

Visualization solutions  
for harsh and  
hazardous areas



Supplying ruggedized computers and data acquisition systems to the oil and gas industry since 1993



# Company Overview

AZONIX Corporation has been supplying ruggedized computers and data acquisition systems since 1993 to the oil and gas industry. With over 10,000 systems sold ranging from human machine interface (HMI) displays, data acquisition systems, wireless communication and I/O devices for hazardous environments, AZONIX has a strong technical understanding for the demands of outdoor and hazardous area environments. This experience guides us as we develop new and innovative products converging computer technology with application know-how to meet a wide range of customer requirements.

AZONIX offers the broadest range of hazardous area HMI products giving you the option of choosing the best solution to meet your technical requirements and business needs. At AZONIX, we understand that it is not just about the product but the overall cost of ownership experience. Manufactured in a world class manufacturing facility focusing on quality and on-time delivery and supported by a strong service center focused on customer satisfaction, our products give the best return on investment and help your business grow. We strive to lead the industry with our product innovation and cost effective solutions.

## Our Product Value Proposition

- Totally sealed computers and displays that eliminate failures from contamination.
- Lower power designs, ensuring longer product life.
- Rugged electronic package that function over a wide range of temperatures, shocks, vibrations and EMI
- Intrinsically Safe electrical design enabling small, light weight ease of connectivity HMIs, data acquisition and I/O devices.
- Certification to hazardous area standards by approved agencies.
- Full product support throughout the life of the product.
- Patented IS Ethernet and wireless communications.

## Applications for AZONIX Systems

- Directional drilling
- Gas compression stations
- Measurement and logging while drilling (MWD/LWD)
- Casing tools
- Mudlogging
- Blow out preventers
- Coil tubing
- Pressure managed drilling
- Well stimulation
- Geo balance drilling
- Production platforms





# Our designs push computing capability closer to the process

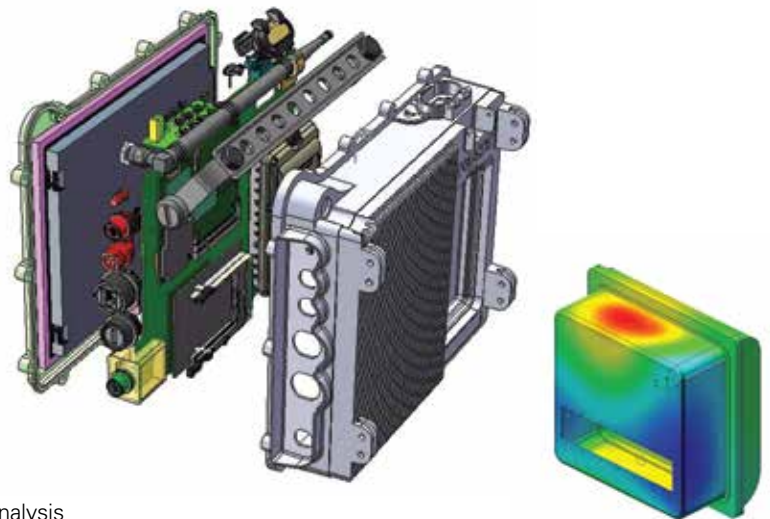
## Making it rugged - design challenges

In order to mitigate the primary cause of all system failures, heat, AZONIX engineers specify high efficiency power supplies, low power LED backlit LCD's and low power CPU's. These highly reliable designs are then modeled in thermal management software to ensure the heat dissipation meets all environmental criteria. Our engineers work closely with our customers ensuring all critical requirements are achieved per demand of the rig floor environment.

Our design review process ensures that the materials, tolerances and manufacturing practices will produce the highest reliability in our products as intrinsic safety and ruggedizations is our core competency. This is also validated during our prototype build and test phase. In addition, reliability predictions are made in accordance with MIL-HDBK-217. With a design focus for obsolescence management, our products typically have a field life of eight to ten years. The design teams' focus on low MTBF is critical in the design process. Our product development process includes several levels of reviews where peers scrutinize each other's work and cross-functional teams evaluate the development process in all areas including design margin. Finally, in addition to in-house testing, we utilize certified third-party labs to validate that the components and assembled units are reliable.

### Design Capabilities

- Integrated computer and display systems
- Intrinsically safe design
- LCD display design and optics technology
- Extreme ambient temperature design
- Embedded system design
- High speed barrier design
- Electronics packaging
- Thermal management
- FEA analysis
- Wireless communications
- Hazardous Area & MIL certification
- Solid Works / Pro E CAD capabilities
- MTBF Analysis - Mean Time Between Failure
- DFMEA Analysis - Design Failure Mode Effect Analysis
- Thermal Analysis for superior thermal management



### Process Capabilities

Lean Manufacturing  
ISO 9001 and AS 9100 certified  
Program Management  
Configuration Management  
Risk Management  
RoHS Compliance  
Hazardous Area Certification



# AZONIX customers expect a quality product that performs in harsh and rugged environments

## Operational philosophy

### Operational Excellence

Op-Ex principles are our foundation and our core building blocks in everything we do. Lean Manufacturing principles are used in the entire life cycle of the product from design to order entry to production, shipping and after sales service. We utilize kaizen events as our core methodology for continuous improvements. These events are focused improvement projects with cross functional teams dedicated to developing and implementing a solution to a defined problem in 5 days or less.

### Visual Metrics

We utilize Key Performance Indicators (KPIs) to monitor the overall business on a daily basis. We also have KPIs for every key function from design to order entry to a production cell to kanban systems. These metrics are posted prominently and reviewed on a daily basis as an integral part of our PDCA (Plan Do Check Act) based real time quality assessment system. Any deviations from the target are analyzed via Pareto charts and problem solving tools are deployed to drive corrective action and improvement.

### Dedicated Production Cells

The production cell is at the core of our Lean Manufacturing System. All materials, information and tools are available at the point of use and dedicated supply chain and engineering resources are assigned to cells to ensure maximum cell uptime.

### Quality Management System

AZONIX is certified to ISO 9001:2008 and has been certified to ISO 9000 since 1996. We are also certified to AS 9100 at all our locations.

### Supplier Quality

As part of our QA system, we have an extensive Supply Chain Management System. Our approach covers:

- Selection of new suppliers
- Supplier scorecards and rating
- Non conforming material review
- Monitoring of OTD and quality levels of existing suppliers.
- First Article Inspection for new suppliers / new part / modification to parts
- Joint continuous improvement initiatives with suppliers

### Obsolescence Management

Obsolescence Management is a service we provide to insure that we have a predictable supply of the key components and subassemblies used in our products throughout their life cycle. Through frequent road map reviews between our critical component suppliers and our supply chain team, we are notified in advance of scheduled updates as well as end of life situations. With this information we are able to design for the next generation and secure sufficient inventory to provide a seamless transition with no down time or loss of service to our customers.

### Quality Assurance

AZONIX customers expect a quality product that performs in harsh and rugged environments. To meet these expectations AZONIX has implemented a quality assurance program which includes ISO 9000 and AS 9100. Vendor qualification and regular quality performance monitoring is posted through our visual performance system which includes Key Performance Indicators.

# Products that perform in harsh and rugged environments

# New Products

## GECMA Remote Terminal

- Platform, modular design concept
- Slimline housing
- Specified for use in hazardous areas
- Full HD, 16 : 9 for 22" - 24" version
- Display options 15" - 24", in different resolutions
- Fibre optic or copper data transmission
- Highest dependability
- Future proof 'transparent' USB interface
- Savings of software licence costs
- Wide range of International Ex approvals

This future proof solution has been designed packed full of features and state of the art technology, all found within a slimline, stainless steel package (mounting options available) and with no hidden extra costs. The GECMA HMI series will be available in three versions, RT (Remote Terminal), TC (Thin Client) and PC (Panel PC).



A new generation, built on experience



## AZONIX Barracuda 15" Workstation

- Intel® i7 processor platform
- Atex Zone 2 and IECEx Class 1 Zone 2, AEx
- 15" Sunlight viewable screen
- Wide operating temperature -40°C - +60°C
- Sealed system with IP66 rating
- Resistive or Glass based projected capacitive touchscreen

Continuously  
striving for  
asset uptime  
while balancing  
performance  
with financial  
sensitivity

The next generation of the most popular hazardous area Zone 2 workstation is about to unfold. This updated platform has the latest in computing technology along with additional features our customers have requested for improved and expanded functionality. The new design is a drop-in replacement for the existing generation of Barracudas in form and fit to enable a smooth transition. The functionality will be equal or better depending upon user requirements. This product update also includes tier touch screen options with the introduction of a more robust glass base projected capacitive screen to improve asset up time. Along with that the unit will operate in broader temperature ranges and have a DC power option.

## Zone 1 - Products

### ProPanel® PRO 4500 Z1

- 15" Sunlight Readable Work Station
- Projected Capacitive glass based Touch-Screen w/ glove operation
- Intel® Core™ i7 2655 Processor
- I.S. Wireless 802.11 a/b/g/n protocol
- Universal AC power
- Wide temperature range
- Bluetooth connectivity
- Light weight
- Multiple mounting options



### ProPanel® MP2030Z1

- 15" Sunlight Viewable Work Station
- Intel® Pentium M 1.7Ghz processor
- RAM: Up to 2GB
- Storage: Hard Drive or Flash Drive up to 16GB
- ATEX Zone 1 Certified - purged
- NEMA 4 rated

### ProPanel® MP2040 Z1

- 15" Sunlight Viewable Work Station & Data Acquisition System
- Intel® Pentium M 1.7GHz
- RAM: Up to 2GB
- Storage: Hard Drive or Flash Drive up to 16GB
- ATEX Zone 1 Certified - purged
- NEMA 4 rated



### Azonix Drilling Unit

- Azonix Drilling Unit Terminal
- Rose Dial, Azimuth and Inclination displays
- ATEX Zone 1 rated
- Single Connection - Power & Data
- Configurable Displays
- Light weight / rugged & sealed

Field proven in oil exploration



## Zone 2 - Products

### ProPanel® MP2030 Z2

- 15" Sunlight Viewable Work Station
- Intel® Pentium M 1.7GHz processor
- RAM: Up to 2GB
- Storage: Hard Drive or Flash Drive up to 16GB
- Fiber network
- ATEX Zone 2
- NEMA 4 rated



### ProPanel® MP2100

- 15" Sunlight Viewable Work Station
- T7400® Core™ 2 Duo processor (2.16 GHz)
- RAM: Up to 2Gb
- Storage: 80GB min hard drive
- ATEX Zone 2 and C1D2
- NEMA 4 / IP65 rated

### Barracuda 19" BOP or Barracuda 19" WS

- 19" Sunlight Viewable Work Station
- Intel® Core™ 2 Duo 2.2GHz processor
- RAM: Up to 4GB
- Storage: 32GB Compact Flash
- ATEX Zone 2 / CSA Class 1 Zone 2
- IP66 rated



### Barracuda 15" WS

- 15" Sunlight Viewable Work Station
- Intel® Core 2™ Duo 2.2GHz processor
- RAM: 1GB to 4GB
- Storage: Compact Flash up to 32GB or 80GB HDD
- ATEX Zone 2 / CSA Class 1 Zone 2
- IP56 rated



# Safe Area - Products

## Barracuda Lite 19" WS

- 19" Sunlight Viewable Work Station
- Intel® Core™ 2 Duo 2.2GHz processor
- RAM: Up to 2GB
- Glass based touch screen
- Storage: 32GB Compact Flash
- Front panel IP56 Back Enclosure IP52

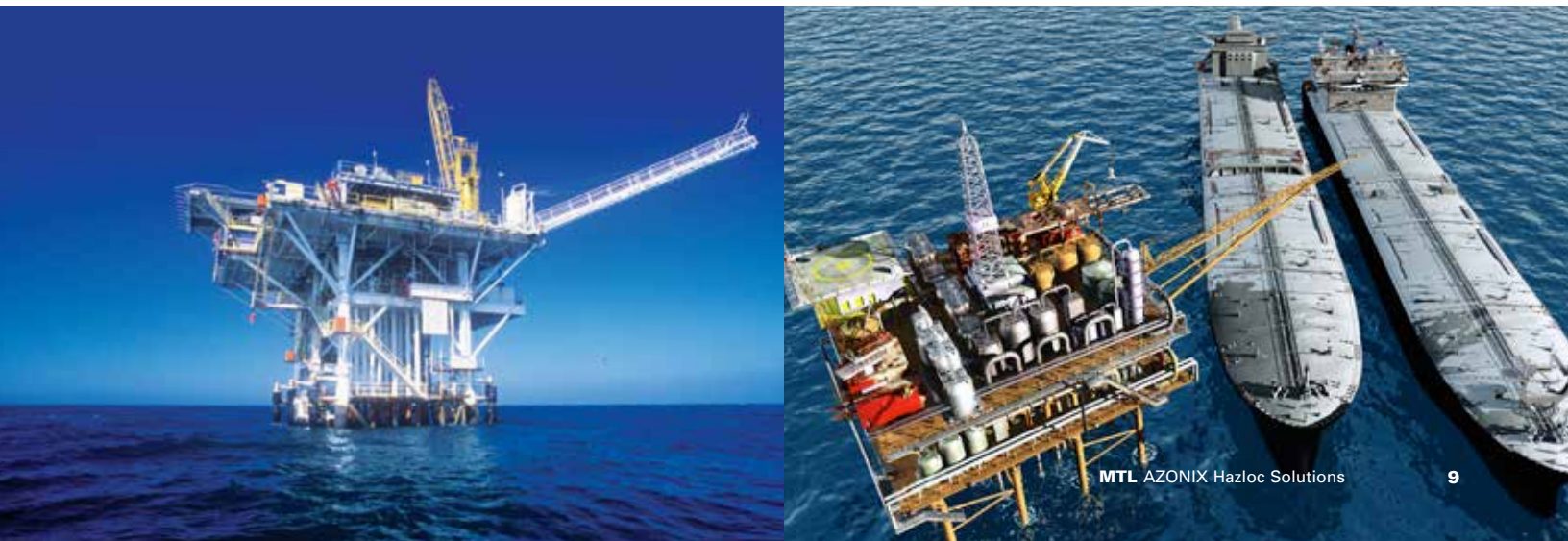


## Barracuda Lite 15" WS

- 15" Sunlight Viewable Work Station
- Intel® Core™ 2 Duo 2.2GHz processor
- RAM: Up to 2GB
- Glass based touch screen
- Storage: 32GB Compact Flash
- Front panel IP56 / Rear panel IP52

## ProPanel® MP2030 SA

- 10" Sunlight Viewable Work Station
- Intel® Pentium M 1.7GHz
- RAM: Up to 2GB
- Storage: Hard Drive or Flash Drive up to 16GB
- Push & hold touchscreen enabler
- NEMA 4 rated



## Remote Terminals and PCs for Hazardous Areas

### Explorer 15i / 18i PC Terminal

- Modular system
- Certified for Ex Zone 1/2 and Zone 21/22
- Designed for harsh environments
- High reliability
- Non-wearing SSD
- Intel® Atom™ 1.6 GHz processor
- 2GB RAM

Challenger remote terminals and Explorer PC's are an optimum solution for even the most demanding of tasks of on-site operation and visualization typically found in Pharmaceutical, Chemical, Petrochemical, Oil & Gas and Off-shore manufacturing. Specifically designed to work within hazardous and industrial environments the Challenger and Explorer HMI's offer great flexibility due to their modular configuration to meet all your plant requirements.



### Challenger 15i, 18i, 22i Remote Terminal

- Modular system
- Certified for Zone 1/2 and Zone 22\*
- Intrinsically safe certified components for operation and visualization
- Trouble-free PC hardware changes and software updates
- Ambient temperature -10°C to +60°C
- Low installation costs

\* Zone 22 only applicable to 15" and 18" screen size

# Expanding the MTL Visualization Solutions

# We strive to lead the industry with our product innovation and cost effective solutions

## Maximize rig uptime with AZONIX training

Hands on instruction is a big part of our training programs. Our instructors work closely with students in all aspects of repair and upgrades. AZONIX can accommodate 6 to 14 students in its Houston based Business Center class room. On site training is also available. AZONIX also produces custom training videos that can be accessed via the web or authored onto DVD depending upon your specific requirements.

If your team needs training, we can help. Please call 832-251-8800 for our training schedule.

### Testing Capabilities

#### Environmental

- Vibration
- Shock
- Temperature
- Humidity

#### Electrical

- Earth Bonding
- HIPOT AC
- HIPOT DC
- Programmable AC power
- Electronic load test



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