

# SYNTEL

No common failure mode  
Reduces installation cost  
Easy expansion

## Addressable hazard event monitoring system

A major innovation in gas and flame detection, SYNTEL integrates gas and flame detectors with third party instrumentation in a secure addressable distributed field network.

### General description

Syntel is an addressable system suitable for use in zone 1 and 2 hazardous areas. The complete addressable loop is fault tolerant operating normally with a short or open circuit. Syntel does not have a central processing unit, so there is no common failure point.

Syntel includes an OPC interface, as standard, and can be supplied with Modbus too, allowing easy integration with third party systems.

Syntel stores alarm and calibration information in distributed non-volatile memory, there is no reliance on a centralised system.

Syntel is ideal for installations where there is the possibility for future expansion. The system architecture allows very low cost expansion as cable runs to a central location are not needed.

### Application

- Oil refinery
- Chemical and petrochemical industry
- Off shore
- LNG & LPG storage
- Power stations

### Features

No central processing unit

Addressable flame, gas and third party instrumentation

Fault tolerant

Simple system configuration

Flexible system design

User friendly, client specific interface

### Benefits

No common failure point

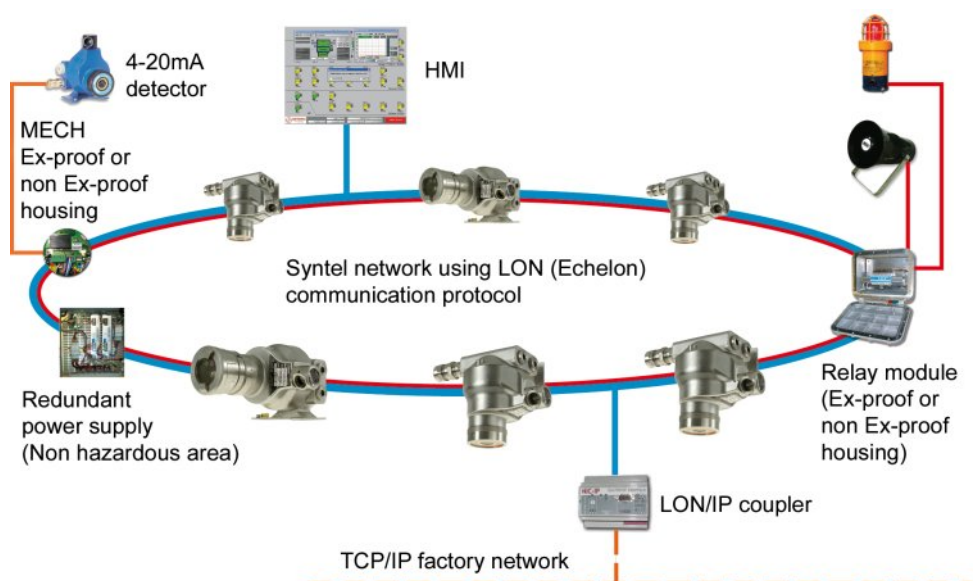
Distributed intelligence in zoned areas

Fully functional with one open or short circuit

Reduced engineering and installation cost

Easy expansion with minimal costs

Ease of use to client requirement



## Technical data

### RELIABILITY

Distributed intelligence:

- Each device stores alarm and calibration information

Fault tolerant:

- The system supports cable failures (short-circuit or break)

Secure communications:

- Each node communicates periodically with all other networked devices.

Redundant power supplies:

- Ensures high availability.

### PERFORMANCE

Maximum distance between two addressable nodes:

- 800 m in copper cable
- 25 km in fibre optic

Single network loop capacity:

- 120 addressable nodes

Maximum number of networked loops per HMI: 16

System capacity: 120 x 16 = 1920 addressable nodes

Digital outputs (relays):

- Decentralised and configurable operation (zoning, voting) depends on detector status and/or digital and analog inputs

### REFERENCES AND OPTIONS

- Detectors (direct devices)

MultiXplo DMRX6	Catalytic combustible gas detector
MultiTox DMIRT6	Electrochemical toxic gas detector
MultiTox DMRT6	Solid-state toxic gas detector
MultiFlame DMTV6	Multispectrum flame detector

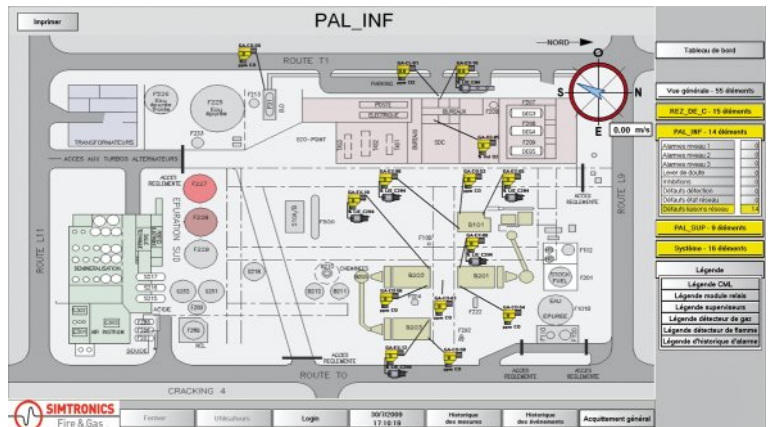
- Detectors (other inputs)

GD10P	Point infrared gas detector
GD10PE	Extended point IR gas detector
GD1	Laser open path gas detector

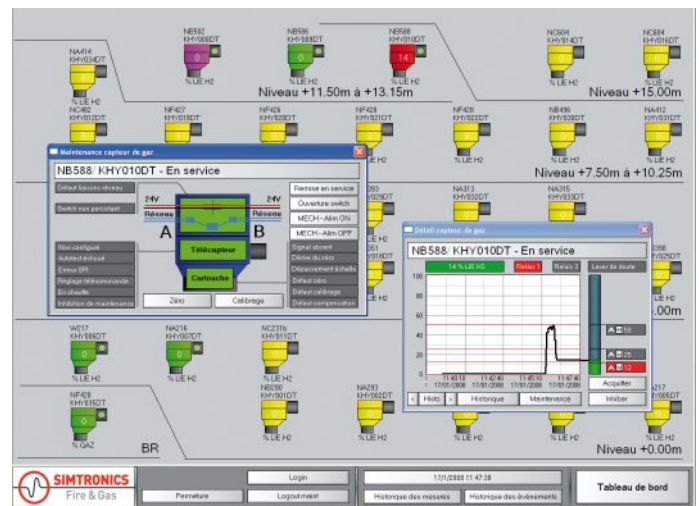
- Additional devices

MECH	Input module for 4-20mA sensors (Hazardous or non hazardous areas)
M-A 8E/8S	Relay module 8 inputs - 8 outputs (Hazardous or non hazardous areas)
LON / RS485	ModBus interface
LON / IP	Interface LON / IP protocol
LON / Fibre optic	Interface LON / Fibre optic coupler

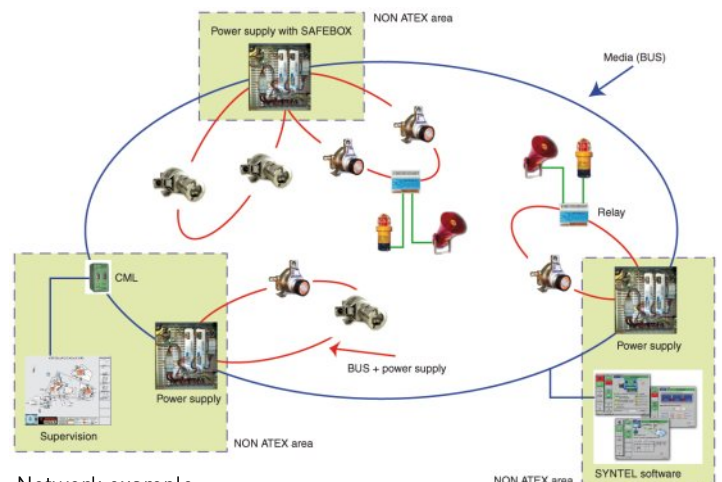
Cable type: 03IP09EI (SF/FA), 3 pairs individually shielded 0.9mm<sup>2</sup>



SYNTEL offers a user friendly, client specific interface



Configuration and maintenance interface



Network example