



INTRON-D *plus*

Customizable - Reliable - Intelligent

Industrial Communication REDEFINED

Customer Requirements

Today's market for industrial communication and emergency warning systems demands flexible solutions. The system design must allow for ease of integration and adaptability into existing infrastructures and system environments.

In addition, the system must support common interfaces and network technologies whilst meeting the most stringent of regulatory standards.

With the INTRON-D *plus*, INDUSTRONIC has taken the renowned INTRON-D system to the next level by using state-of-the-art technology to meet current and future requirements.

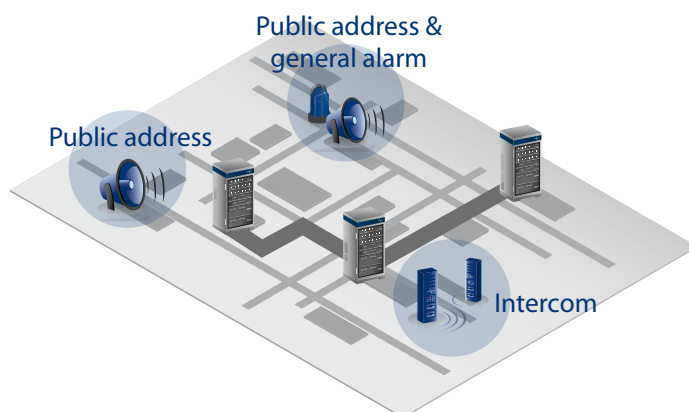
The new high-performance INTRON-D *plus* protects a corporation's most critical assets, its people, machines, and the environment by delivering an effective, prioritized and customized flow of communication. Tried and tested technology together with networking protocols ensure reliable industrial communication, from a small but critical to a large and complex system network.



INDUSTRONIC's communication and emergency warning system is a leader in the industry due to its wide range of functions and flexible fields of application and configuration options. The modular concept of the INTRON-D *plus* allows for a system design meeting or exceeding the current applicable international requirements including but not limited to EN 54-16, EN 60849, SOLAS, and NORSOK. Notified bodies and accredited laboratories have certified the compliance to applicable standards and regulations. Existing INTRON-D systems can be upgraded to the new INTRON-D *plus* platform. INDUSTRONIC systems ensure investment protection through long product life cycles and expandability.

INTRON-D *plus* – Networked

The INTRON-D *plus* can be effectively integrated into many common network environments allowing for data and speech communication to be transmitted via standard Ethernet and IP technology. The system's flexible design and understanding of various network architectures allows for the interconnection of up to 250 distributed INTRON-D *plus* systems.



In other words, whether your organization utilizes fiber, Ethernet or copper connections or any combination thereof, the INTRON-D *plus* system can provide for a robust, reliable and customizable campus-wide communication and emergency warning solution whilst utilizing your existing network backbone.

INTRON-D *plus* – Customizable

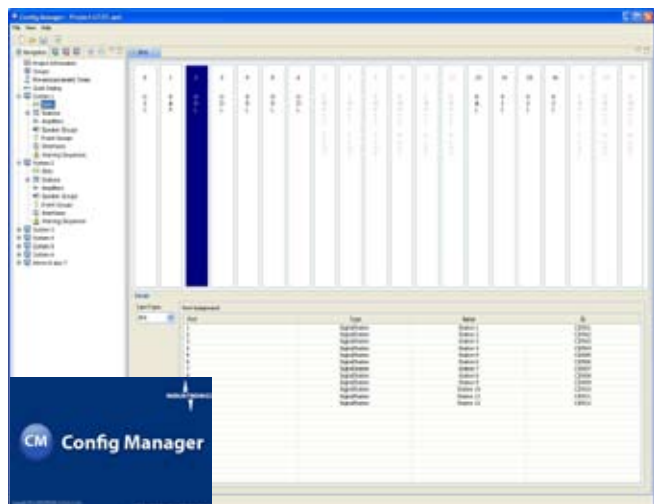
The open and modular design of the INTRON-D *plus* allows for customized solutions meeting all the requirements of a modern industrial communication and emergency warning system.

- Simultaneous non-blocking conversations
- 65,000 programmable addresses
- 1,000 selectable group calls
- 1,000 speaker groups
- 200 priority levels
- Multi zone capable
- Multiple alarm tones
- Pre-recorded messaging
- Visual alarm indications
- Activation of relays (magnetic door locks etc.)
- Alignment with HSE scenarios

This level of customization allows you to implement versatile, complex communication and warning structures in line with your occupational health, safety and environment protocols.

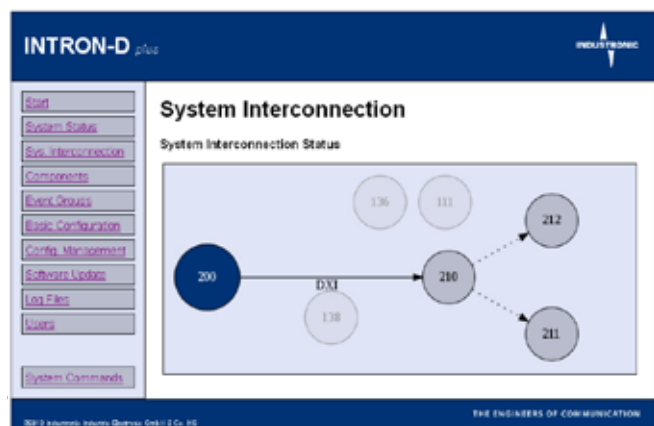
INTRON-D *plus* – Easy-to-use

Config Manager, INDUSTRONIC's cutting-edge configuration software tool, allows you to set up complex communication and network scenarios with ease and accuracy. A full database of INTRON-D *plus* components and functions are available via an intuitive graphical user interface.



With comprehensive “as you type” system checks and integrated configuration checks, the *Config Manager* allows the user to create a verified configuration file. Whether you have one single system or a system network with up to 250 systems, you only need one configuration file.

For oversight and management of your INTRON-D *plus* system or network, INDUSTRONIC has developed a new system integrated web server.



This web based management tool allows you to centrally monitor and configure the overall functionality of the system in a convenient manner:

- Status indicators for CPU, interface cards, call stations, etc.
- Display active events, for example error messages
- Download status and error reports
- Download log files for customers and service personnel
- Download and upload configuration files developed in the *Config Manager*
- Upload software and firmware upgrades

INTRON-D *plus* – Reliable

The industrial sector is especially demanding when it comes to the readiness and reliability of a communication and emergency warning system. The modular design concept of the INTRON-D *plus* system facilitates the implementation of client and industry based redundancy requirements for the following components:

- Power supplies
- Audio processors
- Exchange control boards
- Intercom stations
- Amplifiers
- Speakers
- Network connections

In addition, the INTRON-D *plus* supports full system redundancy (A/B systems) as specified by either customer or regulatory requirements.

As many national and international regulations mandate the monitoring of key components, INDUSTRONIC has made comprehensive monitoring of digital components a standard function of the INTRON-D *plus*. Examples of key digital components are:

- Line cards
- Intercom stations incl. microphones
- Interfaces to external systems
- Power supplies
- Amplifiers
- Speaker circuits

Parameters for monitoring can be configured directly for each INTRON-D *plus* or centrally for a network of systems. Deviations discovered as a result of the monitoring can be delivered in various methods. Most frequently, these deviations are emailed to service and operating personnel and an instantaneous alert is triggered if programmed on a call station.

For the integration into existing network management systems (NMS), a SNMP interface can be provided. For INTRON-D *plus* data transmission on an IP network, existing network redundancy infrastructure can be utilized. The INTRON-D *plus* also offers direct connection capability via optical fiber or copper for back-up or stand-alone connectivity. Whether you use your existing network architecture or a system-to-system direct connection, should any of these connections fail, all local INTRON-D *plus* functions are still available.

INTRON-D *plus* – Integrated

State-of-the-art communication and emergency warning systems must be capable of being integrated into existing and parallel industrial system environments.

The INTRON-D *plus* has available interfaces for:

- Fire alarm systems
- Emergency shutdown systems (ESD)
- Fire & gas alarm systems
- Manual call points
- Universal analog / digital inputs and outputs

Integrated software interfaces, configured using the [Config Manager](#), are available for:

- Modbus TCP, enabling the transfer of status information to external Modbus based systems
- VoIP (SIP interface), allowing for the interconnection of IP telephone systems for direct voice communication and function activation between a PABX and the INTRON-D *plus*

The INTRON-D *plus* system monitoring can be programmed to include all interfaces. The information transmitted by these interfaces can be utilized to drive customized warning and alarm scenarios within the INTRON-D *plus* framework.

INTRON-D *plus* – Centralized Intelligence

A series of networked INTRON-D *plus* systems operates on a centralized architecture providing real-time alarm & warning control and activation throughout the network. System wide status information is locally processed and centrally available for analysis and reaction. The constant monitoring and evaluation of connected components and interfaces combined with the centralized intelligence gives an organization the utmost in fast and reliable warning and alarm control, whether utilizing pre-programmed automated scenarios or relying on manual activation or overrides.

INTRON-D *plus* – Versatile

The INTRON-D *plus* allows you to have the functions and capabilities of three separate systems - intercom, public address and general alarm - in one:

- Intercom system for fast and secure process communication
- Public address (PA) system for the announcement of information across the industrial plant
- Public address and general alarm system (PA/GA) to announce alarms and warnings for the protection of people, machines, and the environment

The modular design of hardware and the wide range of functions joined with the integration of all system features result in a versatile communication system that can be tailored to your individual requirements.

Intercom



- Half- and full-duplex capable
- Point-to-point connections
- Multi party and page party
- Emergency priority call override
- Call request and selective call control
- Conferencing

Public Address (PA)



- Group calls
- All calls / system wide page
- Selectable group calls
- Automatically activated group calls and all calls based on preprogrammed scenarios
- Direct group and all calls from existing PABX via telephone interface

Public Address & General Alarm (PA/GA)



- Emergency warning
- Individual and complex scenarios (e.g. alarm triggering resulting from SIP and MODBUS interface inputs)
- Manual and automatically activated warning scenarios
- Integration of external systems (e.g. fire & gas, emergency shutdown)



INTRON-D *plus* – Benefits

Centralized

Whether you have a stand-alone system or a multitude of networked systems, the centrally available data and system control provides for all your needs from one access point. From here you can employ up to 200 priority levels, 1,000 individually selectable and configurable call groups and 65,000 programmable addresses. All communication and control functions can be linked to each other.

You already have a predictable communication and control behavior when configuring your INTRON-D *plus*.

Modular

The modular design concept allows the system to use off-the-shelf principles to customize both hardware and software suiting the needs of operations as well as the requirements of regulatory agencies.

This also facilitates various redundancy principles and provides for future expansion needs thus protecting an organization's capital investment without having to replace already vested components.

Standard

Utilizing standard interfaces and protocols allows for easy and efficient integration of external systems. Ancillary systems can be replaced or upgraded without costly impact on the INTRON-D *plus*. The reverse is also true, the INTRON-D *plus* can be integrated into an existing advanced Ethernet / IP data network without proprietary hardware or software.

Flexible

As different as the requirements may be for a network, as flexible are the solutions with the INTRON-D *plus*. Whether you are dealing with an existing data network or direct interconnection via fiber / copper, or the use of a star, ring, or hybrid network topology, the flexibility of the INTRON-D *plus* delivers a true and tested solution.

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A large, abstract graphic consisting of multiple overlapping, wavy lines in shades of blue and white, creating a sense of depth and movement. The lines flow from the bottom left towards the top right, with some lines appearing as solid bands and others as thin, parallel lines.

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