INNOVATIVE, RUGGED AND RELIABLE
INDUSTRIAL TELECOMMUNICATION PRODUCTS

In2iT

In2iT IN-PLANT COMMUNICATION SYSTEM

GUARDIAN
TELECOM

tough. trusted. true.

GUARDIAN TELECOM In2iT IN-PLANT COMMUNICATION SYSTEM

NEW GENERATION MODULAR IP PAGE TALK / PAGA, INTERCOM PLATFORM

As plants modernize network infrastructure to support internet protocol-based communication and improve network topologies, they rely on Guardian Telecom to provide them with the latest technology. Designed to work in hazardous locations, laden with flammable gases, vapors, dust, or fibers, Guardian Telecom delivers easy to use, rugged devices to solve In-Plant Communication concerns while maximizing integration options and easing implementation costs.

Guardian Telecom's Next Generation In2iT In-Plant Communication System was designed using a forward-thinking approach, with the future in mind for additional support and expansion capabilities, solving major limitations of existing and current in-plant communication solutions and going beyond traditional thinking with Hybrid Analog/Digital Technology.

When we designed our In2iT In-Plant Communications System, it was based on client requests to reduce complicated configuration and system controls, improve maintenance and system upkeep, decrease cabling costs and to be fully backwards compatible. We went beyond the industry standard to meet those challenges; like, rugged reliable components for hazardous locations, a new intuitive and flexible user interface, remote configuration monitoring and management, fiber connection ready and compatible with all legacy infrastructure including endpoints and easing installation costs. We future proofed so your facility's current needs are met while also anticipating features of tomorrow.

At Guardian we have decades of experience with equipment in operation equally as long. Guardian Telecom products are engineered from the ground up to work reliably, provide excellent value and last – especially in the roughest weather, toughest applications and most extreme environments.

Simply put, Guardian Telecom products are built rugged, tough, and dependable to last in the harshest environmental conditions in the world. When you need a ruggedized in-Plant Communication System that boasts the highest level of HazLoc safety, Guardian Telecom delivers by offering you a new standard in In-Plant Communications design, rugged, reliability, safety, quality and value.

In2iT SYSTEM ARCHITECTURE

Guardian Telecom has retained its traditional system architecture at the base concept level. It is a proven and reliable process for managing in-plant paging and communications, alarm management/broadcast and more.

The heart of the In2iT Communication System is the System Control Frame (SCF) that has been totally redesigned. We've re-engineered the system to provide the features the industry demands utilizing our advanced product technology with just the right amount of open architecture to ensure the systems can be expanded and customized. All of the devices within the SCF are hardened for high reliability and high stability in hazardous locations.

Some of the key features we have introduced include the following:

- Wide range of power compatibility.
- A whole new Graphical User Interface designed to assist operators, engineers and maintenance to manage the communications network, zone control, paging services and of course alarm monitoring and management plus more.
- The Secure Engineering/Maintenance Mode will allow local and remote management of devices; setting up audio broadcast levels, microphone sensitivities, etc. giving our customers the flexibility to manage the facility as environmental conditions change.
- Diagnostics to perform automated/manual full system wide tests or zero into an individual station.
- We have a new standardized Main Distribution Frame to ease connections from the end points through to the System Control Frame.
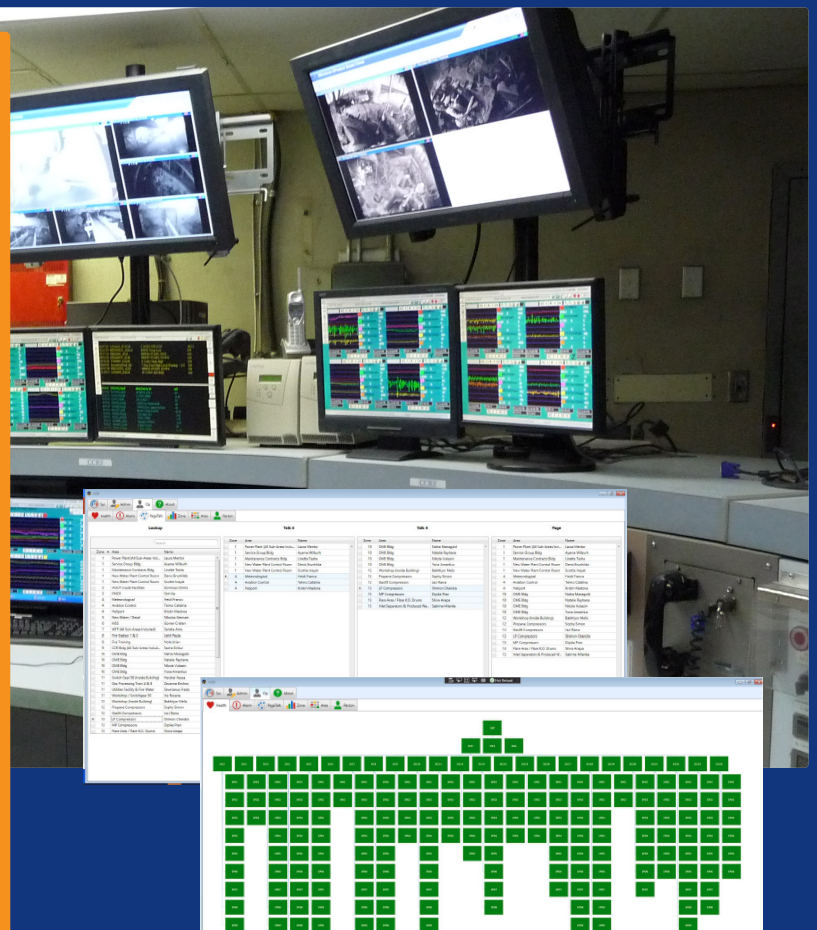
In addition to the above, all of the Guardian equipment within the System Control Frame are equipped with real time status monitoring/communications to support any necessary redundancy combinations. This includes the primary system controller. Should an alarm monitor fail as an example, the fault is detected, communicated and the backup module immediately takes over.

The base system consists of the System Control Frame (main communications system rack) with the end point communication devices (talk stations, paging amplifiers, signaling devices, etc). End Point Stations can be individually wired to the system cabinet or wired from station to station to reduce cabling requirements and integration costs.

In2iT RANGE
IN-PLANT COMMUNICATION SYSTEM

Features and Benefits
- A/B Architecture
- N+1 Architecture
- Central / Distributed Paging
- Standardized Main Distribution Frame (MDF) for wiring ease
- 6 Zones Standard (Expandable to 60 Zones)
- Hot swappable Zoning Modules
- 24 Dry, 8 Wet Alarm Inputs Standard (Expandable)
- Alarm Priority Reconfiguration without re-wiring
- Software Configurable
- Secured System Management
- Multiple Security Levels (administrator, operator & service) to tailor feature access as needed
- Remote Diagnostics and Monitoring
- Remote Speaker Level Management
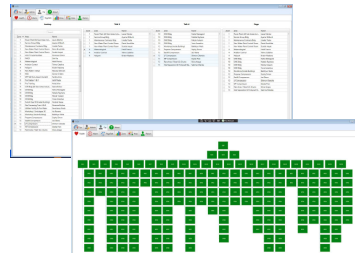- Supports both IP and Analog Endpoints

In2iT PLANT COMMUNICATION SYSTEM BASE PLATFORM

In2iT Guardian Telecom's Plant Communication System

The base system consists of the System Control Frame (main communications system rack) with the end point communication devices (talk stations, paging amplifiers, signaling devices, etc). End Point Stations can be individually wired to the system cabinet or wired from station to station to reduce cabling requirements and integration costs.

The In2iT Communications System has been totally redesigned. We've re-engineered the system to provide the features the industry demands utilizing our advanced product technology with just the right amount of open architecture to ensure the systems can be expanded and customized. All of the products within the In2iT Communication System Platform are hardened for high reliability and high stability.

See the In2iT Series individual specification sheets for more detailed information.

Features and Benefits

- A/B Architecture
- N+1 Architecture
- Central / Distributed Paging
- Standardized Main Distribution Frame (MDF) for wiring ease
- 6 Zones Standard (Expandable to 60 Zones)
- Hot swappable Zoning Modules
- 24 Dry, 8 Wet Alarm Inputs Standard (Expandable)
- Alarm Priority Reconfiguration without re-wiring
- Software Configurable
- Secured System Management
- Multiple Security Levels (administrator, operator & service) to tailor feature access as needed
- Remote Diagnostics and Monitoring
- Remote Speaker Level Management
- Supports both IP and Analog Endpoints

SCF In2iT SYSTEM CONTROL FRAME

The System Control Frame (SCF) works in conjunction with the Operator Access Panel, the SCF manages and routes all audio and data signals between the end points and users. It operates autonomously or in conjunction with other SCF sub-stations. Designed for future expandability, with ongoing support and reliability. The SCF is flexible and incorporates all the required modules as needed for each custom application. A standardized distribution frame is incorporated for consistent and reliable connections to the facility cabling architecture.

CPA In2iT CENTRAL PAGING AMPLIFIER

The Central Paging Amplifiers (CPA) provide superior quality audio and flexibility and are ideal for mass notification in hazardous locations. Offered in channel / power configurations of 4 x 400W, 4 x 1600W and 2 x 3200W and can drive speakers down to 2ohms. At only 1U high they reduce rack space. As well, factory optimized DSP processing, protective limiting and amplification. Supports Low Z, 70V or 100V applications with mixed configuration to maximize the system flexibility.

SZM In2iT SYSTEM ZONE MANAGER

The System Zone Manager (SZM) is the audio hub of the system. Features a modular design, and each chassis comes with dual redundant power supplies and supports up to 12 zone module cards. The zone modules have an independent micro-controller embedded and provide continuous self-health monitoring and communication to the SCF Servers. Each Module card will manage 5 Conference talk lines and the page line. If more than 12 zones are required, the total number of zones can be expanded by adding additional SZM Chassis.

FIM In2iT FIBER INTERFACE MANAGER

The Fiber Interface Manager (FIM) extends paging/alarm and talk lines over fiber to reduce long distance copper infrastructure. Converts Page/Talk signals (audio and data) into a digital format that is transmitted via an SFP device module. Two form factors, a multi-zone rackmount chassis and a single zone module. The broadcast zone consists of five talk channels, a page channel, and a data port. The outputs are designed to directly interface without additional line balancing or audio conditioning.

AIM In2iT ALARM INTERFACE MANAGER

The Alarm Interface Manager (AIM) provides continuous monitoring of alarm or other device inputs and reports triggers to the SCF for alarm or message broadcast. The AIM can also be used to control external devices (sounders, beacons, door strikes, etc.). Alarm priorities are securely configured via the Operator Access Panel, this allows the system to be reconfigured without the need to re-wire at the Main Distribution Frame. Armed with a multitude of configurable inputs and outputs the Alarm Interface Manager is designed for any I/O strategy thrown at it.

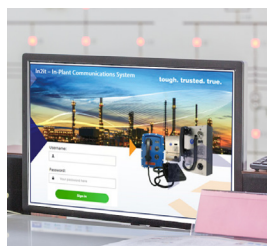## EIM In2iT ENHANCED INTERFACE MODULE

The Enhanced Interface Module (EIM) is a small multi-function Interface module that is the ideal endpoint for interaction with 3rd party devices to monitor and control such devices including adjusting paging speaker volume levels remotely. Features continual real time self-diagnostics and offer the flexibility of monitoring external devices via 4 opto isolated inputs when used with the SCF. Designed for use in harsh environments and offer an IECEx Zone 1 Hazardous certification rating.
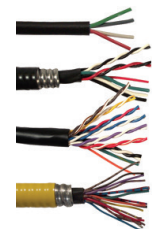
OAP In2iT OPERATOR ACCESS PANEL

The In2iT Operator Access Panel (OAP) is the software to monitor, control, alarm and configure the Guardian Telecom In2iT In-Plant Communication Platform.

The Operator Access Panel monitors data from the system control and the end points. The OAP operates autonomously providing status updates and notifications to the user, once set up and configured. Designed for future expandability, with ongoing support and reliability.

In2iT SYSTEM CABLE

Standard Guardian Telecom cabling types include multiline plus speaker in armored or non-armored varieties. Customized system variations that require special cable configurations are also Guardian supplied. CSA approval for hazardous areas available.

In2iT PLANT COMMUNICATION SYSTEM ENDPOINTS

In2iT In-Plant Communication System Endpoints

In2iT Guardian Telecom Page Talk Handset Stations - same ease of use, same hardened exteriors, same reliability but a whole new core. Our new page talk combines the best of digital technology while allowing connection to the analog world. We've boosted the paging power range from the traditional 12W to 30W.

These stations are beyond "smart". From remote locations one can access each station or groups of stations. Perform diagnostics, control the paging amplifier volume to the speakers. In normal operation the station will continually self monitor it's status and silently report to the SCF for real time monitoring. Someone drop a handset? Not a problem! The stations internal monitoring algorithms will detect this, report it and then place the unit back into an on-hook state. You may still see a rotary knob for switching talk lines but inside the audio management is all digital, eliminating opportunities for noise due to worn or dirty switch contacts.

Features and Benefits

- Microprocessor based technology
- 30W integrated paging amplifier
- Self-Monitoring / Diagnostics
- Remote Configurable
- Hazloc Certified
- Indoor, desk, outdoor and hazardous area end points
- Handset & Amplifier or Amplifier only options
- Easy one button access to operator
- Backwards compatible to legacy Guardian systems

PTI — PAGE/TALK INDOOR ENDPOINT

Guardian Telecom's Page Talk Indoor (PTI) In2iT Zone 2 Stations provide easy to operate paging with the versatility of five intercommunication talk lines for two or more people. The stations feature continuous real time self-diagnostics and the flexibility of monitoring external devices via four optically isolated inputs when used with Guardian Telecom's In2iT In-Plant Communication platform.

Designed for use for harsh indoor harsh environments and features a IECEx Zone2 hazardous environmental certification.

Five talk lines with ambient noise sensor , also available with optional flush mount kit
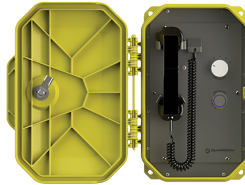
PTD — PAGE/TALK DESK ENDPOINT

Guardian Telecom's Page Talk Deskset (PTD) In2iT SERIES Station provides easy to operate paging with five talk lines. Individuals can be paged from any station and two or more people can communicate simultaneously on any available talk line.

External ambient noise sensor adjusts speaker volume automatically. Magnetic hook switch provides maximum durability. Push-to-page switch on handset with a noise canceling microphone. Operators switch on faceplate for easy access to operator without using the page line.

PTO — PAGE/TALK OUTDOOR ENDPOINTS

Guardian Telecom's Page Talk Outdoor (PTO) Zone 2 Stations provide easy to operate paging with the versatility of five intercommunication talk lines for two or more people. The stations feature continuous real time self-diagnostics and the flexibility of monitoring external devices via four optically isolated inputs when used with In2iT In-Plant Communication platform. Designed for use for indoor and outdoor harsh environments where an IP-66 weather rating is required and features a IECEx Zone2 hazardous environmental certification.

PSA — PAGE/TALK SPEAKER AMPLIFIER

Guardian's Telecom's In2iT Series Page/Talk Speaker Amplifier Station (PSA) gives you the capability of adding extra speakers without the need for a paging station.

Approved for IECEx Zone2 hazardous areas. Weather resistant and dust protected. Corrosion protected & powder coated faceplate. Powder coated 16-gauge aluminum enclosure. External speaker hook-up. Optional water/dust tight thermoplastic resin enclosure, Type 4X & IP66.
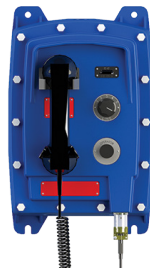

EXP — PAGE/TALK EXPLOSION PROOF ENDPOINT

Guardian Telecom's EXP SERIES Paging Stations provides easy to operate paging with the versatility of one or five intercommunications talk lines for two or more people.

The stations feature continuous real time self diagnostics and offer the flexibility of monitoring external devices via four opto isolated inputs when used with the System Control Frame (SCF).

All stations have been design for use in harsh environments and offer a IECEx Zone 1 Hazardous certification rating.

EXP-A — PAGE/TALK EXPLOSION PROOF SPEAKER AMPLIFIER

Guardian Telecom's EXP-A Explosion Proof Page/Talk Amplifier is designed to deliver safe, reliable, cost effective industrial communications without the need for a paging station and are deemed to be hazardous due to the presence of flammable gasses, vapors or dust.

Designed for IECEx Zone 1 rated areas. Type 4X (IP66) enclosure.

ACOUSTIC BOOTHS

Enhanced communication in areas with high levels of background noise. Each Acoustic Booth can be fitted with a Guardian Telecom telephone suited for specific needs and depending on the model can be equipped with a variety of accessories including interior lights, strobe lights, ringers and speakers.

AB-1000 — Glass reinforced plastic. Noise Attenuation of up to 25 dB with the new high performance polyurethane acoustic liner

AB-100 — Sheet aluminum. Noise Attenuation of up to 24 dB

LOUDSPEAKERS AND RINGERS

Guardian Telecom manufactures, supplies and distributes a wide selection of Explosion Proof, Hazardous Area, ATEX and General Area Loudspeakers & Ringers from leading manufacturers around the world.
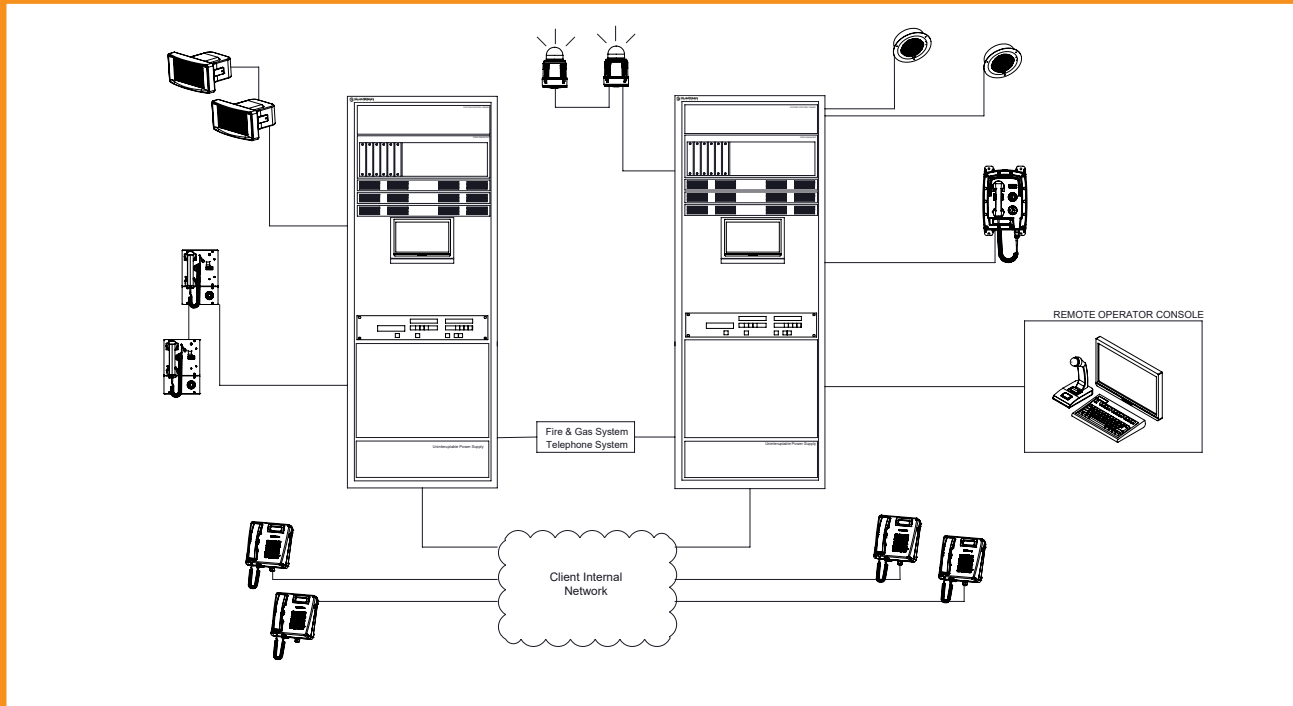

CE20 Line Powered Explosion Proof Ringer

CE20 with projection horn

SR40/SR60 Explosion Proof Speaker, Ringer & Speaker/Ringer

In2iT SYSTEM SPECIFICATIONS

In2iT RANGE IN-PLANT COMMUNICATIONS PLATFORM

ENGINEERING SPECIFICATIONS

SYSTEM CONTROL FRAME

ELECTRICAL REQUIREMENTS
Input Supply Voltage	110VAC to 250VAC
Power Cycle	50/60 Hz

MECHANICAL SPECIFICATIONS
System Cabinet	(2000mm x 800mm x 800mm) Integrated Fans
Color	RAL-7035, Light Gray

ENVIRONMENTAL
Enclosure	Type Nema 12 Enclosure (Indoor Use Only)
Temperature	-40C to +70C
Humidity	0 - 95% RH

INDOOR ENDPOINTS

ELECTRICAL REQUIREMENTS
IInput Voltage:	90VAC – 250VAC; 50/60 Hz
Current (Nominal):	<500 mA
Current (In-Rush):	0.5A @ 120VAC
	0.25A @ 220VAC
Optical Input	1 -4: 1mA nom
Dry Contact Relays (Non-Fused):	3A @ 120VAC
Fuse:	4 A

SPEAKER AMPLIFIER
Amplifier Maximum Output Power	30 Watts RMS
Amplifier Gain	50 dB
Frequency Response	250-4000 Hz
Distortion	1.0% Maximum THD @ 1000 Hz
Input Impedance	200 K Ohms Nominal

MECHANICAL SPECIFICATIONS
Body Construction	Powder Coated 16 Ga Steel
Faceplate	Corrosion Protected & Powder Coated
Hand Set Construction	High Impact Polycarbonyte
Standard Mounting	Vertical Wall
Connection to System	Conduit or Cable Gland

ENVIRONMENTAL
Weather Proof Enclosure	Type 3R
Temperature	-40˚ to +140˚F (-40˚ to +60˚C)
Humidity	0 - 95% RH Non-Condensing

OUTDOOR END POINTS

ELECTRICAL REQUIREMENTS
Input Voltage:	90VAC – 250VAC; 50/60 Hz
Current (Nominal):	<500 mA
Current (In-Rush):	0.5A @ 120VAC
	0.25A @ 220VAC
Optical Input	1 -4: 1mA nom
Dry Contact Relays (Non-Fused):	3A @ 120 VAC
Fuse:	4 A

SPEAKER AMPLIFIER
Amplifier Maximum Output Power	30 Watts RMS
Amplifier Gain	50 dB
Frequency Response	250 - 4000 Hz
Distortion	1.0% Maximum THD @ 1000 Hz
Input Impedance	200 K Ohms Nominal

MECHANICAL SPECIFICATIONS
Body Construction	Thermoplastic Resin
Faceplate	Corrosion Protected & Powder Coated
Standard Mounting	Vertical Wall
Hand Set Construction	High Impact Polycarbonyte
Connection to System	Conduit or Cable Gland

ENVIRONMENTAL
Water/Dust Tight Enclosure	Type 4X & IP66
Temperature	-40˚ to +140˚F (-40˚ to +60˚C)
Humidity	0 - 95% RH Non-Condensing

Guardian pursues a policy of continuous improvement, therefore specifications are subject to change without notice.

HOW TO GET STARTED - OUR SERVICES

For optimal results we find it is important to work closely with our clients to analyze their needs, identify the parameters of the project and discuss the options that are available to meet them. The best time to start the discussion for your project needs is early in the planning process. It's as easy as 1-2-3-4.

ASSESSMENT SERVICE

We ask the important questions that need to be considered when developing a successful communication system. It all begins with a conversation. What is the proposed schedule? Is there an existing system? Is there a need for a sound study or other on-site inspections? Are there plans for expansion?

PLANNING & ENGINEERING

With your goals ever in mind and with our collaborative approach, our professional designers use state-of-the-art tools to suggest, develop and plan a winning communication system design. Our recommendation helps ensure the finished result meets all your needs and your budget.

SITE SERVICES

Because Time is Money... Guardian Telecom has created a seamless process designed to ensure a successful implementation. From delivery to commissioning to training, Guardian Telecom is with you every step of the way. Our best-in-class site services help protect and support your investment by optimizing product performance, and reducing unplanned downtime.

CUSTOMER SERVICE

Service after the sale and installation is a significant part of the solution. Partnering with someone you can trust is critical to effectively maintaining and servicing today's communication systems. Should any issues arise or you have any questions on expanding / downsizing, our pros are just a phone call away.

THE GUARDIAN TELECOM ADVANTAGE

INDUSTRY LEADING 5-YEAR WARRANTY

As a reflection of our unwavering commitment to quality, Guardian Telecom offers our industry leading 5 year warranty, so you have complete peace of mind. Guardian Telecom products are engineered from the ground up to work reliably and last, especially in the roughest weather, toughest applications and most extreme environments. Our products are built to last.

VALUE

Guardian Telecom competitively priced products have added value for you. Because our products are built to last, require less repairs and will keep working in the most difficult conditions, you save money in the long term. No costly repairs, no expensive downtime, no replacing broken telecom equipment; the result, your net operating costs will go down. Guardian Telecom is cost effective.

EXPERIENCE COUNTS

Guardian Telecom brings you a great deal of industry knowledge and experience because we've worked with all types and sizes of businesses. We understand that different industries have unique needs, and the solution you need is not just another commodity.

CUSTOM SOLUTIONS

The key to Guardian's growth is our commitment to working closely with customers and responding to their needs, instead of trying to shoe-horn products that do not fit. In fact, the customization of products and the development of new products, has been one of the cornerstones of our customer focus which continues to this day.

KNOWLEDGEABLE PEOPLE

We know that to help you succeed, we must keep pace with the changes and challenges you face daily. To do that we believe we have the best, the most experienced and the brightest personnel available in sales, manufacturing, engineering and customer service in this market. We are experts at what we do for you.

MADE IN CANADA

We've been proudly building Guardian Telecom products in Calgary, Alberta, Canada since 1986. Manufactured in our modern, CSA, UL and ATEX approved, state of the art facility, Guardian telephones meet or exceed the approved standards and requirements for the environments they are designed for. Our manufacturing team boasts the ultimate commitment to safety, quality and your satisfaction.

YOUR RESULTS

Our advice is expert. To receive what you need; in fact, what you want, you can trust Guardian Telecom. We know your industry, and we are dedicated to serving our customers unique needs through our standard, customized and valuable solutions. And our proven track record of success means that you will receive the results you are looking for.

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Guardian Telecom is known as a world leader of building rugged, safe, reliable telecommunication devices used in harsh environments, extreme elements, critical infrastructure, and safety-critical and mission-critical applications.

Residing in power plants in the hot desert sun to production platforms battling arctic temperatures, high vibrations within manufacturing plants, or extreme environmental conditions in nuclear facilities, thermal and hydro plants, and into mining excavations. Our equipment and systems are manufactured for transportation facilities, tunnels, highways, rail systems and airports. Our products are placed in pharmaceutical plants, grain, and food processing plants.

Guardian Telecom's safety and rugged equipment is distributed throughout various state and federal institutions including college and university campuses worldwide.

Our products are utilized in the travel and entertainment industry such as hotels, resorts, theme parks, baseball and football stadiums, golf courses, the movie and production industry, entertainment arenas, and on travel cruise liners. Outdoor gateway entrances, border crossings or high-end security gated facilities, and fenced-in areas.

Top military units such as the Marines, Navy, Army, and intelligence agencies acquire our ruggedized equipment to be used in ships, buildings, tankers and war zones. Ranging from NASA to Space X using Guardian Telecom's equipment throughout its testing and launch facilities to corporate and commercial day-to-day work environments.

Experience Counts - You can trust Guardian Telecom

GET THE GUARDIAN TELECOM ADVANTAGE!
Guardian Telecom products come with an industry leading 5 year warranty. Don't accept anything less.

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