ØN3 safety&controls

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H4 WIRELESS HANDHELD | WITH INTEGRATED JMOBILE HMI SOFTWARE

TABLE OF CONTENTS

ONE H4 HANDHELD + INTEGRATED JMOBILE SOFTWARE

- ✓ CERTIFIED WIRELESS FUNCTIONAL SAFETY (SIL 2)
- ✓ STUNNING DESIGN/ERGONOMICS
- ✓ MULTIPLE INTEGRATED DEVICES (KEYS/POTENTIOMETERS/HANDWHEEL/STATE SELECTOR)
- ✓ EASY TO PROGRAM
- ✓ EASY TO CONNECT
- ✓ 30 YEARS MANUFACTURING EXPERIENCE
- ✓ A-LEVEL SERVICE

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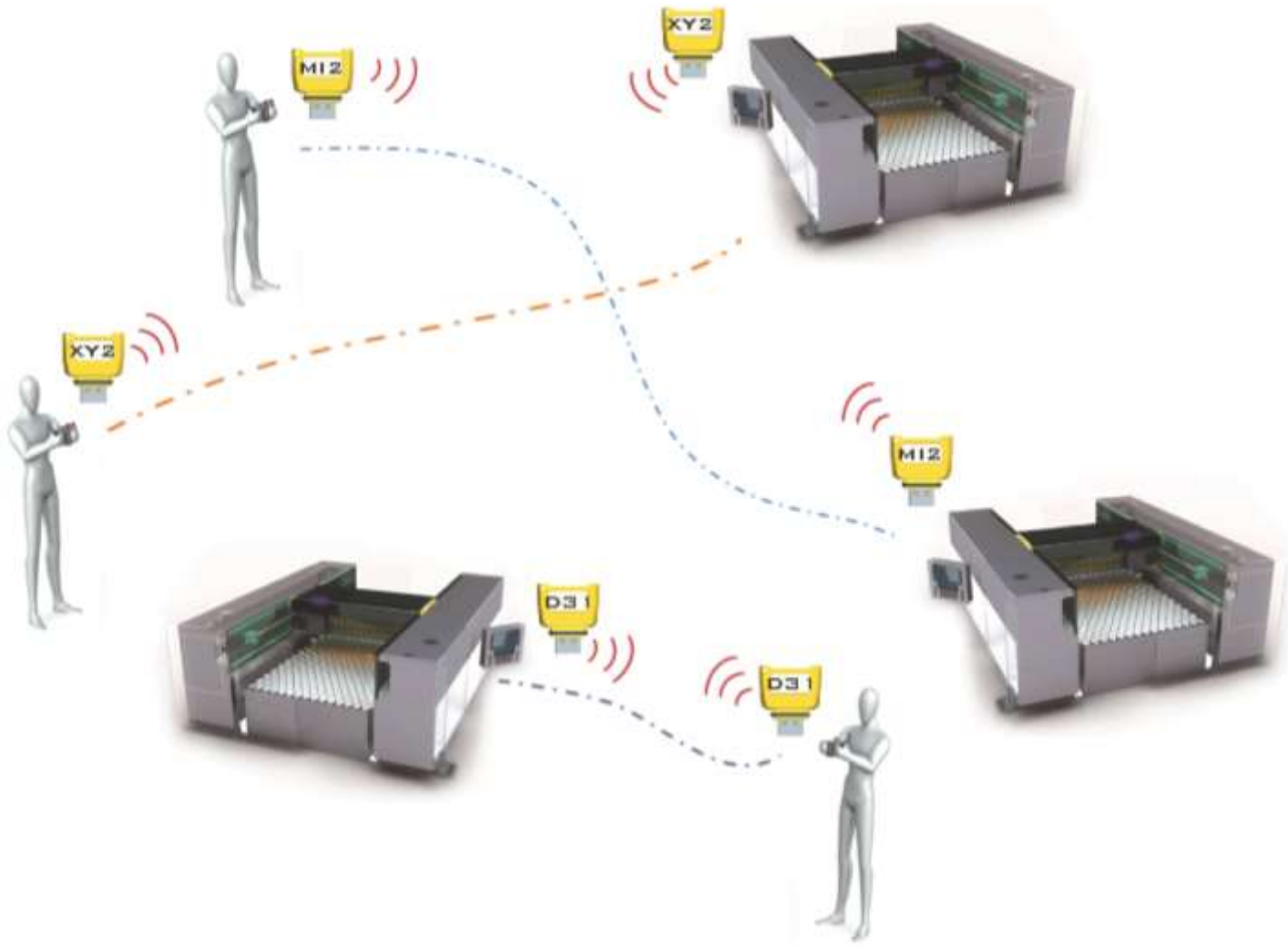
THE PERFECT HMI CHOICE FOR YOUR MACHINE | INTEGRATED HW/SW FOR LOW DEVELOPMENT COSTS

THE WIRELESS HMI FOR AUTOMATION & MACHINERY

UP TO 50 METERS WIRELESS CONNECTION

WIRELESS HANDHELD CONNECTION

DYNAMIC HANDHELD TO MACHINE CONNECTION | BY MEAN OF AN UNIQUE ELECTRONIC KEY



SAFE MULTIPLE HANDHELD-MACHINE CONNECTIONS | IN THE SAME ENVIRONMENT

WIRELESS COMMUNICATION: GREAT FLEXIBILITY OF TRANSMISSION MEANS TO FULFILL ALL COMMUNICATION NEEDS

BLUETOOTH

- ✓ IT'S ALWAYS «ON» TO TRANSMIT SAFETY TELEGRAMS (SAFETY PACKETS ARE NOT ACCESSIBLE TO THE USER)
- ✓ CAN TRANSMIT HMI INFO WITH LOW LATENCY

WIFI

- ✓ CAN TRANSMIT HMI INFO WITH HIGH BANDWITH

WIRELESS COMMUNICATION: TECNICAL CONFIGURATION

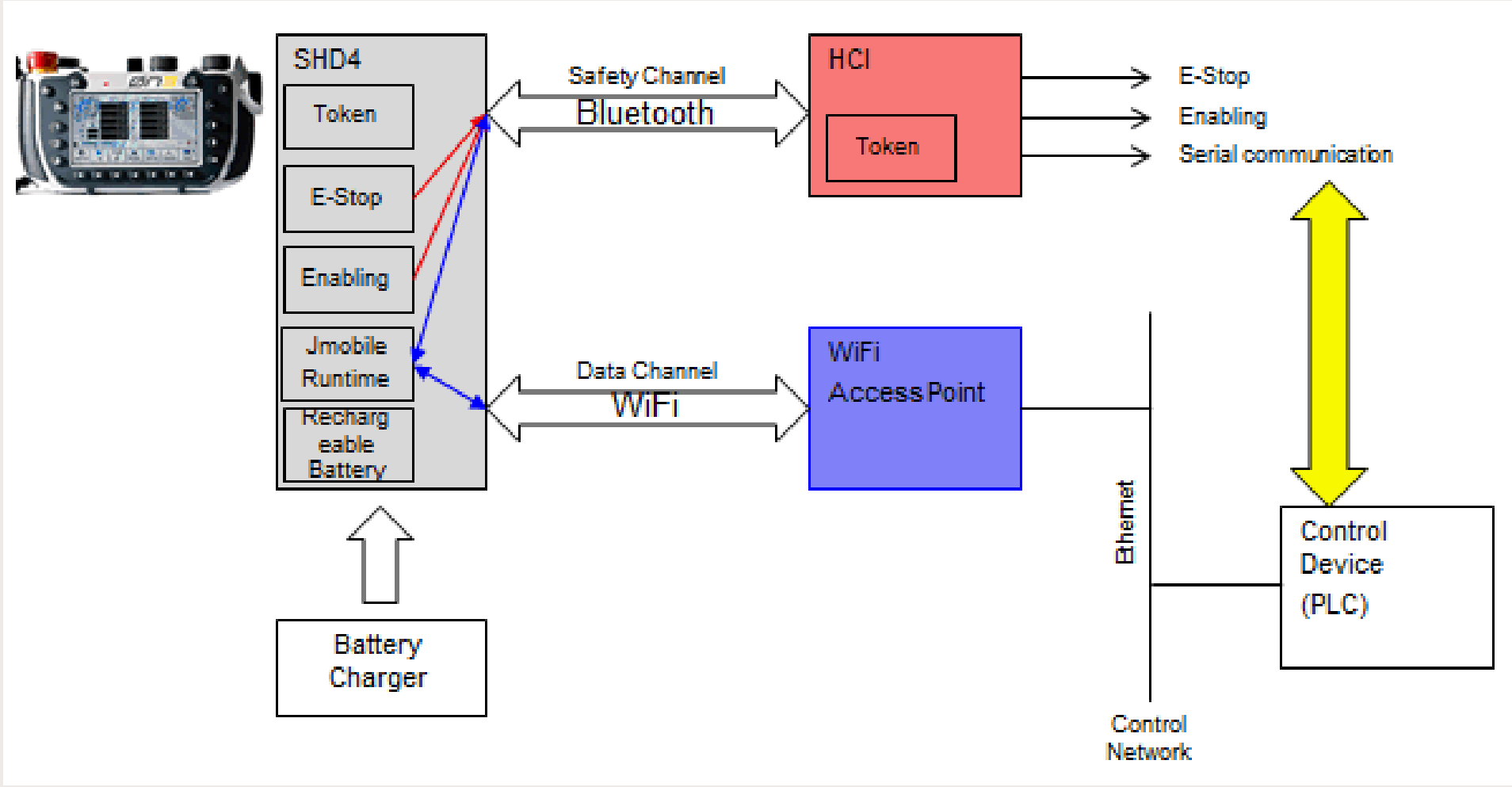
BLUETOOTH

- ✓ BT DATA ARE AVAILABLE BY MEAN OF A SERIAL CONNECTION TO PLC. COMMUNICATION BY MEAN OF MODBUS PROTOCOL.

WIFI

- ✓ WIFI DATA ARE AVAILABLE BY MEAN OF A STANDARD WLAN* TO PLC. COMMUNICATION BY MEAN OF JMOBILE PROTOCOLS.

* wlan already available or to be settled up by user



SYSTEM DIAGRAM | SAFETY AND HMI CONNECTION

3 POSSIBLE WIRELESS COMMUNICATION SCENARIO (USER CONFIGURABLE)

#1 **BT ONLY**. MACHINE PLC RECEIVES HMI INFO ON BT CHANNEL BY MEAN OF MODBUS PROTOCOL*

#2 **BT + WIFI**. MACHINE CAN RECEIVE LOW LATENCY (SMALL DIMENSIONS) HMI INFO ON BT CHANNEL (MODBUS) AND OTHER HMI INFO ON WLAN (JMOBILE PROTOCOLS*)

#3 BT + WIFI. MACHINE RECEIVES ALL OF HMI INFO ON WIFI ONLY (JMOBILE PROTOCOLS*)

*** See user manual for technical info**

SCENARIO#1*: USE OF BLUETOOTH ONLY (NEED FOR REACTIVE COMMANDS, LOW BANDWIDTH REQUIREMENTS)

BLUETOOTH TRANSMITS ALL OF HMI INFO

SUGGESTED FOR

REACTIVE AND INTERFERENCE-PROOF CONNECTION. LOW LATENCY OF NEAR-REAL TIME COMMANDS (E.G. AXES JOG, HANDWHEEL)

NOT SUGGESTED IF HIGH BANDWIDTH HMI INFO MUST BE TRANSMITTED

*** Safety telegrams are always on and not accessible to user**

SCENARIO#2*: USE OF BLUETOOTH (REACTIVE COMMANDS) + WIFI (LESS REACTIVE COMMANDS AND INFO)

BLUETOOTH TRANSMITS: HMI INFO THAT NEEDS TO BE REACTIVE (LOW LATENCY) LIKE JOG BUTTONS, CYCLE START-STOP, HANDWHEEL, ECC.

WIFI TRANSMITS: HMI INFO THAT NEEDS TO BE LESS REACTIVE LIKE LOW UPDATING FREQUENCY STATE/LEVEL INFO AND TRENDS.
HMI INFO WITH HIGH BANDWIDTH CONSUMPTION (E.G. CAMERA STREAMING)

SUGGESTED FOR

APPLICATIONS WHERE BOTH LOW LATENCY AND HIGH BANDWIDTH HMI INFO MUST BE TRANSMITTED

*** Safety telegrams are always on and not accessible to user**

SCENARIO#3: USE OF WIFI ONLY

WIFI TRANSMITS: ALL KIND OF HMI INFO THAT NEEDS TO BE LESS REACTIVE LIKE LOW UPDATING FREQUENCY STATE/LEVEL INFO AND TRENDS.

HMI INFO THAT HAVE HIGH BANDWIDTH CONSUMPTION (E.G. CAMERA STREAMING)

SUGGESTED FOR

APPLICATIONS WITH NO NEED FOR REACTIVE COMMANDS

*** Safety telegrams are always on and not accessible to user**

HANDHELD DEVICES AND ERGONOMICS

16 positions state selector (SIL 1)

2 programmable potentiometers

Emergency stop button (SIL 2)

Optional integrated handwheel

19 programmable physical keys

Touchscreen

IF Design Award for design and ergonomics

product design award

EVERYTHING YOU NEED AT YOUR FINGER TIPS | FULL CONTROL IN 900 GRAMS

Hanging magnets

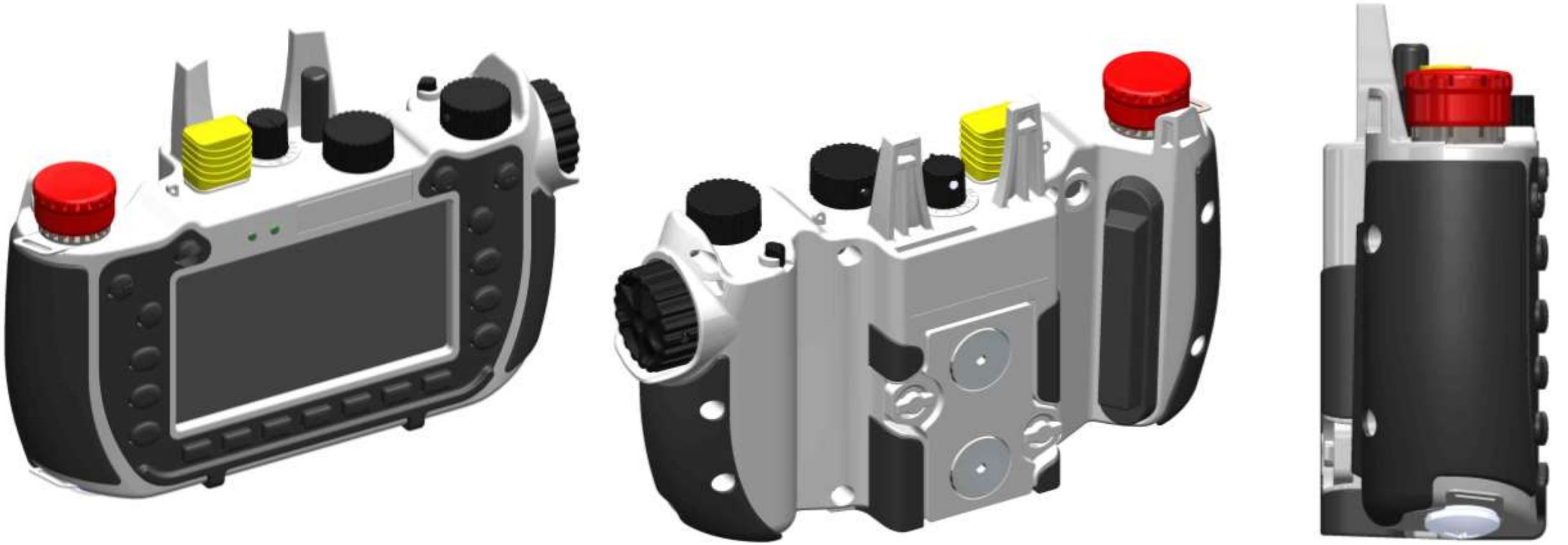
Safety enabling device

(SIL 2)

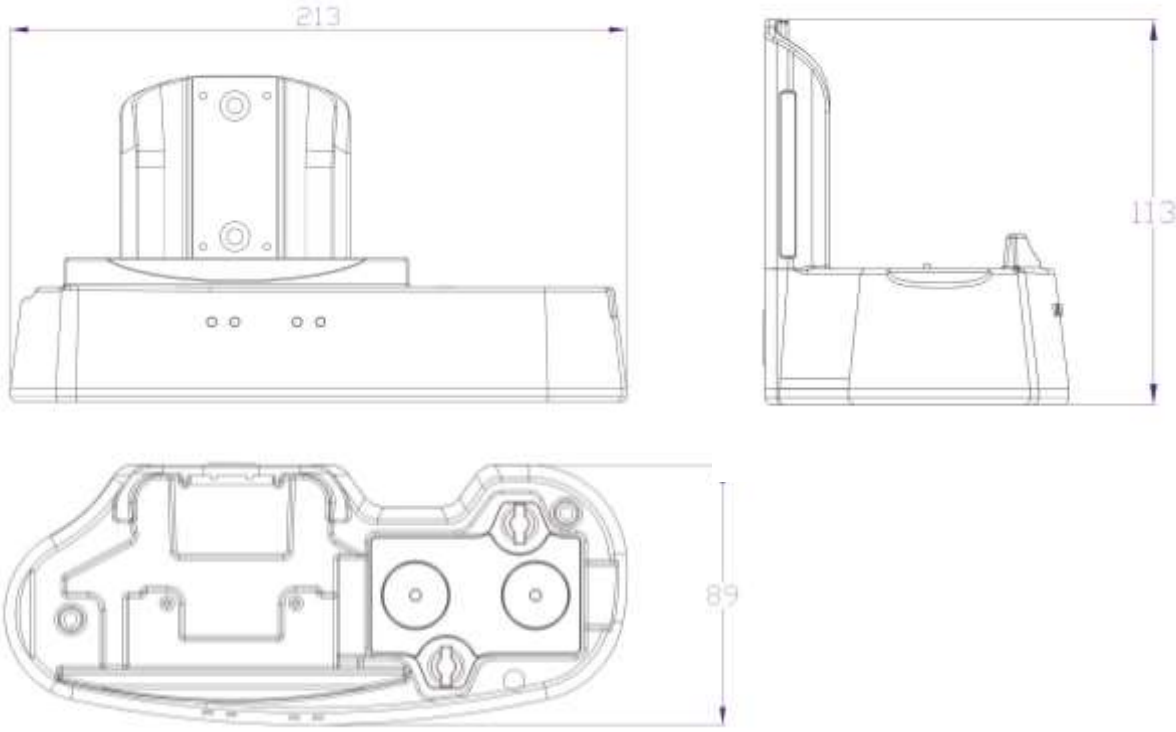
Hand strap

IP 64

REAR HANGING MAGNETS | HANG IT WHEREVER YOU NEED

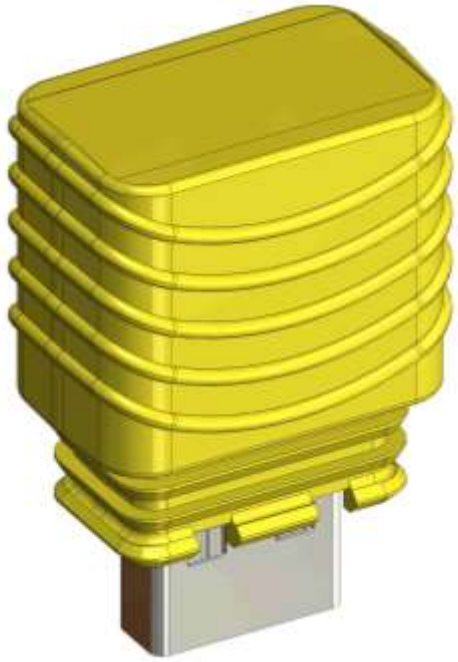


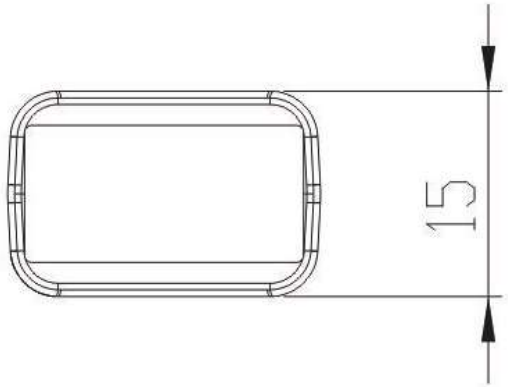
STUNNING DESIGN | EVERYTHING AT FINGERTIPS

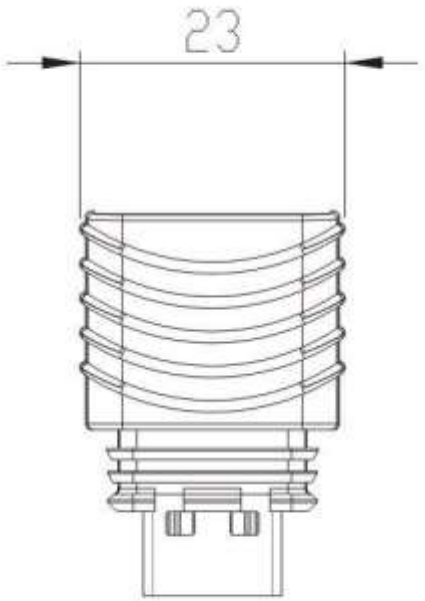


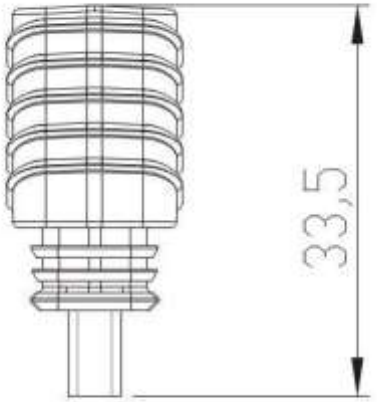
RECHARGING STATION | WITH SPARE BATTERY CHARGER

UNIQUE ID “TOKEN”



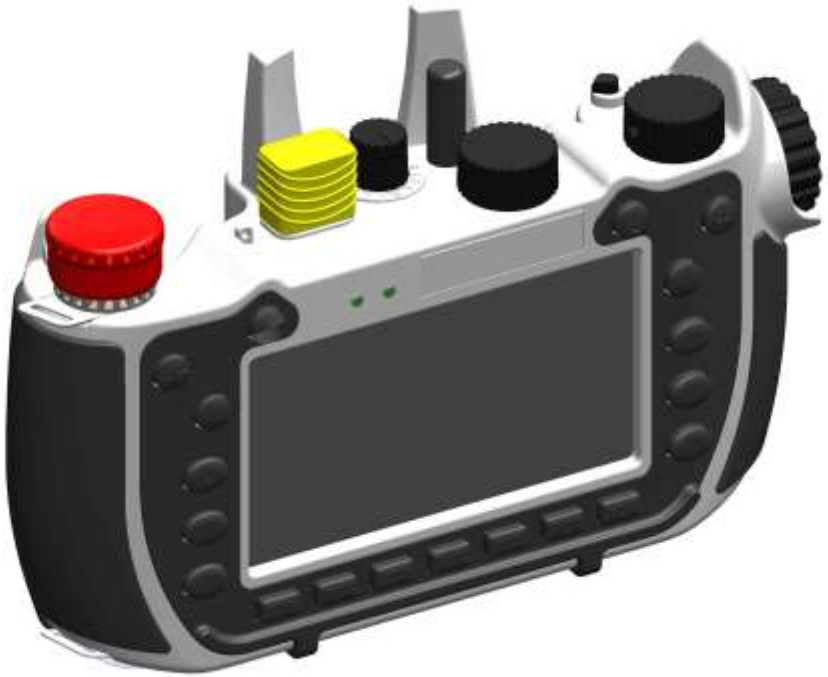


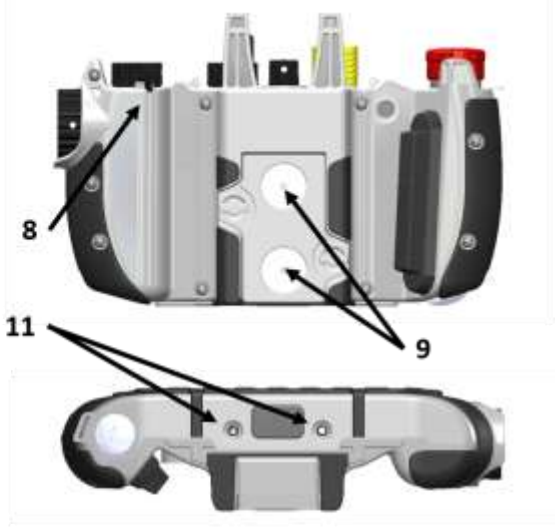




UNIQUE ID TOKEN | SAFE COUPLING

LEGENDA





1 TOKEN RECEPTACLE
2 STOP PUSHBUTTON
3 ENABLING DEVICE
4 STATE SELECTOR
5 POTENTIOMETERS
6 HANDWHEEL (OPTIONAL)
7 MEMBRANE KEYPAD
8 TOUCH SCREEN PEN
9 MOUNTING MAGNETS
10 STATUS LED's
11 BATTERY RECHARGING CONTACTS

MANY HARDWARE DEVICES | FOR FULL CONTROL

OPTIONAL COMPONENTS

INTEGRATED HANDWHEEL | 40 PULSE/ROTATION

HARDWARE AND SOFTWARE SPECS

Hardware specifications

-ARM Cortex-A8 600MHz

-Flash Memory: 128MB

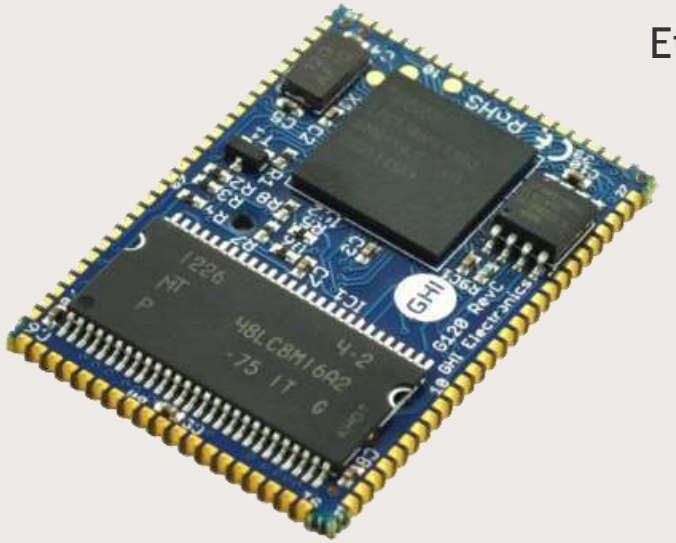
-RAM Memory: 256MB

-Dimensions: 5”

-Colors: 64K

-Resolution: 480 x 272

-USB interface: USB A (Host)



Wireless connection

SAFETY communication: Bluetooth

HMI communication: Bluetooth (using our gateway) or Wi-Fi connection.

Connection to the controller is always by means of Ethernet cable.

EXOR STANDARD HARDWARE | GREAT RELIABILITY AND SERVICE

Safety channel between H4 and NSMHC is based on Bluetooth

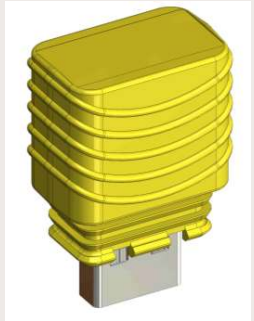
Association rules are based on the Token plugged in H4 and NSMHC

Connection H4/ NSMHC is automatic when two devices with the same token are in range

Safety Channel can be active/connected independently of the Wi-Fi connection

Diagnostic information on Bluetooth connection available to the JMobile runtime. User information can be designed at the application level

Status of E-Stop and Enabling switches is available to JMobile runtime



SAFETY CHANNEL ASSOCIATION WITH NSMHC | BLUETOOTH CONNECTION

Association in the Wi-Fi network between H4 and the available Access Point is manual

It must be performed using the System Setting menu in the H4

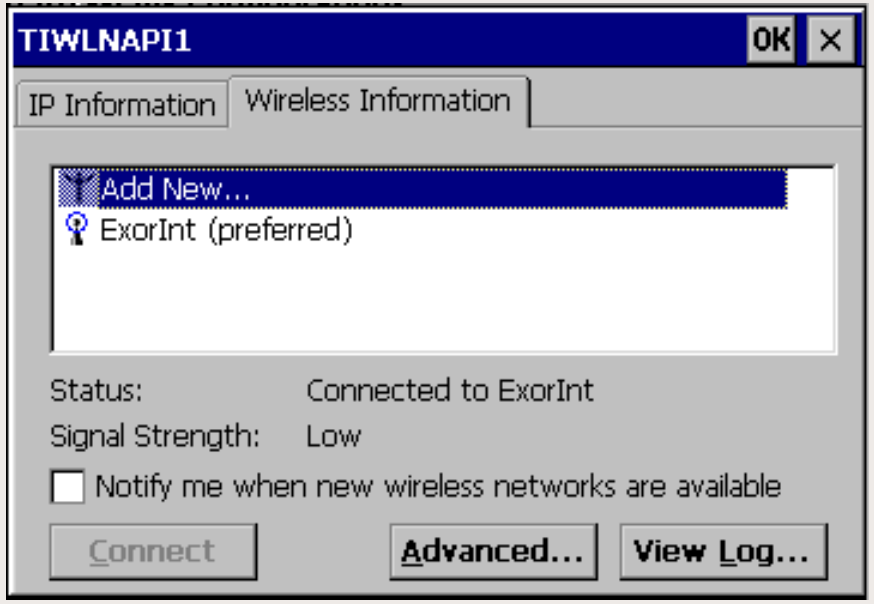
It is possible to enter multiple Access Points in the list

H4 will connect to only one Access Point at the time

Diagnostic information on wireless connection available to the JMobile runtime. User information can be designed at the application level

Connection to configured Access Point is automatic

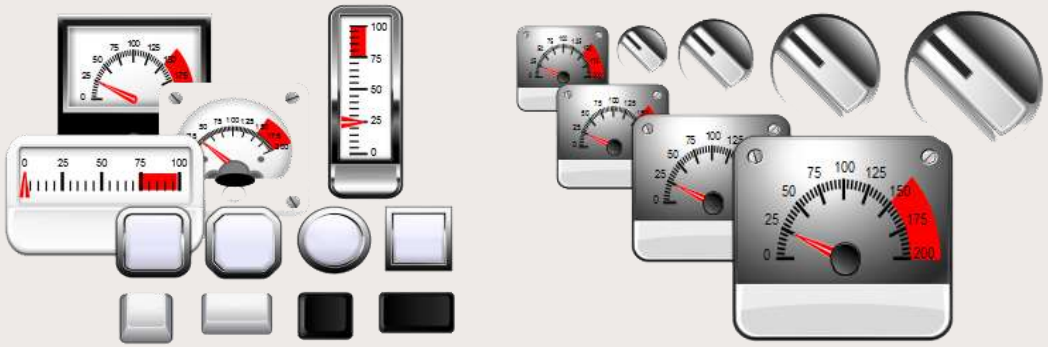
Wi-Fi connection (Data Channel) may be connected and active also in case the Safety Channel is not connected



EASY ASSOCIATION WITH AN ACCESS POINT | WIFI CONNECTION

ONE Power Jmobile run time*

To run your powerful HMI and connect to all the main controller by mean of more than 18 built in automation protocols.

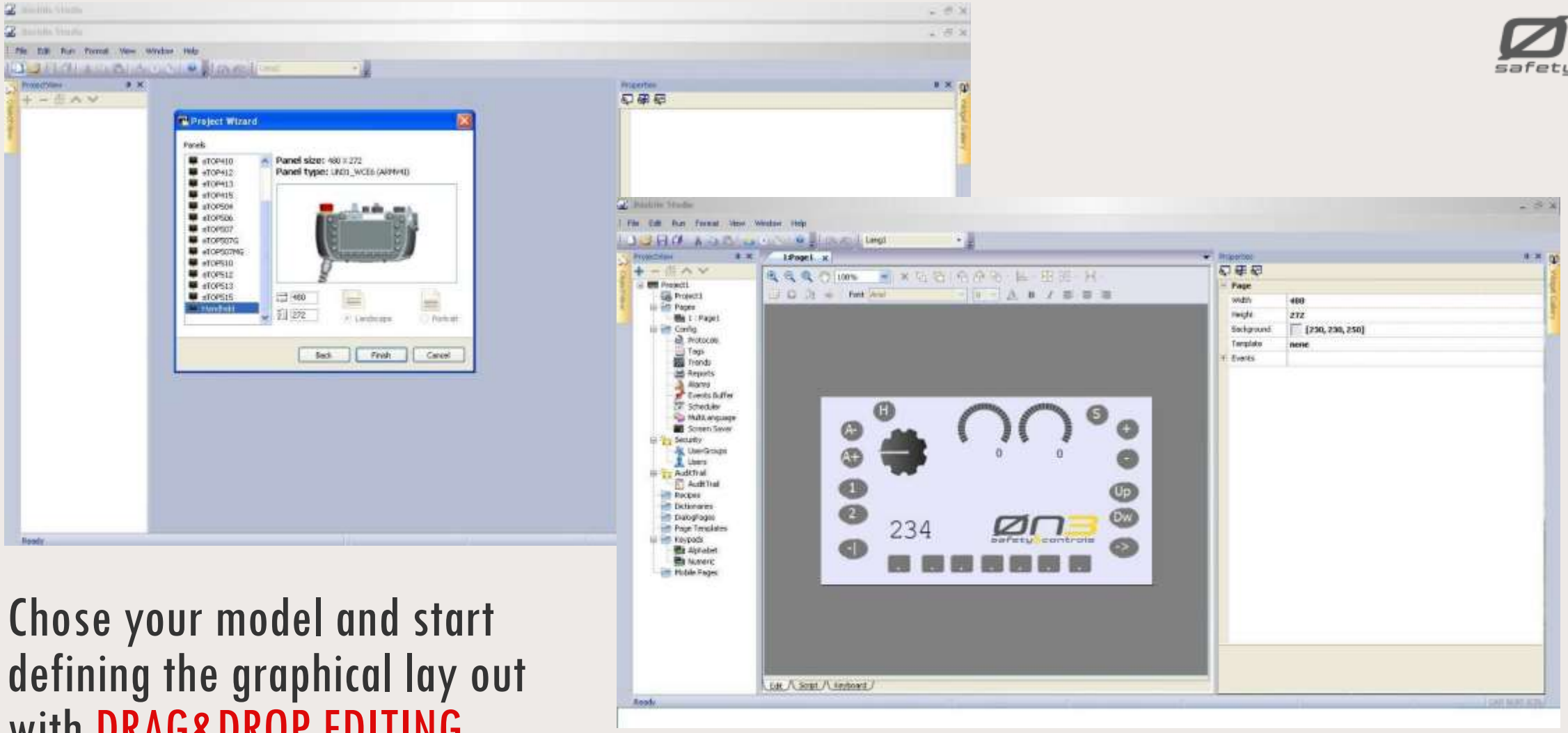


18 ETHERNET built in protocols

BACnet, Beckhoff ADS, CODESYS V2, CODESYS V3, EIA Modbus TCP, Ethernet IP CIP, Fatek FACON, GE IP SRTP, Hitachi, Jetter, KNX IP, Mitsubishi FX, Mitsubishi Q/L, Modbus TCP, Modbus TCP Server, Omron FINS, OPC UA Client ProConOS, SAIA S-BUS, Simatic S7

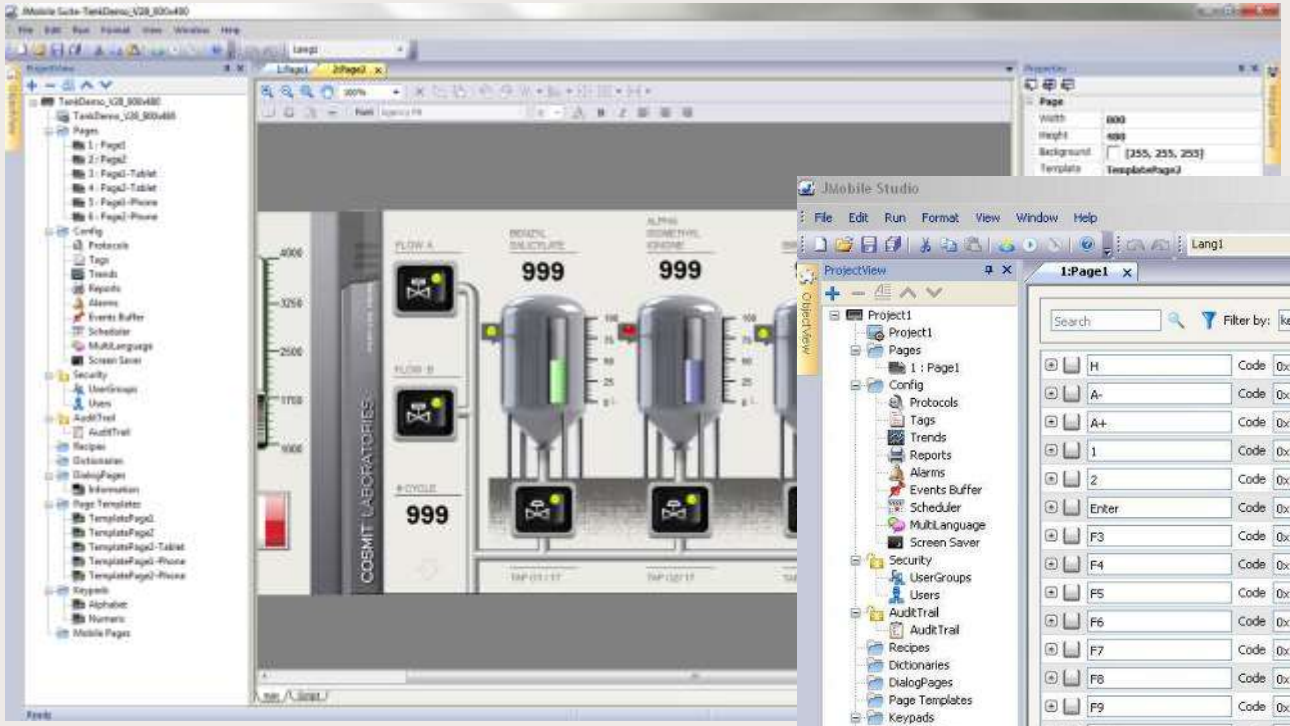
* **Also available with WIN CE drivers to install third party HMI SW**

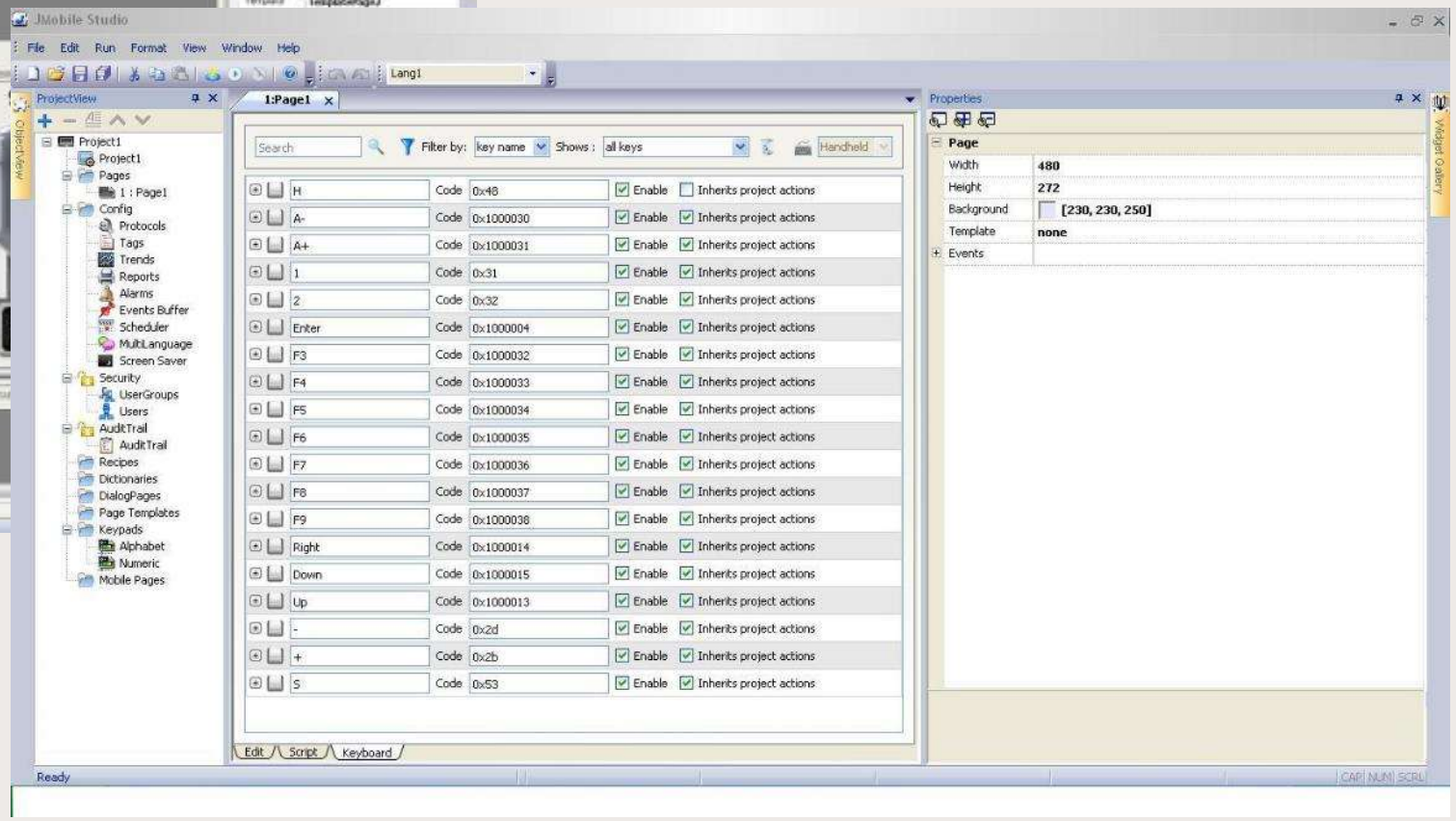
INTEGRATED JMOBILE RUNTIME | YOUR POWERFUL HMI



Chose your model and start defining the graphical lay out with DRAG&DROP EDITING

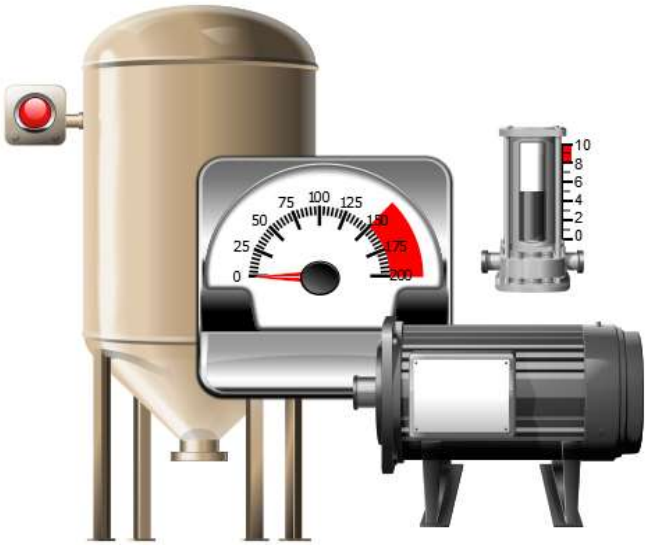
ONE POWER JMOBILE STUDIO | THE DRAG&DROP HMI EDITOR

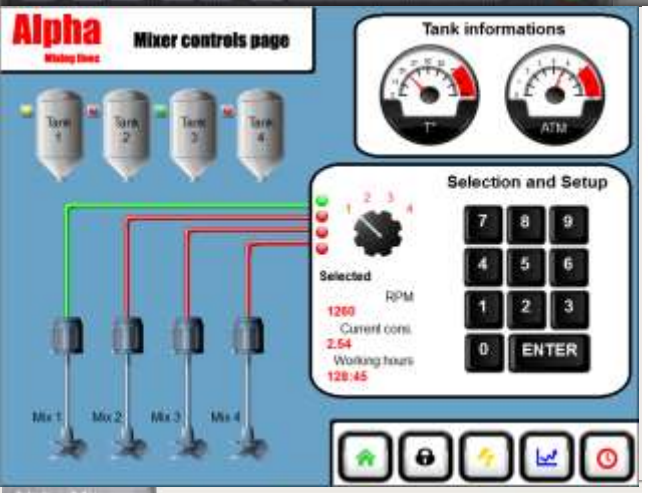


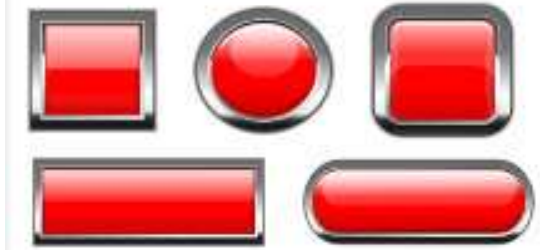


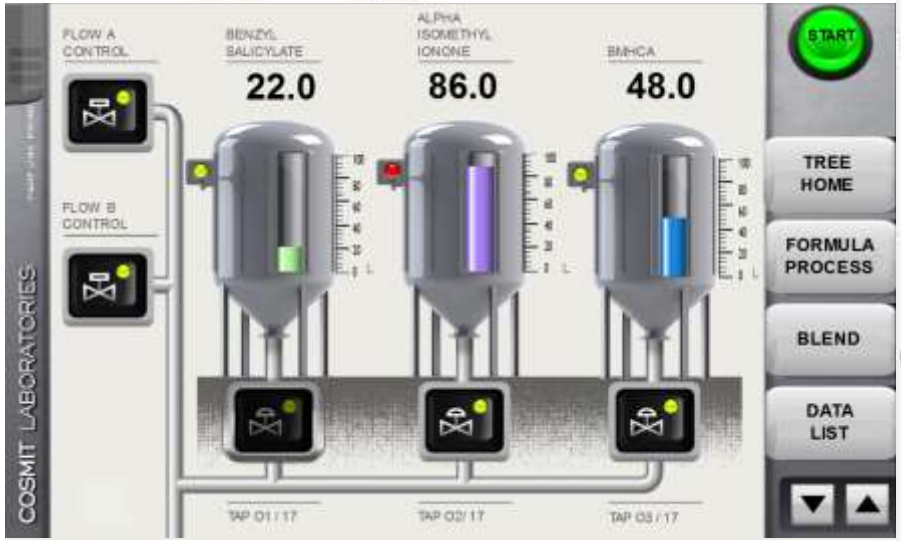
Assign variables, keys, potentiometers, handwheel, and everything else WITHIN THE EDITOR

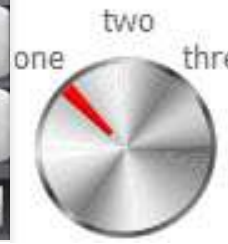
ONE POWER JMOBILE STUDIO | FULLY AUTOMATED EDITING











SOME HMI EXAMPLES | COMPLETELY CUSTOMIZABLE

STANDARDS AND DIRECTIVES

IN PROGRESS

DIRECTIVE
2004/108/EC Electromagnetic Compatibility Directive (EMC)

STANDARDS (EMC)
EN 61000-6-2 Electromagnetic Compatibility (EMC) Part 6-2: Generic Standards - Immunity for Industrial Environments
EN 61000-6-4 Electromagnetic Compatibility (EMC) Part 6-4: Ge-neric Standards - Emission for Industrial Environments

Degrees of protection and environmental tests
EN 60529 + A1 Degrees of protection provided by enclosures (IP code: 64)

Emergency Stop Push-button conforming to:
IEC 60947-5-5, 6.2 Safety Lock Mechanism
IEC 60947-5-5, 5.2
IEC 60947-5-1, Annex K Direct opening action mechanism
EN ISO13850, 4.2, 4.3, 4.4

Enabling Device conforming to:
IEC 60947-5-1
EN 60947-5-1
JIS C8201-5-1
UL508
CSA C22.2 No 14
IEC 60947-5-8 Low-voltage switchgear and controlgear

EUROPEAN DIRECTIVES AND RELEVANT STANDARDS | COMPLIANT WITH RELEVANT DIRECTIVES/STANDARDS

HOW TO ORDER

(IN PROGRESS)

HOW TO DEFINE YOUR PRODUCT CODE BASING ON YOUR NEEDS*

* Ask us for special needs

CODE LEGENDA

CODE EXAMPLE

ORDERING INFO | EASY TO ORDER

CONCLUSIONS

ONE H4 WIRELESS HANDHELD + INTEGRATED JMOBILE SOFTWARE

- ✓ CERTIFIED WIRELESS SAFETY (SIL 2)
- ✓ STUNNING DESIGN/ERGONOMICS
- ✓ MULTIPLE INTEGRATED DEVICES (KEYS/POTENTIOMETERS/HANDWHEEL/STATE SELECTOR)
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THE PERFECT HMI CHOICE FOR YOUR MACHINE | INTEGRATED HW/SW FOR LOW DEVELOPMENT COSTS

THANK YOU

(FOR FURTHER INFO SEE CONTACTS BELOW)

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