

MAGIC SYSTEM – MICROSYS 3200 ET

- DCS
- PLC
- SCADA
- Emergency Shutdown Systems
- RTU
- Custom-built proprietary automation system
- Multi-loop Controllers

Salient Features:

Extremely compact size

DIN-Rail Mounted I/Os

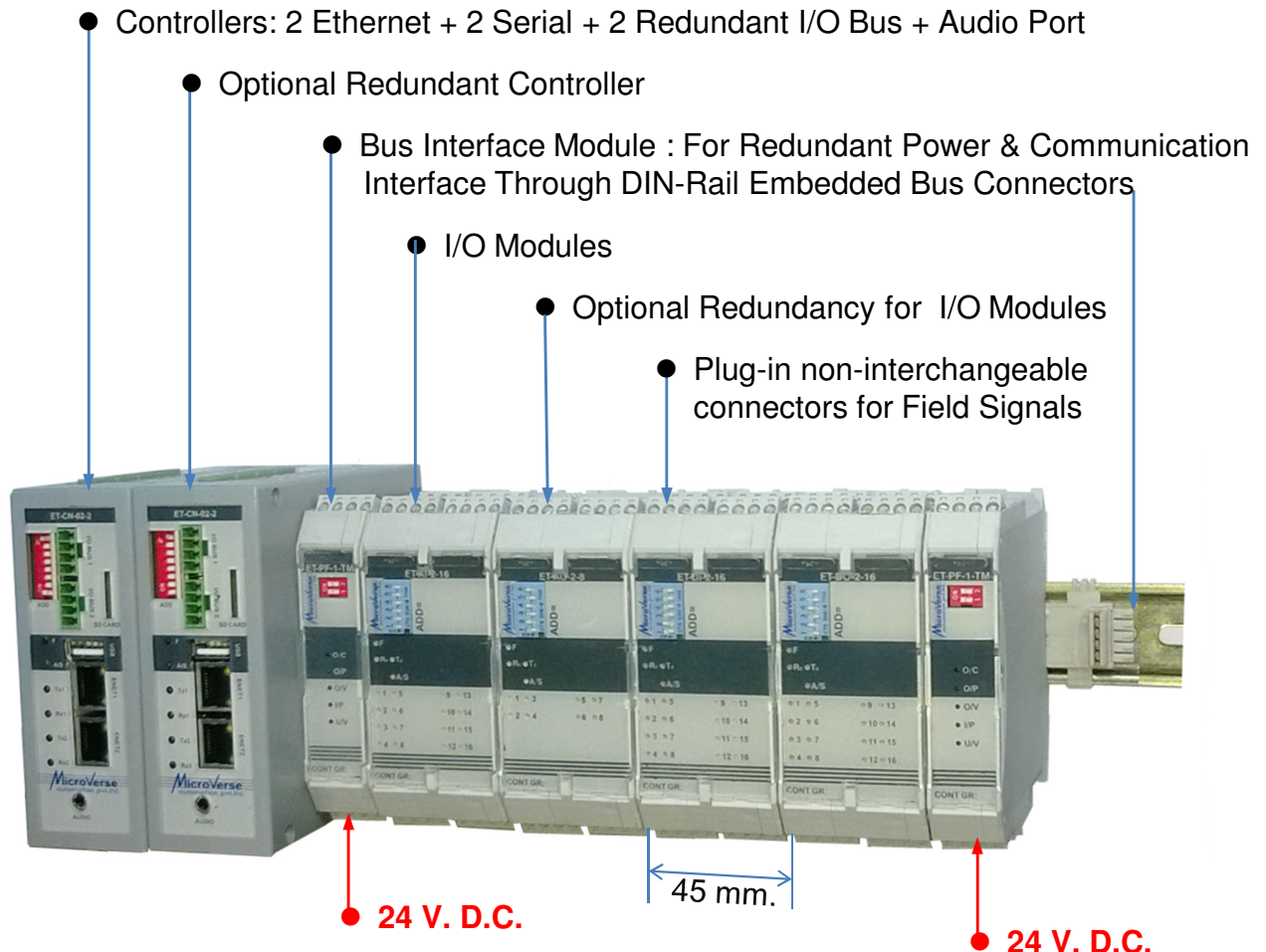
All I/O signals are voltage & current limited

Extensive diagnostics

Integrated development platform for plant-wide logic & SCADA

Variety of configurations for very small to very large systems

System Elements:



MicroVerse
automation pvt.ltd.

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System Configurations:

MAGIC SYSTEM MICROSYS 3200 ET can be configured in several ways depending upon application requirements & criticality. Some of the examples are shown below:

Small Compact System with optional local HMI

Stand-alone system.

Can be housed in flame-proof enclosure
for hazardous area applications



Typical Configuration with Less than 500 I/Os

Redundant communication links between
Controller & OS/ES

Redundant Controllers

Event-based Audio Annunciation of pre-
recorded messages

Redundant I/O Bus communication

**Optional I/O Redundancy for critical
channels**



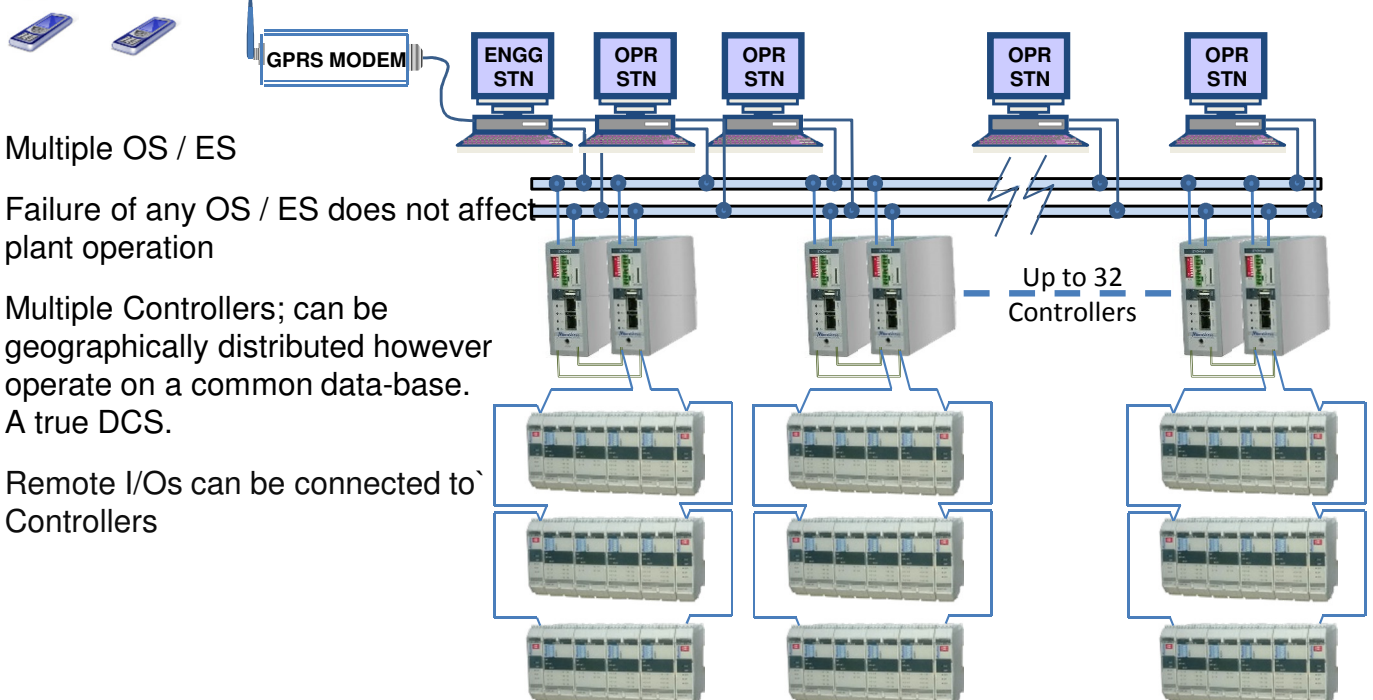
Typical large installation

Multiple OS / ES

Failure of any OS / ES does not affect
plant operation

Multiple Controllers; can be
geographically distributed however
operate on a common data-base.
A true DCS.

Remote I/Os can be connected to
Controllers



System I/O capabilities

Each Controller can access up to 32 I/O Modules

Up to 32 Controllers can be connected in a single Ethernet Network

A total of $32 \times 32 = 1024$ I/O Modules can be connected in a single network

If all I/O Modules are of 16 Channels each, this works out to be 16,384 I/Os per Subnet Layer

I/O Module Types

MICOSYS 3200 ET family has a large variety of I/O Modules to select from. Some of the most commonly used types are listed below.

Model Number	Signal Type	No. Of Channels	Width
ET-DI-2-8	Digital Inputs Individual channel isolated. Excitation from external supply	8	Single
ET-DI-2-16		16	Double
ET-AI-2-8	Analog Inputs. Individual channel isolated. Excitation from external supply	8	Single
ET-AI-2-16		16	Double
ET-DO-2-8	Digital Outputs. Open Collector. O/L & short-circuit protected to 300 mA each channel. Isolated from system supply	8	Single
ET-DO-2-16		16	Double
ET-AO-2-4	Analog Outputs. Individual channel isolated. Excitation from external supply	4	Single
ET-AO-2-8		8	Double
ET-PI-2-8	Pulse Inputs. (12 kHz max.) Individual channel isolated. Excitation from external supply	8	Single

Note: For the Model Numbers mentioned above, all the Digital Inputs & Outputs are 24 V.D.C. & Analog Inputs & Outputs are 4-20 mA D.C. Please consult our sales team for other types of I/O Modules

Controller Options

Present range of Controllers for **MICOSYS 3200 ET** family are as follows:.

Model Number	Major Specifications	Application
ET-CN-01-1	Clock Speed: 60 MHz, Flash: 256kB, RAM: 32kB, Ethernet Ports: 1; I/O Bus: 1; Serial Ports: 2	Can support 8 I/O Modules; Can be used as Remote Communication Processor
ET-CN-02-2	Clock Speed: 720 MHz, Flash: 512MB, expandable to 4GB RAM: 512MB, DDR 3 Ethernet Ports: 2; I/O Bus: 2; USB: 1 Serial Ports: 2, Audio Interface available	Can support 32 I/O Modules; Broad range of applications including RTU, Voice Alert facilities.

Software Tools

Magic Engineering Tools provide facility for development of complete application for the entire plant on a single platform. Tag Database, SCADA & Logic configuration are developed & integrated on a common platform. Multiple Controllers, even if they are geographically distributed & deployed for different plant areas get interconnected through this common platform.

Entire system logic can be developed off-line on any PC. Complete logic can be tested in a simulated manner prior to downloading in a running plant. On-line modifications are possible in a running plant without any disturbance in operations.

Logic is developed with the help of a library of over 100 powerful Function Blocks. In addition, user can define & create his own Functional Blocks.

Execution speed of each logic page can be defined by the user.

Communication between multiple Controllers & multiple Operator / Engineering Stations is in the form of multi-master / multi-slave. Failure of any Engineering Station or Operator Station does not affect plant operation. In case of failure of Engineering Station, any Operator Station can be set as Engineering Station & all the functionalities of Engineering Station can be performed from this station.

Each Operator Station stores history of 'History-enabled' tags. Multiple copies of history are therefore available.

SCADA package has all the standard facilities like Graphical Displays with dynamic symbols, Trends, Alarms Management. Alarms can be displayed in groups for different areas.

SCADA package has facility for sending SMS Alerts to mobile phones through a GPRS Modem. Alarms can be classified as per degree of severity. It is possible to define recipients & corresponding degree of severity of alarms

Several facilities are provided for maintenance purpose. This includes forcing of Tags, debugging, seamless movement of I/Os from one module to another..

Operational & Environmental Specifications:

Operating Temperature Range:	10°C to 65°C
Maximum Storage Temperature:	75°C
Maximum Relative Humidity:	95% RH, non-condensing
Supply Voltage:	18 to 27 V.D.C. including ripple
Electrical Noise Immunity:	Conforming to IEC 61000-4-4