

A Tradition of Fire Protection Innovation



Network & Graphics

The ZETTLER network can be extended up to 99 panels with panels interacting with each other where required. The network is a true peer to peer network which remains unaffected by a single node failure. Furthermore failure of any panel's main processor will not inhibit transmission of any fire alarm or fault signal from that panel across the network to a designated panel's zonal display. Networks can be created using a wide range of cable types or fibre optics. The network will support the Tyco Expert Graphics (TXG), Emergency Management System and Graphical User Interface. The system provides annunciation, status display and control for the ZETTLER network either to a single or multiple stations. Multiple stations are connected as true clients of the dedicated primary station (server), and can be on the client's own network if desired. TXG is windows based system which uses a combination of symbols, floor plans, pictures, text, voice messages and video input to display events and create actions for the operator. TXG is user friendly and simplifies the operator's actions, saving valuable time in an emergency.

Third Party Interfaces

When Fire alarm systems have to be interfaced to a third party's system such as BMS, there are no specials with MZX Technology. The MZX to BACnet interface provides high level communication between the fire alarm and building automation systems. The BACnet client will display both point and zone events together with various system statuses and analogue detector values. The system also supports commands thereby providing a seamless bidirectional interface.

A MODBUS interface also exists for the ZETTLER network allowing connection via a number of protocols to the third party system. Multiple units can be interconnected within a single system. The module has on-board relays which can be configured as inputs to the ZETTLER system plus a number of supervised inputs whose status can be read from the MODBUS map.

Network & Graphics Tyco Expert Graphics



Additional features and functions

- Response buttons with configurable icons or text provide control switches specific to any operation being performed
- Uses a combination of symbols, floor plans, pictures, text and video to communicate events
- Standard MZX and Minerva symbol libraries supplied
- Instructions given on emergency action to be taken
- Maps and instructions printed to assist response teams
- History logging recallable or printable by event, dates, device, or a host of other available filters
- An advanced filter allows history reports to be specifically limited to a particular range or date
- Commands to control outputs from the Graphical User Interface
- Events can be accepted individually or can be "auto-accept"
- Supports all standard PC image file types (i.e. GIF, JPG, BMP), AutoCAD® & Vector file types

The IP Video feature allows real-time images of the area at risk to be displayed in the event of an alarm or fault. Video capture of the affected area appears on the screen automatically, allowing the severity of the situation to be assessed quickly and the appropriate executive action to be taken.

For less serious incidents, expensive and unnecessary plant shut downs can be avoided. In more critical situations, accurate information can be quickly and efficiently communicated to the response team. Icons representing the devices being monitored will change colour dependant on status (Alarm, normal, fault, isolate etc).

Selected areas can be highlighted using the chromatic analogue display feature, MZX HOTSPOT. As the analogue value of a monitored point changes the chromatic analogue display will change the highlight colour through a pre-defined range.

For example a heat detector assigned MZX HOTSPOT could transit the highlight from blue to red. The number of chromatic steps is dependent on the resolution of the graphics card used, 16, 24 or 32 bits.

508.040.100	TXG USB	Server Dongle/License/Software
508.040.001	TXG001	Single Client With 1 Panel (Requires TXG USB)
508.040.002	TXG004	Single Client With 2 to 4 Panels (Requires TXG USB and TXG001)
508.040.003	TXG010	Single Client With 5 to 10 Panels (Requires TXG USB, TXG001)
508.040.004	TXG020	Single Client With 11 to 20 Panels (Requires TXG USB, TXG001, TXG004 and TXG010)
508.040.005	TXG999	Single Client With 21 or Above Panels (Requires TXG USB, TXG001, TXG004 TXG010 and TXG020)
508.040.011	TXG-C	Additional Client License
508.040.021	TXG-MIN80	Minerva Driver License
508.040.023	TXG-ZETA	ZAD/FIL Drive License
508.040.024	TXG-ZETF	Zetf/FIL Drive License
508.040.025	TXG-OPC	OPC Alarm / Event & Data Access Server Licence
508.040.027	TXG-CPP	SIMPLEX CPP Driver

Notification by email

Events, whether they are real or false alarms are handled most efficiently when information can be quickly and accurately communicated. TXG allows users to set up email groups and notification texts linked to predetermined events. These are automatically transmitted ensuring that the appropriate resource is deployed.

Availability and order process

TXG can be downloaded from the tycoemea.com website and can be used with a time restriction for demonstration or training purposes. TXG can also be ordered from our distribution centres.

Customers can fax or e-Mail an order form which details the software options required, to customer service. Original order forms can be obtained from [http:// www.ZettlerFire.com/](http://www.ZettlerFire.com/). This form will allow customer service to prepare and allocate a license code that will activate the required features. Customers will also be required to place an order for each part number on the form.

A media pack containing CD with license number, dongle, multi language manuals on CD and original order form will be dispatched to the customer. On receipt, the software can be loaded and the license number entered to make the requested software features available.

Network & Graphics

TXG is Totally Scalable

From a single fire alarm panel connected to a TXG server...

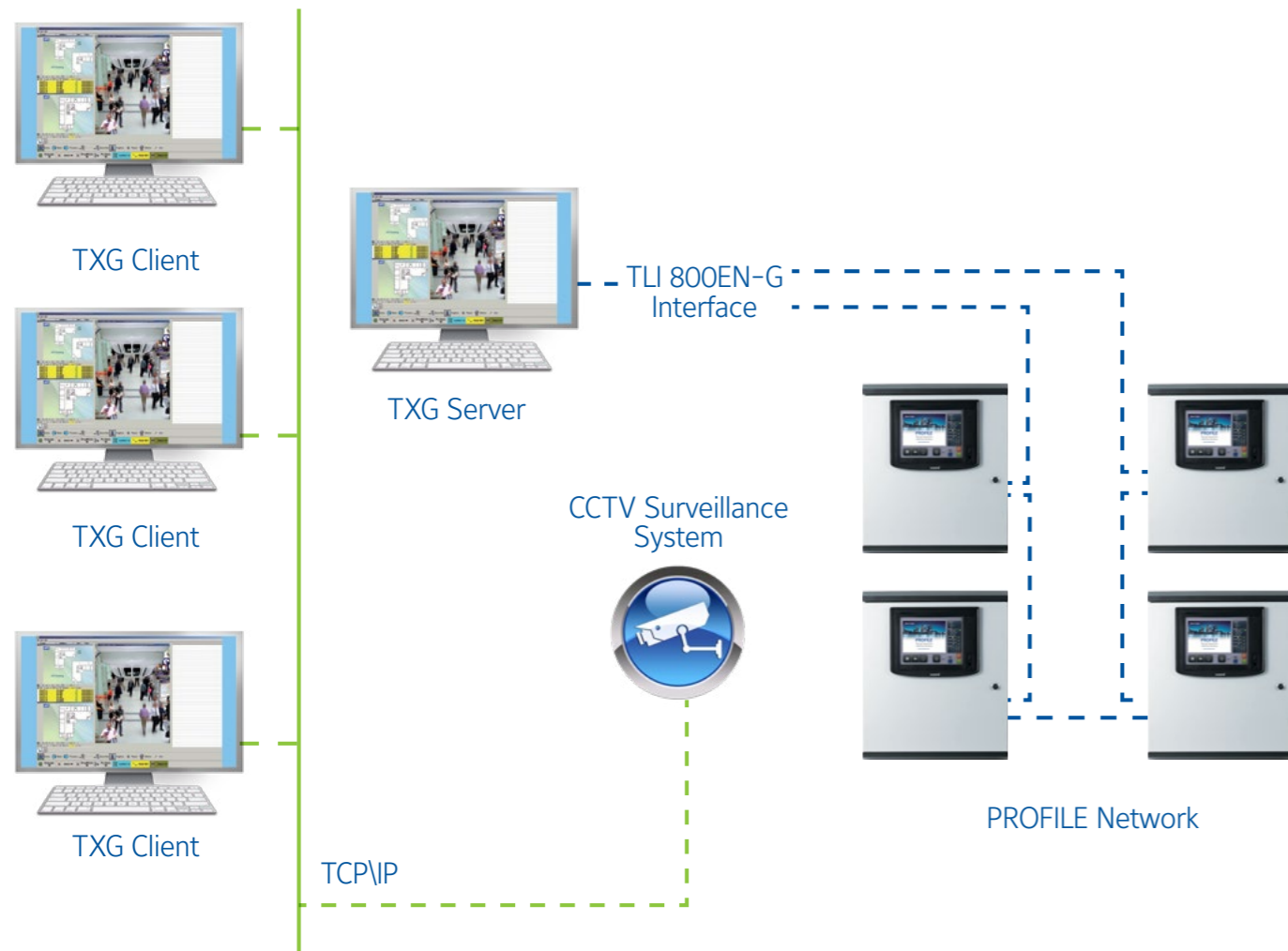
The modest additional cost of a single TXG client/server is easily justified when the benefits that a Graphical User Interface bring are considered.



TXG with direct connection to a single PROFILE panel

...to a complex installation with multiple diverse networks and distributed clients

Large multi-building facilities may have a number of fire detection networks, possibly installed over an extended period of time. TXG can be used as a hub to integrate these systems with a number of clients providing annunciation and control where it is needed.



Network Interface Modules

TLI800EN Network Interface Module and FOM800 Fibre Optic Module



Inter-controller Network

The use of the ZETTLER Network allows the fragmentation of a number of fire controllers to be drawn into a network system. Because every installation is different, the ZETTLER Network has been designed to be highly flexible, allowing for a wide range of different system applications. With a large network system the amount of data and information passing between fire controllers can become high during an emergency condition. The ZETTLER Network communication protocol has been specifically designed with this in mind and ensures that each event message passed around the network is acknowledged by the receiving controller in the fastest possible time.

Operation

The network is totally flexible and enables from 2 to 99 fire controllers to be seamlessly linked together.

System Overview

The MZX Net communications network comprises a collection of network interface modules and peripheral equipment that together form a fault resistant, and flexible peer-to-peer network for the ZETTLER Digital addressable fire systems controllers.

Notification by email

Events, whether they are real or false alarms are handled most efficiently when information can be quickly and accurately communicated. TXG allows users to set up email groups and notification texts linked to predetermined events. These are automatically transmitted ensuring that the appropriate resource is deployed.

Features

- Allows ZETTLER Fire Detection Panels to be "seamlessly" networked together
- Dual ARM 7 RISC processors
- Support for Emergency Mode Indication
- True peer-to-peer communications; no host or master controller required
- Highly resilient, node failure open and short circuit does not affect remaining network
- Approved to EN54-13 and EN54-2
- Up to 99 controllers may be used on the network
- Wide range of cable topography supported
- Network can use a variety of cable types with up to 2500m between nodes (cable dependent), 1200m using standard 1.5 mm MICC cable
- FOM800 Plug on fibre optic module provides up to 5000m between nodes using 62.5/125 multimode fibres
- Easy to install and programme
- Simple to operate

557.202.081	FOM800	Fibre Optic Module TLI800EN
557.200.039	TLI800EN	Network Interface in Housing c/w PSU PC to TLI800 EN Network Card
557.180.219	Connection Cable	

Master operating stations use the standard PROFILE Flexible, PROFILE or MZX Fire Controller hardware. In this application, the controller changes its personality; and enables additional information from each controller on the network to be displayed.

Cable Parameters

Technical data:		
Maximum wire to wire capacitance		Resistance
Baud rate	Capacitance	
38400	0.3 uF	Maximum resistance = 40 Ohm for EN54-13 compliant installation. Maximum resistance = 65 Ohm for proper function without compliance.(all baud rates)
19200	0.6 uF	
9600	1.2 uF	
2400	1.2 uF	
1200	1.2 uF	

Network Interface Modules

Mode of Operation

The ZETTLER Network employs a token passing communications protocol that treats each node on the network equally. Loss of one or more nodes does not affect the operation of the remainder of the network. Data is regenerated at each node in the network enabling maximum distance between nodes. In the event of a short/open circuit on the network between any two nodes, isolation will automatically occur and the network will re-configure communications and continue to allow communication between all nodes physically connected. The ZETTLER Network offers a high level of system integrity, allowing safety critical actions to be passed across the network from one Fire Controller to another. This very high level of system integrity enables the ZETTLER Network to meet the requirements of EN54-13 and EN54-2. In the event of loss of communication with the host controller, the TLI800EN will use its secondary processor to monitor the controllers fire outputs and if necessary can activate the controllers emergency fire input. In addition it can support a LED annunciator for network panel fire indication, this is wired to a MPM800 via the TLI800EN's integral RBus RS485 port.

Fibre Optics

Fibre optics can also be supported on the ZETTLER Network system by fitting one or two FOM800 modules to the TLI800EN network card, this uses either type 62.5/125 or 50/125 multi-mode fibres between nodes on the network. Use of fibre permits a maximum distance between nodes of up to 5000 metres in either bus or ring topology.

Technical Information

TLI800EN-G Housed Network Card with PSU

Mechanical	
Dimensions:	300 x 200 x 85 mm
Weight:	3.85 Kg
Electrical	
Supply voltage	220 to 250 VAC
Power Consumption	160 mA
Network Connections:	2 x RS 485
Network Diagnostic:	9 x on board LED's / RS232 port for system analysis and fault finding
Cable Type:	2 Core MICC, Shielded or Twisted pair
Connectors:	Screw terminals, will accept 2.5 mm ² cable
Network Parameters	
Number of nodes:	99 (max)
Distance between nodes:	1000 to 5000 metres (dependent upon cable type)
Communications type:	RS485
Baud Rates:	9.6K to 115.2K
Transport Type:	Token passing, non-collision protocol
Network Parameters	
Operating Temp: Storage	-10°C to + 55°C
Temp:	-10°C to + 70°C

Technical Information

FOM800 Fibre Optic Network Interface

Mechanical	
Dimensions:	50 x 58 x 12 mm
Weight:	0.015 Kg
Housing:	The FOM800 is mounted directly onto the TLI800EN Network card
Electrical	
Supply voltage	Powered from TLI800EN
Network Connections:	2 x ST Fibre optic connections
Cable Type:	62.5/125 or 50/125 multimode fibre optic cables Twisted pair
Connectors:	Screw terminals, will accept 2.5 mm ² cable
Environmental	
Operating Temp:	-10°C to + 55°C
Storage Temp:	-10°C to + 70°C
Relative Humidity:	95% (100% intermittent)

Network Interface Modules

BACnet Interface



BACnet is an industry standard communications protocol for building automation and control networks. It was designed to allow communication of building automation and control systems for applications such as heating, ventilating, and airconditioning control, lighting control, access control, and fire detection systems and their associated equipment. The BACnet protocol provides mechanisms for computerised building automation devices to exchange information, regardless of the particular building service they perform. The MZX BACnet interface provides BACnet/IP connectivity to MX / ZX / MZX / PROFILE / PROFILE Flexible / T2000 fire detection panels. The new BACnet interface (UC-8112-ME-T-LX), is built around an ARMv7 Cortex-A8 1000 MHz RISC processor with 512 MB SDRAM. The BACnet interface can be connected to a stand-alone MZX Technology panel or for larger installations via an MZX Network connection. In either case a single BACnet converter is required. The BACnet interface (UC-8112-ME-T-LX) converts "MX Speak protocol data" to BACnet communications protocol. Special firmware is required by the converter which is uploaded from a PC. For stand-alone panels a BACnet interface (UC-8112-ME-T-LX) takes serial data directly from the panel. For networked systems the BACnet interface (UC-8112-ME-T-LX) is connected to a dedicated TLI-800EN network card.

Features

- High level interface to building automation systems
- Meet interfacing requirements for large integrated projects

Displayed on BACnet Client side

- Zone alarms, point alarms from fire inputs
- Panel faults, faults from zones and points
- Mains fault, System faults
- Pre-alarms and alarm warnings
- Isolation of zones, loops & points
- Day/Night Mode status
- Analogue values of automatic detectors

Supported commands issued from the BACnet Client side

- Silence, Resound
- Sounders On and Off
- Evacuate
- Fire Reset
- Isolation of zones and points

557.202.082	UC-8112-ME-T	Embedded Controller Including one Moxa Console Cable (CBL-F9DPF1x4-BK-100) for Serial
557.202.083	RJ12 PVC Cable Male-Male, 3 metres.	For Serial Connection to TLI800EN or to FIM800 557.202.083

Technical data:

Mechanical Data	
Dimensions (W x H x D):	101 x 27 x 128 mm
Weight:	224 g
Electrical Data	
Input voltage:	12 to 24 VDC (3-pin terminal block, V+, V-, SG)
Input current:	450 mA @ 12 VDC, 225 mA @ 24 VDC
Power consumption:	5.4 W (without cellular module and external USB device attached)
Ambient Conditions	
Operating temperature:	-40°C to +75°C
Storage temperature:	-40°C to +80°C
Non-condensing ambient humidity (max.):	95 %