



INTRON-D *plus*

Modular, Flexible & Innovative Industrial Communication

Oil & Gas
Chemicals & Pharmaceuticals
Metals, Minerals & Mining
Energy & Utilities
Transportation & Others

INDUSTRONIC manufactures SAFETY Focused Industrial Communication Systems with standard features that allow for day to day in-plant communication to help drive work flow efficiencies and overall plant productivity.



95 Countries



3,200 Customers



6,100 Systems



103,000 Call stations



3,900,000 Watts of Amplification

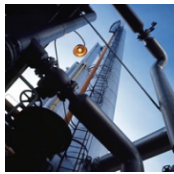
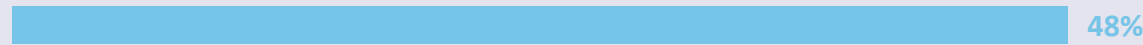


Established in 1964 – Family Owned Enterprise

Project Share per Industry



Oil & Gas



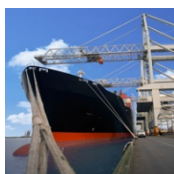
Chemicals & Pharmaceuticals



Metals, Minerals & Mining



Energy & Utilities



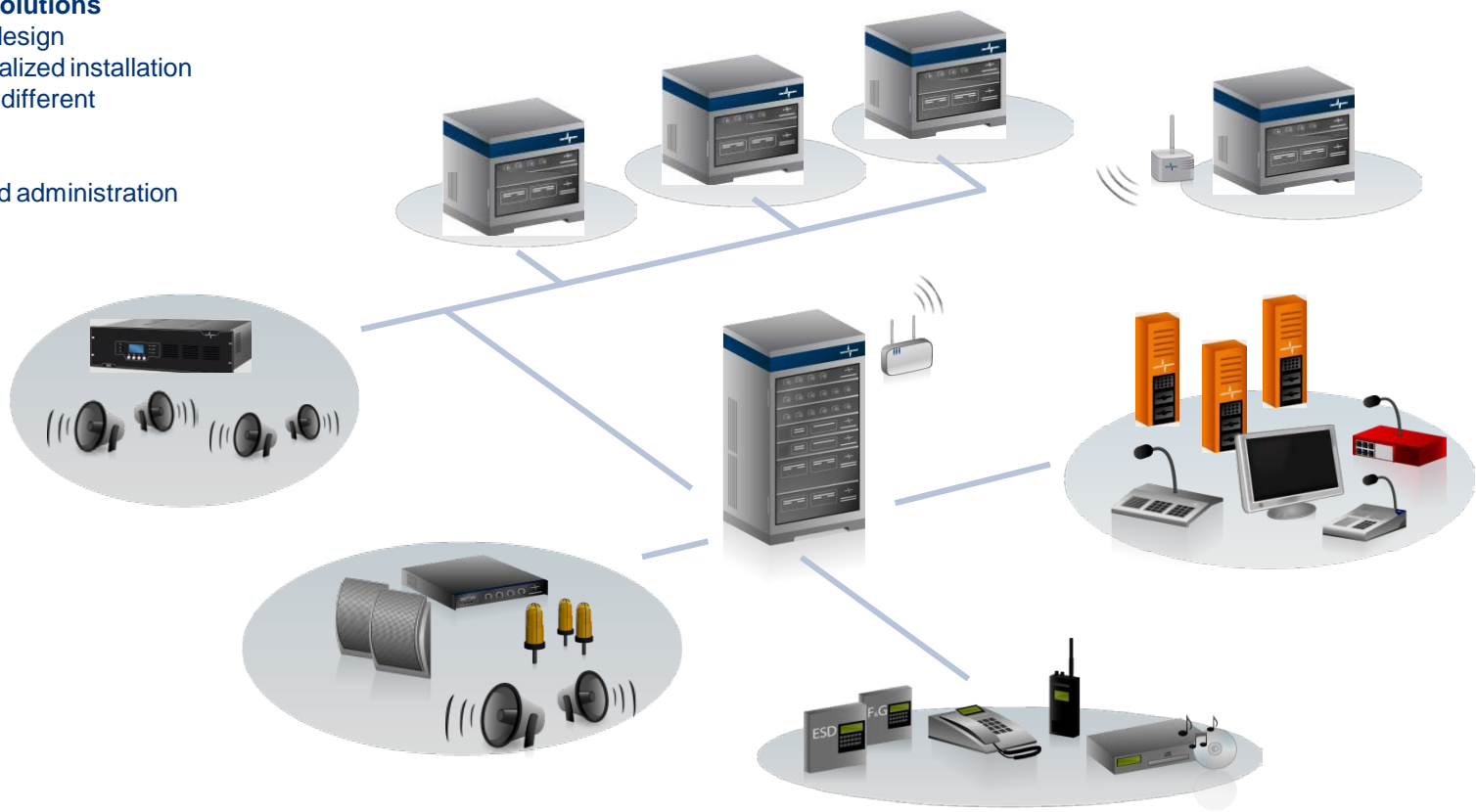
Transportation & Others



INTRON-D *plus*

Industrial communication you need for SAFETY, plus additional features that increase plant efficiencies, productivity, and supply detailed analytics about system functionality

- **One System – four solutions**
- flexible and modular design
- centralized or decentralized installation
- manifold functions for different applications
- hybrid technology
- easy configuration and administration



INTRON-D *plus* – Four Solutions



MASS NOTIFICATION



GENERAL ALARM



PAGING



INTERCOM



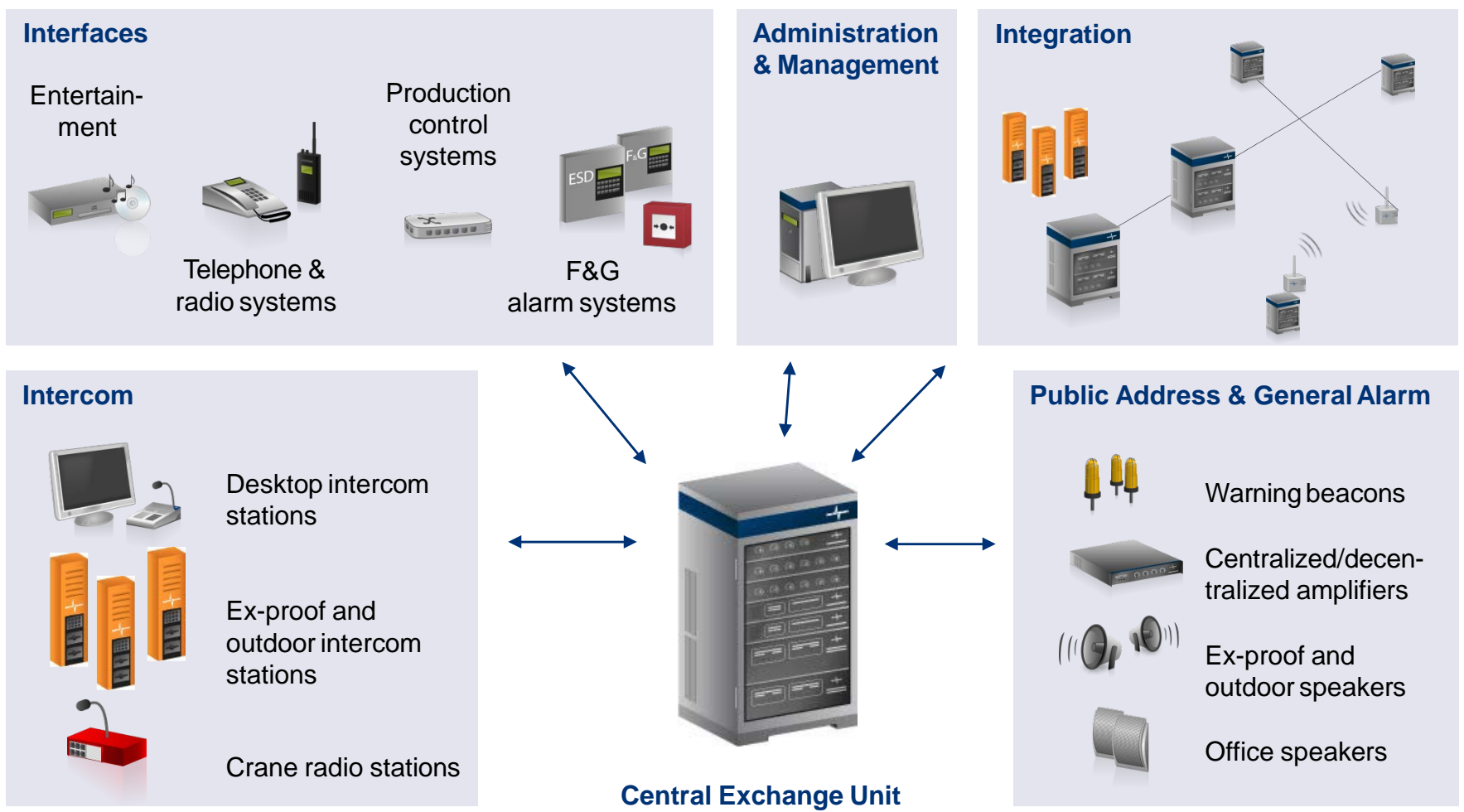
SAFETY

EFFICIENCIES



INTERFACING

INTRON-D *plus* - Modular Design



Intercom



Intercom Functions

- Two-way communication (pre-defined)
- Duplex communication
- Multi Control Station function
- Conference function
- Page and Party function
- Visual and acoustic call and busy signaling
- Visual and acoustic call storage
- Keypad dialing

Public Address (PA)



Public Address Functions

- Group calls and all calls
- Selectable group calls
- Automatically controlled calls
- Public address function
- Call groups and parallel stations

Public Address & General Alarm (PA/GA)




Warning and Alarm Functions

- Individually activated warning scenarios
- Manually activated warning scenarios
- Automatically activated warning scenarios
- Semi-automatically activated warning scenarios
- Time-controlled scenarios
- 200 priority levels
- Systems certified according to EN 54-16 and EN 60849

Indoor Intercom Stations & PA Access Panels

PC Intercom Station

- Up to 2000 keys programmable
- Free creatable screen layout
- Intuitive user interface and clear indication of current events



* Parameters of EX-Panel are different

AP... Access Panel

- 7" color touch display with easy-to-use menu
- Mechanical keys with multi-colour status indication
- Modular design, up to 200 display keys and 2 x 24 additional keypads



12 NIB 001

- 12 direct dialling keys
- Number dial pad
- LCD display
- Option: wall mounting



.. NRC 001

- Robust IP Compact Station
- Keypads with 10 or 16 keys (max. 32 keys)
- Dynamic mic. & speaker



Desktop Station (DT series)

- Up to 7 plug-in keypads
- Foil keypads (16 keys)
- Keypads with toggle switches (10 keys)
- Types: 10/20/30DT or 16/32/48 DT



Desktop Station (DTM series)

- Up to 4 keypads with 15 keys each
- Display with 4 x 20 characters
- Types: 15 / 30 / 45 / 60DTM



Flush mounting

- Up to 9 keypads with 10 / 16 keys
Types: 10 / 20 ... 90 DE or 16 / 32 ... 144 DE



19"-Version



IP Desktop Intercom Station (Access Panel) for connection with INTRON-D *plus*



Main features

- 7" color touch display with easy-to-use menu
- Mechanical keys with multi-colour status indication
- Audio bandwidth of up to 16 kHz
- Network connection via Ethernet
- PoE or external power supply
- Modular design, you can connect:
 - 1 handset
 - Up to 4 additional keypads with 24 mechanical keys each



Configuration of touch display

- Basic: 1 display layer with up to 20 display keys
- Functional extensions possible:
 - 120 display keys (6 display layers with 20 keys each)
 - 200 display keys (10 display layers with 20 keys each)
 - Customization of display keys (color, size, shape)



Example Display Template

Types



12 AP 701



12 AP 701H



36 AP 701



108 AP 701H



IP PC Intercom Station NCP 001



- ## Features and Functions
- Management of up to 2,000 buttons
 - Various screen sizes and resolutions (up to 4K)
 - Audio bandwidth of up to 16 kHz
 - Network connection via Ethernet
 - Highly customizable user interface
 - Support of two monitors when applications runs in window mode
 - On-screen dial keypad
 - Changes in configuration can also be performed on site

Components and Accessories



Monitor



PC



Microphone





Speakers



Handset

Digital Outdoor & Explosion-proof Intercom Stations



Modular design



*Accessoires depending on station type

To power an external speaker



Booster Amplifier

For flexible expansion solutions

Expansion Housing*



To visually signal an alarm or an incoming calls

Warning Beacons



For hands-free communication

Foot Switch



For private conversations

Handset



For greater flexibility

Hand-held Microphone



For safe communication in high ambient noise areas

Headset





Digital Weatherproof & Explosionproof Intercom Stations



Types

2, 4 or 6 direct keys

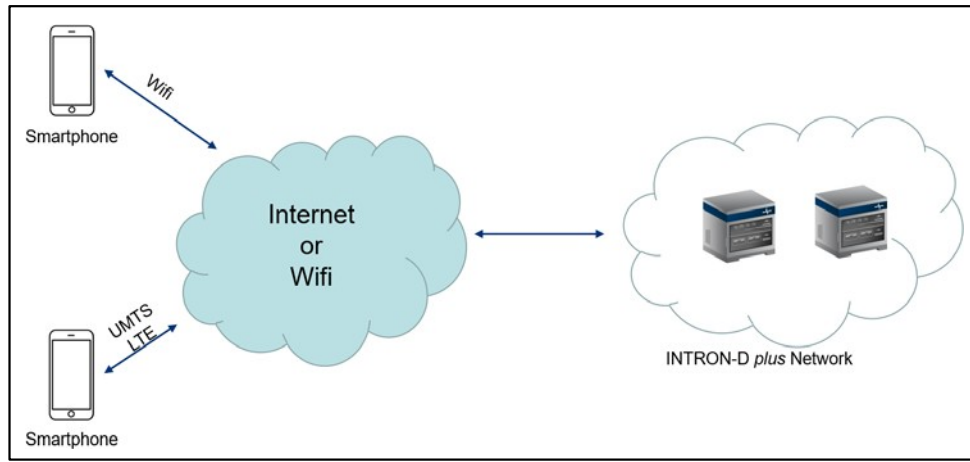
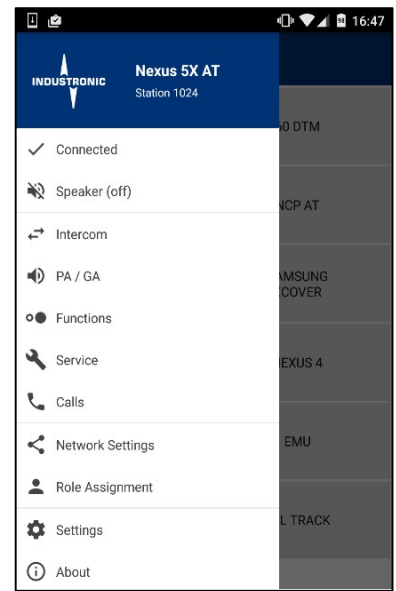
For special Applications:
-Handset

Dial keypad

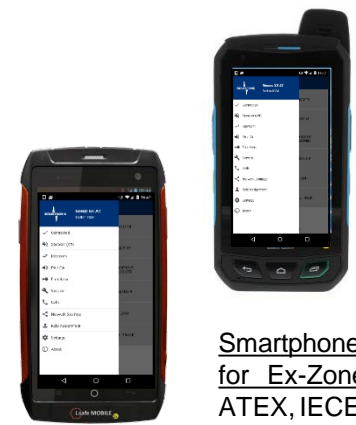
Several editions:
- with certifications for different countries (USA, Russia, China...)
- special colors

INDUSTRONIC Smartphone-App

- Mobile Intercom station (Wireless and Cellular)
 - Activation of Alarms
 - Point to Point Communication
 - Group Calls, Paging, All calls
 - Voice over alarms
- Remote Maintenance and Monitoring



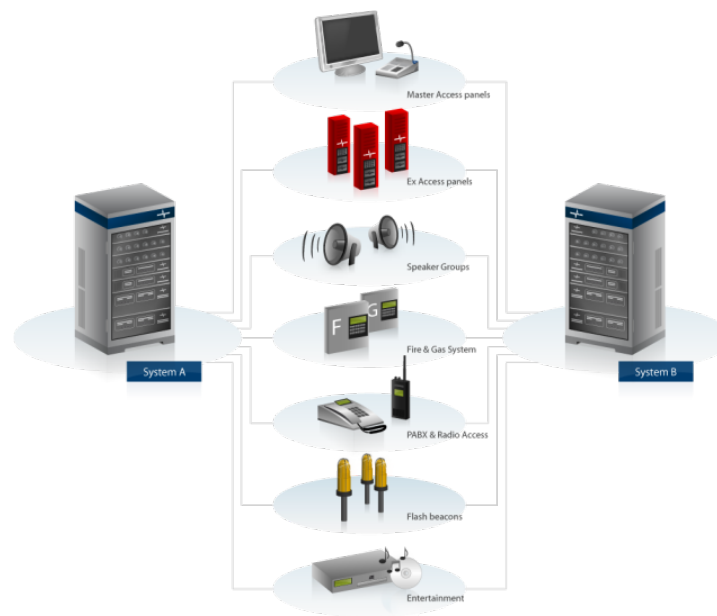
Use of existing infrastructure



Smartphones for Ex-Zones ATEX, IECEx (Zone 1/21 (Div. 1), Zone 2/22 (Div. 2))

System Reliability and System Self-monitoring

- Component monitoring
- Redundancy concepts



System Monitoring

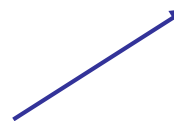
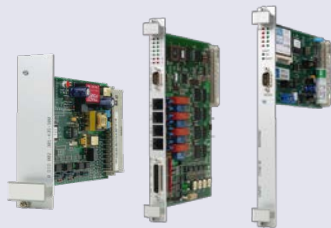
Real-time alert in case of component failure

Exchange Control Board

Permanent Real-time Monitoring

- All digital components, like:
 - Digital exchange control board
 - Line cards (BUS components)
 - Digital intercom stations
 - Digital amplifiers
 - etc.
- All cabling for:
 - Short circuit
 - Cable break
 - Incomplete data transmission
 - Connectivity problems
 - etc.
- All integrated interfaces:
 - SIP
 - Modbus
 - CANopen
 - SNMP

Central Exchange Components



Cabling & Terminal Devices

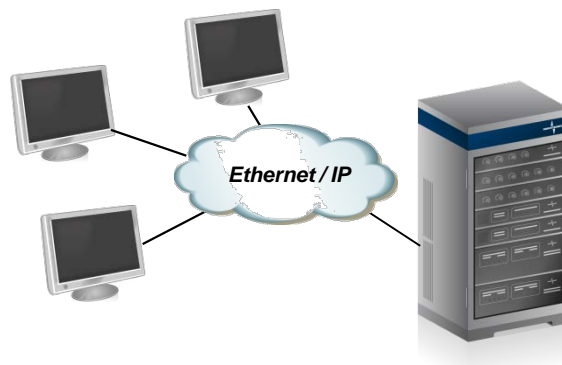


Integrated Interfaces

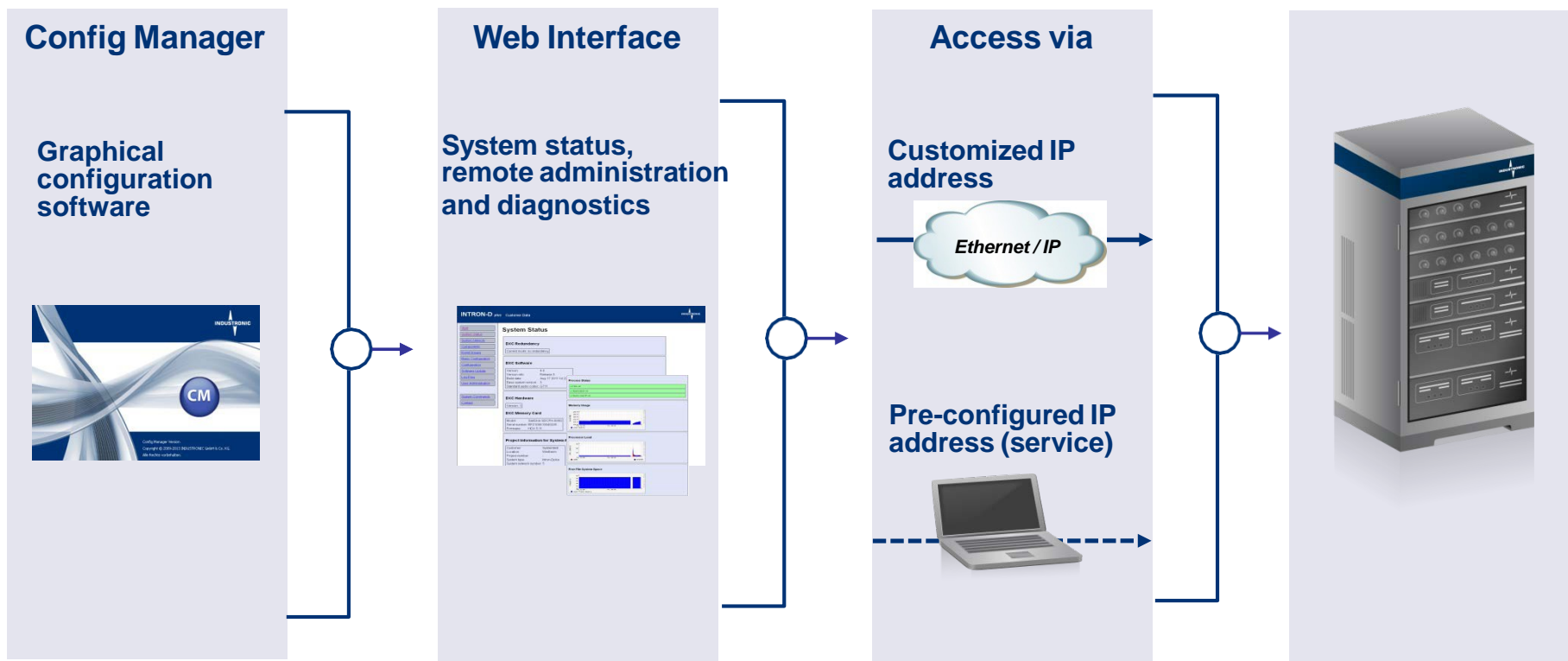


Administration & Management

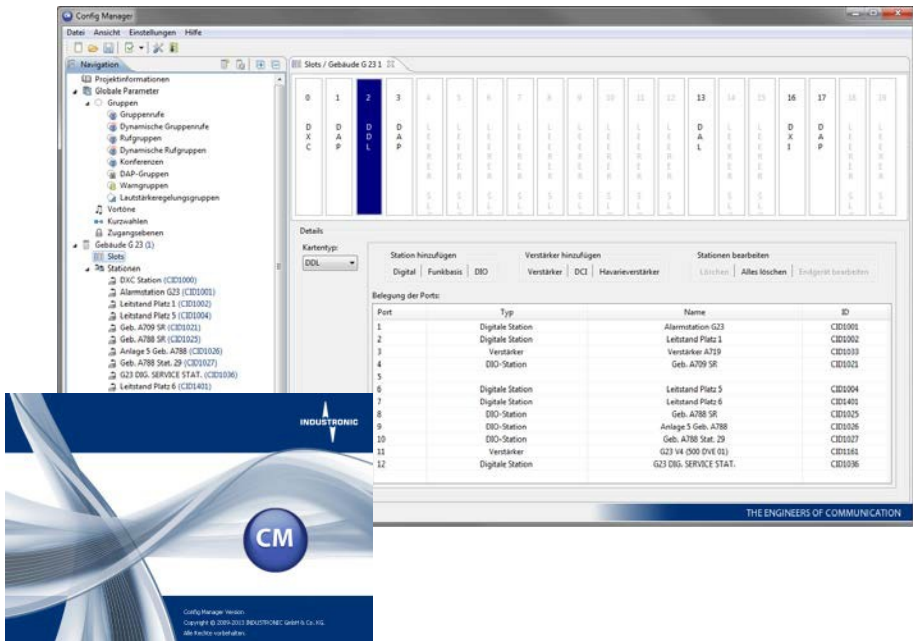
- Diagnostics
- Configuration
- Remote administration
- Network management



Administration & Management



Configuration Software Config Manager



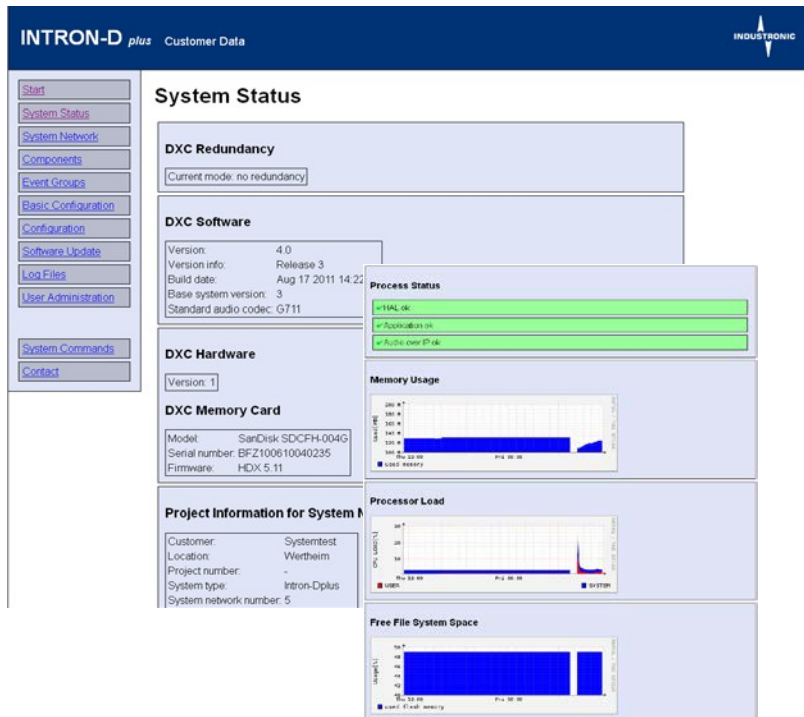
Management of System Data

- Graphical user interface with intuitive menu in English or German language
- Clearly structured system components
- History of configuration data
- Release Management
- Integrated report functionality
- Integrated help function [F1]
- Syntax and semantic check of all data entered
- Single user license with USB dongle

Configuration

- Configuration of single systems or complex system networks
- Configuration of interfaces, stations, functions, etc.
- Configuration of complex control or warning functions

Diagnostics via Web Interface



Web Interface

- Graphical user interface in English or German
- Information on
 - Software
 - Hardware
 - System network
 - Project
 - Process status

Remote Administration

- Easy upload and download of system configuration
- System commands
- Network configuration

Diagnostic Function

- Hardware information (e.g. stations, components,...)
- System voltage, temperature, memory status
- Diagnostic reports
- Error management via e-mail

System Integration

- Various interfaces available
- Easy integration





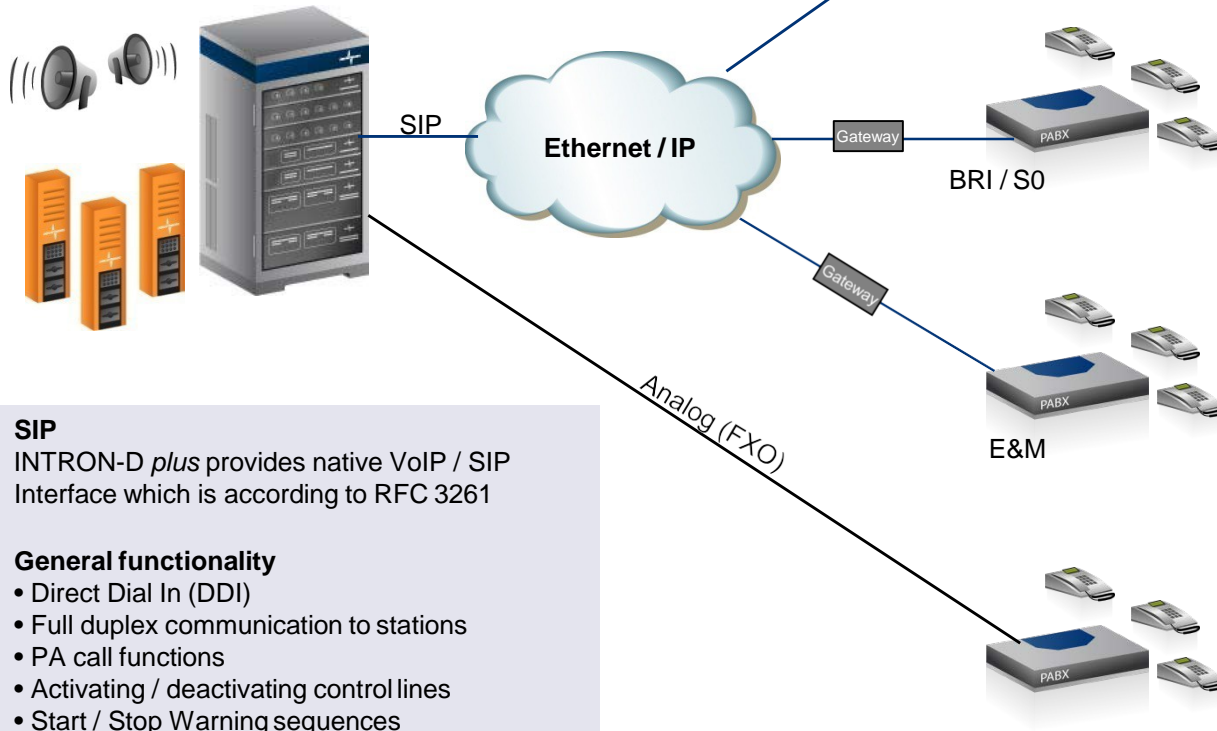
System Interfaces

- Telephone
- Fire & Gas alarm systems
- Management systems
- Entertainment
- Radio systems





Telephone Interface



Direct SIP connection

- Up to 24 simultaneous voice channels

Telephone Gateway

- 4 x BRI / S0 interfaces
- Up to 8 simultaneous voice channels

E&M Gateway

- 2 E&M 2-or 4-wire Type I to V
- Up to 2 simultaneous voice channels

Analogue Telephone Interface

- 1 FXO Port
- 1 Voice channel
- Up to 6 different functions via DTMF
- (only incoming calls possible)

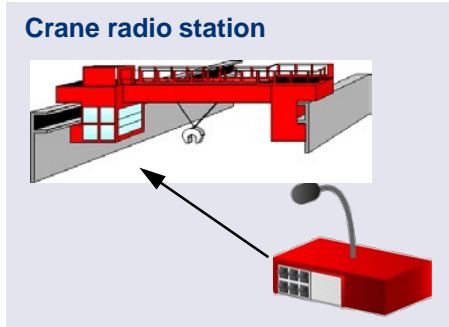
SIP
INTRON-D *plus* provides native VoIP / SIP Interface which is according to RFC 3261

General functionality

- Direct Dial In (DDI)
- Full duplex communication to stations
- PA call functions
- Activating / deactivating control lines
- Start / Stop Warning sequences



Radio Solutions



**Radio base station
WLAN Access Point**



INTRON-D plus

- Radio Interface of:**
- Analog UHF or VHF
 - Digital radio systems
 - IP intercom stations via WLAN (IP crane station under development)
 - IP based WLAN handsets (via SIP)

Thank you for your attention!

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