS system for cracking furnace for ethylene and propylene extraction
- 1 H51q HRS system
- 1,000 I/Os
- Customer: OMV Deutschland GmbH, Germany





Suggested Next Steps

1. Compare HIMA to alternatives
 - Inspect the technology
 - Assess the support
 - Evaluate the company
 - Consider your future requirements
2. Sponsor our vendor qualification request
3. Consider us for your next project: RFQ