HIMA SMART SAFETY.

HIMA System

SafeEthernet Enables Safety-Related Networking of Decentralized/Distributed SIL 3 Applications

To create applications requiring networked safety systems, HIMA developed the SafeEthernet protocol back in 1997. SafeEthernet is based on standard Ethernet technology (IEEE 802.3) and enables easy and efficient networking of HIMA safety systems in the widest range of industrial and application fields. Safety-related data transmission can therefore be easily integrated into already existing Ethernet networks via all common types of transmission media. Furthermore, all HIMA systems are able to communicate with one another. As a result, they can be optimally adapted to their respective plant.

Features
- Data transmission at 1 GBit/s
- Fast response times, even for networked applications
- Virtually no limit in terms of physical expansion
- Utilizes standard Ethernet components and functions for safety-critical applications
- Enables a range of different network topologies, also with regards to cybersecurity
- Fully compatible with industrial use

Communication Mediums
- Copper
- SHDSL
- Fibre optic
- Satellite
- WLAN

Benefits
- Integrates safety-related and non-safety-related data into one standard Ethernet network — without compromising safety
- Can be integrated into existing Ethernet networks
- Utilizes cost-efficient standard Ethernet components made by any manufacturer
- Redundancy concepts and SafeEthernet reload assure uninterrupted system operation
- Quick, step-by-step commissioning
- Economical remote diagnostic and maintenance concepts

High Flexibility and Transparency

Ethernet network technology can be flexibly adapted to any application. It facilitates planning, start-up, maintenance, and extensions.

Each station within the network has access to every other station. This allows centralized programming, diagnosis, and visualization.

HIMax

HIMatrix

HIQuad

<div class="sidebar">
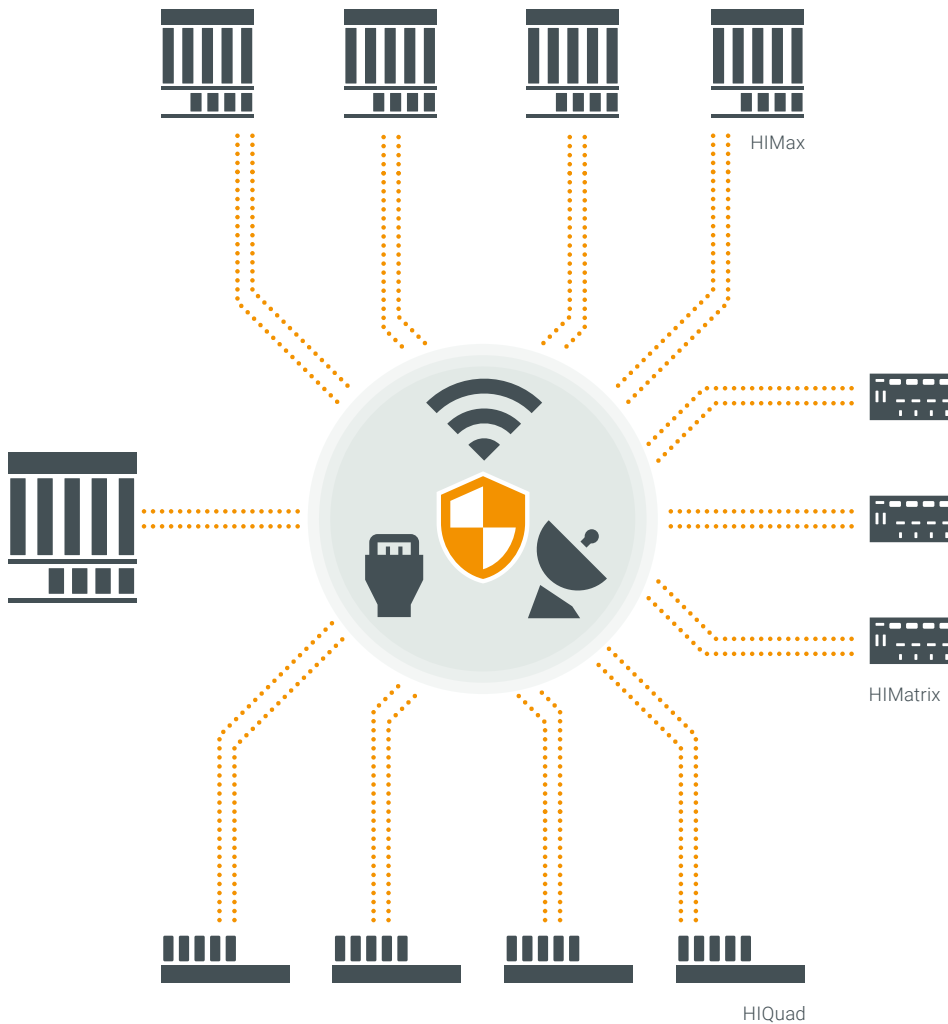
Typical Applications

Process Safety
- Steam crackers
- Polyethylene, polypropylene, and PVC production plants
- 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

Rail Sector
- Signaling
- Railway crossings
- Rolling stock
- Power supply

Logistic and Machine Safety
- Material handling systems
- Cranes, crane networks, and lifting equipment in production facilities or on docks
- Driverless transport systems (DTS)
- Punching and presses
- Painting plants
- Robot cells
- Lifts
- Sluices and polders
- Lifters and elevating platforms
- Cableways
- High-bay warehouses
- Complete solutions for airports

Certificates
- SIL 3
- SIL 4 (CENELEC)

</div>

Safety Systems

Safety-related networking with SafeEthernet:
- Up to 255 systems on each HIMax Ethernet segment
- Up to 255 systems on each HIMatrix Ethernet segment
- Up to 64 connections (each up to 1100 byte) between two systems
- Up to 99 systems on each HIQuad Ethernet segment