

NEX·U·PRO

WIRELESS FLUID MANAGEMENT SYSTEM

Control is in the air 



Reduce waste
Increase efficiency
Boost productivity

...in your vehicle and fleet service shops



Leading through innovation



SAMOA Headquarters and Technical Centre in Gijón (Spain)

Who?

SAMOA Industrial, founded in 1958, is a privately owned, leading European manufacturer of Pumps & Systems for complex fluids.

Our products are mainly used for lubrication, fluid processing (transferring, dispensing, and dosing), coating & paint treatments, and high viscosity fluid dispensing.

SAMOA designs, develops, and manufactures lubrication equipment, industrial air operated piston pumps, air operated double diaphragm pumps, spraying systems and extrusion units.



Why?

Product Quality
 Product Reliability
 Product Efficiency
 Environmental Concern

QUALITY
 EFFICIENCY
 product
 RELIABILITY
 environmental
 CONCERN

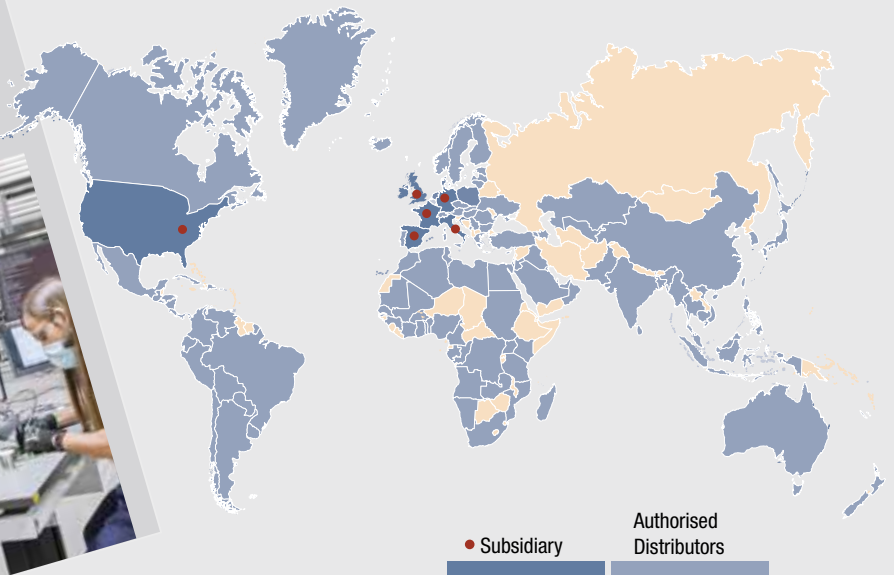
SAMOA Electronics

In 1999 SAMOA acquired the French company A3B that designed and manufactured electronic fluid management systems for vehicle dealerships and workshops. Since then, SAMOA has been developing new electronic systems and software to control, measure, and monitor pumps and bulk fluids. Thanks to our R&D Electronics department - consisting of software, electronics, and telecommunications engineers - and our clean room for electronic systems production, SAMOA ensures top quality products that increase productivity and reduces carbon footprint in your pumping processes.



Where?

Present in 100+ Countries through our own subsidiaries and authorised distributors.



● Subsidiary

Authorised
Distributors

New NEX·U·[®] Pro

With full wireless technology for vehicle and fleet service

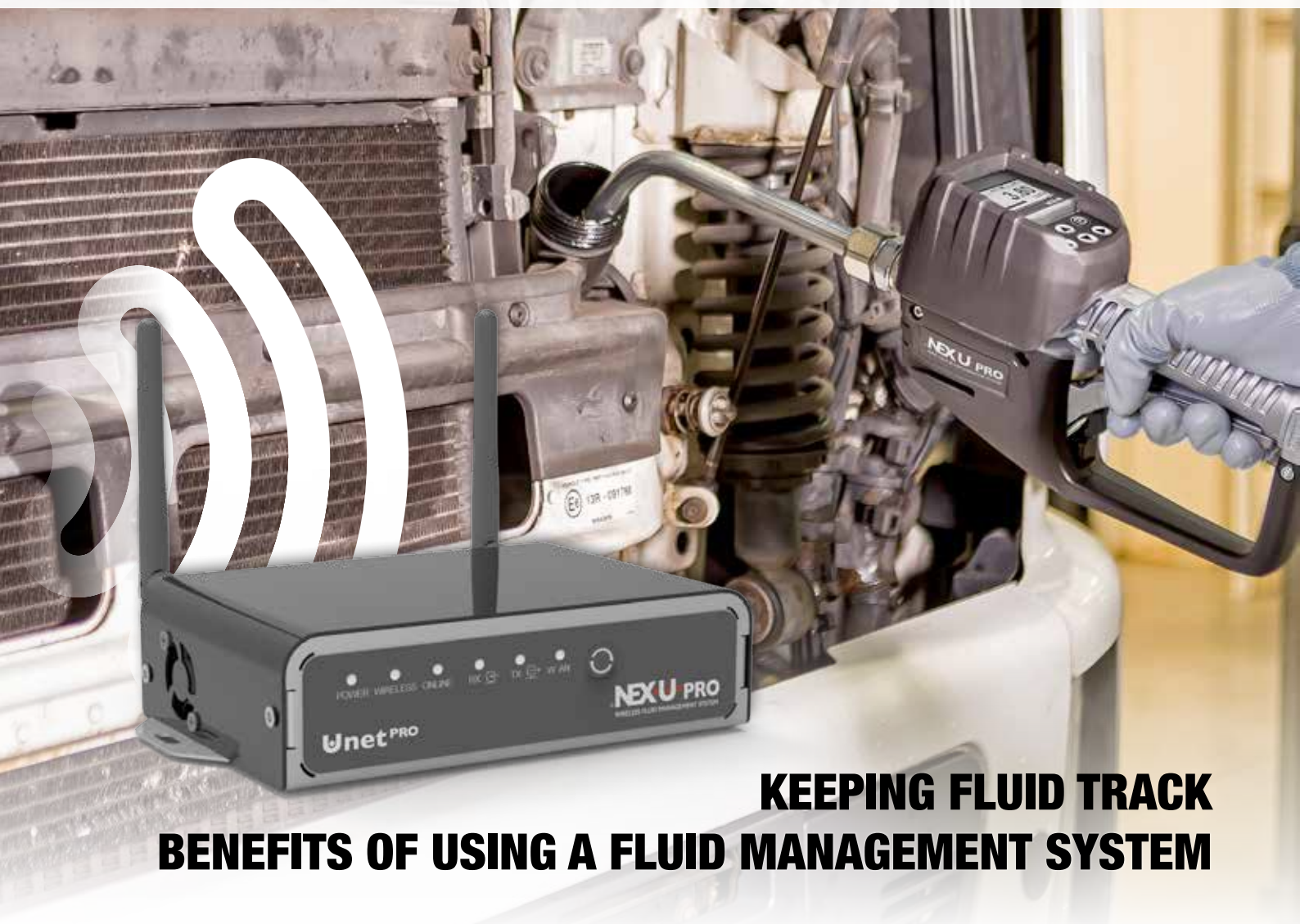
NEX·U·[®] Pro connectability and simplicity have been upgraded!!



**Reduce Waste
Increase Efficiency
Boost Productivity**



**Maximize
Profitability &
Reduce carbon
Footprint**



**KEEPING FLUID TRACK
BENEFITS OF USING A FLUID MANAGEMENT SYSTEM**

Benefits of Using a Fluid Management System

Monitor

- Real time information about fluid transactions and inventory.
- Inventory management (refills schedule, warnings...).
- Automatic alerts.

Control

- Reliable dispensing.
- Safety.
- Accuracy.

Track

- Account for every drop of lubricant or other vehicle service fluid used.
- No doubts about unfinished jobs or work orders.
- Reconcile fluid purchases and inventory with fluid sales and use.
- Supervise technician activity.
- DMS integration.

- **Increased reliability and full track of fluid transactions.**
- **Improved productivity.**
- **Accurate billing.**
- **Reduced downtime costs.**
- **No tank stock-outs or spill-overs.**
- **No tank refill delays.**

Lost inventory equals lost profit. With today's high oil prices, Inventory Control eliminates this concern.

Why NEX·U.[®] Pro?

WIRELESS

The system can work fully Wireless reducing installation costs.

SIMPLE

Intuitive software.
Plug & Play.
Few components.
Simple set-up.

INCREASED PRODUCTIVITY

Keep control of service fluids.

Control every transaction from the dispensing valve, without walking back and forth.

VERSATILITY

The system can be installed fully Wireless, or hybrid mode (combining wireless and wired).

Possibility to control mobile units.

DMS INTEGRATION

Optional API is available for integrations with 3rd party's DMS.

UPGRADE POSSIBILITY FROM NEX·U.[®] TO NEX·U.[®] Pro.

REDUCED DOWNTIME

All components are reachable by technician without lifting.

Easy installation.

What is NEX·U·[®] Pro?

NEX·U·[®] Pro is a wireless fluid management system that provides the control and the information you require to make your operations more profitable. You will be able to account for every drop of lubricant or other service fluid used. On top of this, you will keep efficient inventory control, which includes automatic alerts and fluid reordering when needed, to eliminate operation downtime. Due to the high cost of lubricants and other service fluids, the NEX·U·[®] Pro investment is quickly paid back, regardless of shop size or fluid consumption.

Main NEX·U·[®] Pro components

U-track Software

- Create work orders
- Integrate with DMS
- Track your transactions
- Monitor Fluid Inventory
- Warning Alerts
- Produce data reports

U-net Pro

- Control and manage all functions and communications

U-link Dispensing Valve

- Communicate with U-track software
- Accurate dispensing
- Easy to operate
- Battery powered (four AA)
- Reduced power consumption

U-tank Module

- Monitor tank levels
- Avoid tanks running empty
- Avoid spillover
- Level alerts

Network Extender

- Extend the coverage of the Network deployed by U-net Pro

Three Different Dispensing Modes

Standard Mode

- Identify technician
- Input work order
- Enter dispensing quantity

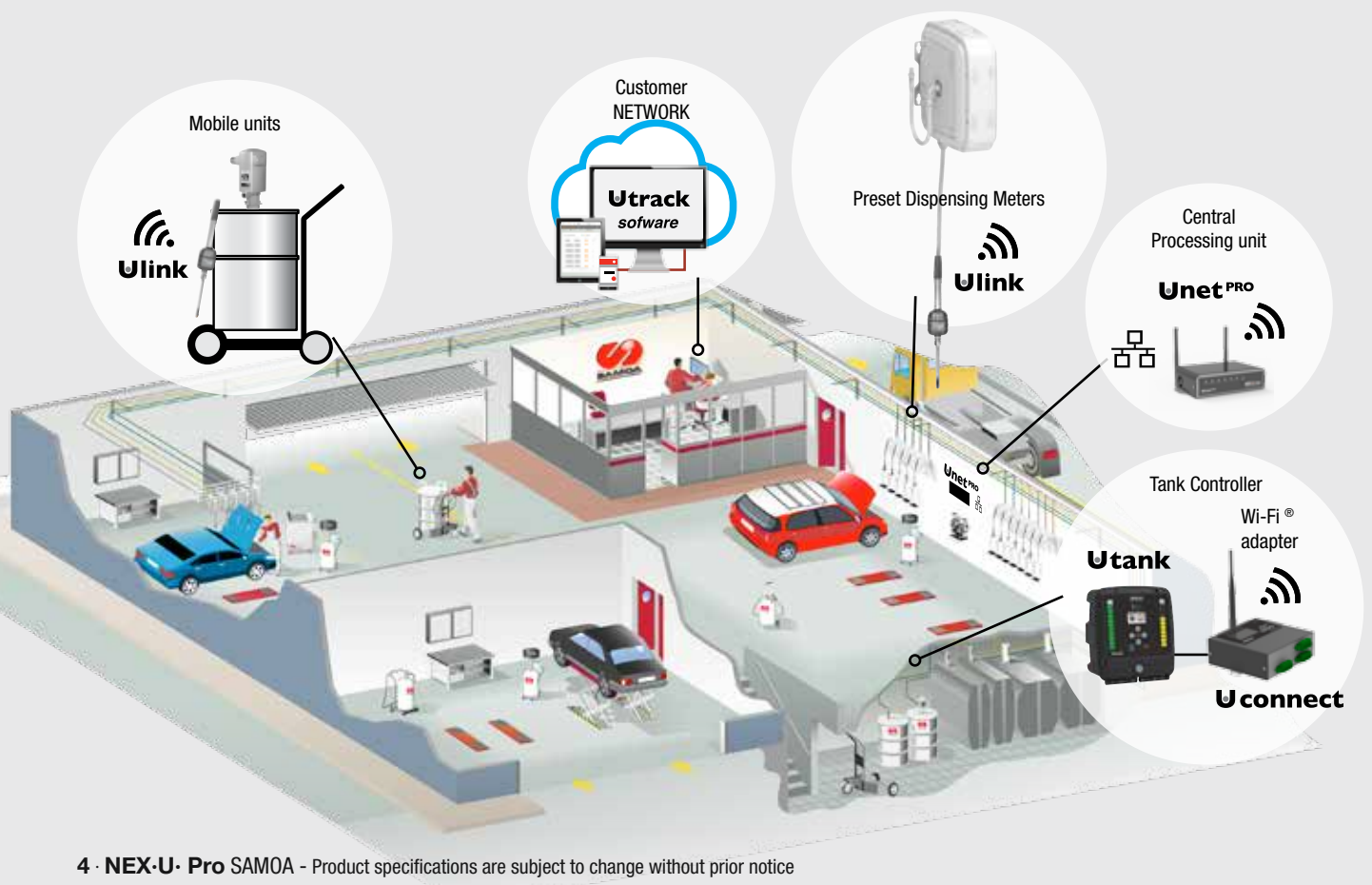
PreSet Mode

- Identify technician
- Select work order, previously input in to U-track software
- Confirm volume

Integrated & Remote

- Start transaction using 3rd party software or U-track
- Confirm volume

Main Configuration



U-track: NEX·U.® Pro Software



Utrack

U-track is a software for dispensing and controlling fluids in workshops.

U-track system is a web based application accessible through any device (laptop, PC, tablet or cell phone) connected to the same network as U-net Pro.

U-track dashboard screen.
In a glance, provides information on oil inventory and oil usage. Just click on any tank for more information.

Transactions can be followed and monitored on a real-time basis if required.
U-track can also generate different reports that can be exported easily into CSV format.

Ordering information

Part No.	Description
383 305	U-net Pro central processing unit. Includes U-track software.

U-net Pro: NEX·U.® Pro System Central Processing Unit

U-net^{PRO}

U-net Pro is the key NEX·U.® Pro component. It is the central processing unit that controls the system communications and houses the U-track software.

U-net Pro includes a powerful 2.4 GHz processor and 4 GB RAM. It controls the system functions and it manages the wired and wireless communication between the NEX·U.® Pro components.

SAMOA may deploy a dedicated network with an additional Wi-Fi® router (U-net Pro is not a router), contact SAMOA for further information.



DMS - Dealer Management System

NEX·U·® Pro can interface with most popular DMS on the market. It offers an efficient bidirectional communication to integrate the transaction information with workshop DMS.

Integrated & Remote

Features

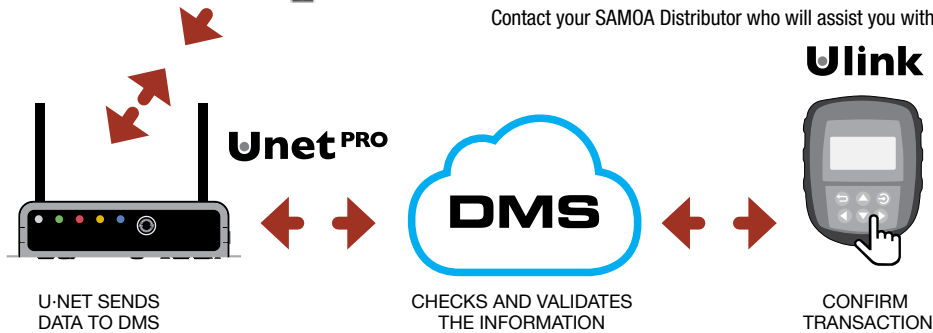
Virtual Keypad

ENTER
WORKORDER
SELECT PRODUCT
ENTER QUANTITY



- Easy to use: quick and effective.
- Enhanced security: work orders are checked and validated before fluid is dispensed.
- Automation: simplifies data entering as it can be automatically downloaded from the DMS.

Contact your SAMOA Distributor who will assist you with the license software you need.

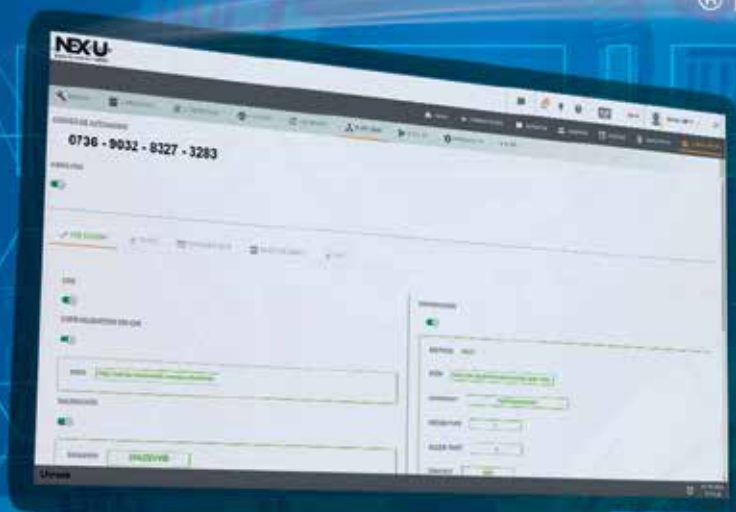


SAMOA Interface

A bidirectional communication is established through web service. The user enters their PIN number and the work order. DMS will prompt a message whether this information exists or not. NEX·U·® Pro offers multiple operating modes depending on the customer needs.

Bi-directional integration with DMS used by most brands

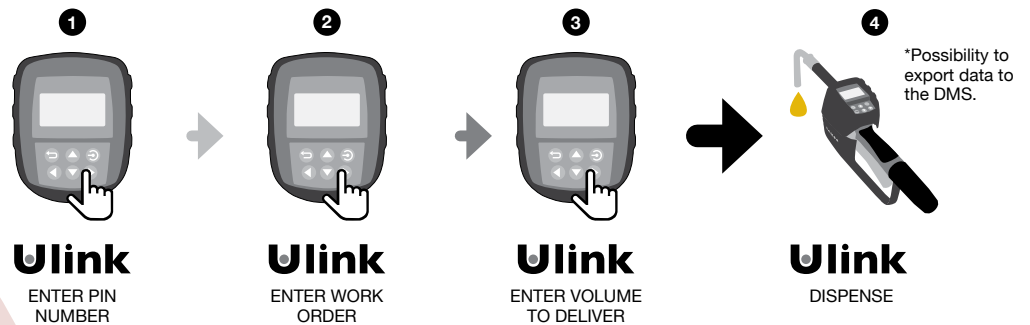
NEX·U·



Three Dispensing Mode Options

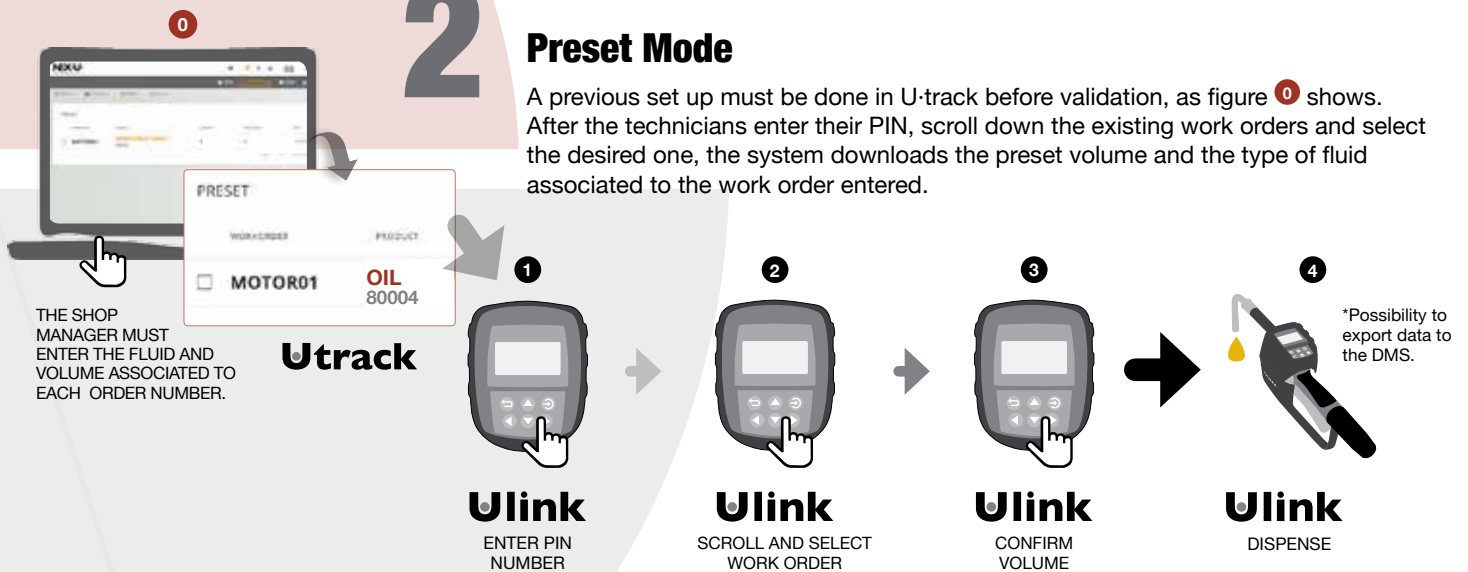
1 Standard Mode

After entering their PIN and work order number, the technician must select the type of fluid to be delivered, the hose reel number and enter the volume to deliver.



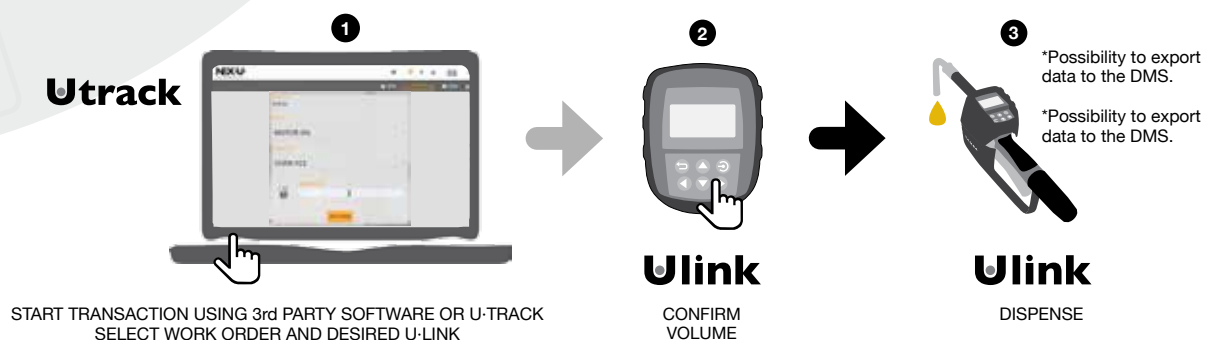
2 Preset Mode

A previous set up must be done in U-track before validation, as figure 0 shows. After the technicians enter their PIN, scroll down the existing work orders and select the desired one, the system downloads the preset volume and the type of fluid associated to the work order entered.



3 Integrated and Remote Mode

From any device connected to the same network as the U-net pro, the user can launch the transaction (with DMS integration if desired) and then start it from the U-link gun.



U-link: Wireless Dispensing Meter Valve

Ulink

- Dispensing meter with integrated valve. Includes wireless communication and RFID module.
- Allows technicians to control transactions directly from the meter keeping them monitored and tracked in U-track software.

Increased durability
Protective TPE shroud.

Reliable valve operation
Valve automatically shuts off once the delivered flow reaches the Pre-set volume.

Easy and intuitive programming
6-key integrated keypad with large LCD screen.

Easy to replace batteries
Four AA standard alkaline batteries provide the power required for an effective valve operation.

Light and Robust
Aluminium die cast for longer life and lighter weight.

Easy to operate
Four finger trigger for increased user comfort.

Heavy Duty inlet swivel with inlet filter
1/2" High flow inlet swivel with protective TPE swivel boot.

Rotating screen option available (for oil bars)

Product name

Qty dispensed

Required Qty

Back / Cancel Button

Set Button

Control / Insert Scroll



TECHNICAL SPECIFICATIONS

Fluids handled	Motor oil, Hydraulic oil, Anti-freeze, Gear oil, Automatic transmission fluid
Flow range	1 to 30 l/min (0.25 to 7.5 gal/min)
Maximum working pressure	100 bar (1,425 psi)
Accuracy	± 0.5 % (Oil); ± 1% (Coolant solutions)
Inlet	1/2" BSP (F)
Outlet	1/2" BSP (F)
Working temperature range	-10 °C to 50 °C (14 °F to 122 °F)
Battery	4 x AA Alkaline 1.5V
Viscosity Range	Up to 2000 mPa.s
Display	LCD
Wetted parts	Aluminum, AISI 316 Stainless Steel, Buna-N, Delrin, Brass, Zinc plated steel
Weight (with no outlet)	1,7 kg (3.7 lb)



Category	Specification
Regulatory Approvals	FCC (EEUU), ETSI (Europe), IC (Canada), KCC (Korea), TELECK (Japan), RCM (Australia), Anatel (Brazil)
Frequency band	ISM 2.4 GHz, DSSS (Direct Sequence Spread Spectrum)
Protocol	Wireless communication and RFID
Encryption	128/256 bit AES

Ordering information

Part No.	Description
383 405	U-link, no outlet.
383 406	U-link, with 60° rigid outlet and 1/4 turn non-drip tip.
383 407	U-link, with 90° flexible outlet and 1/4 turn non-drip tip.



U-tank: Tank Level Monitor Module

U-tank

Provides real-time inventory control, reducing concerns about inventory shortage or used fluid tanks overflow

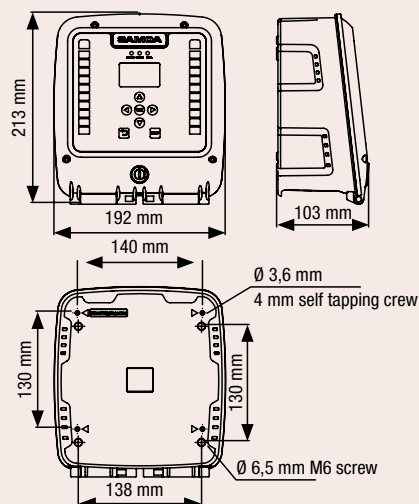


Tank Monitoring

It is a monitor module capable of controlling two tanks using digital or analogical level gauges. Can be connected to solenoid valves to control pump operation, and to external warning devices.

U-tank communicates with other NEX·U·[®] components using CAN BUS wired connection or WiFi[®] when including a U-connect.

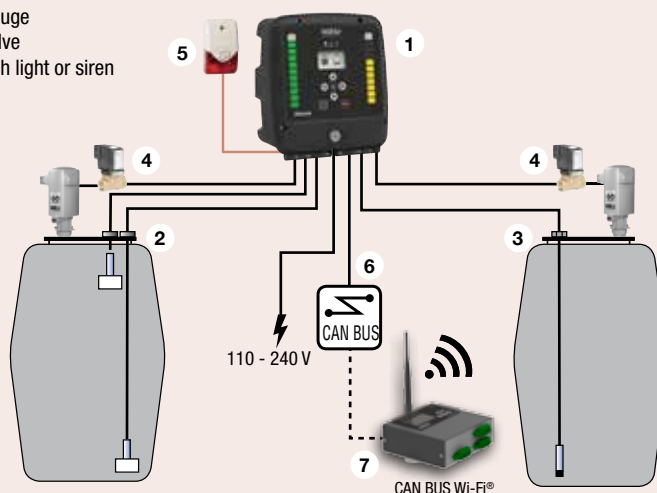
U-tank has two independent graphic displays and level bars. Each of them shows the inventory available in each tank. It also has a set-up keypad for inventory adjustment if required.⁽¹⁾



The number of input and output ports are:

- One analogical input per tank for a pressure probe with 4-20 mA or 0-10 V.
 - Three digital inputs per tank for a low, intermediate or high-level probe ⁽¹⁾.
 - One output per tank for a solenoid valve to control air supply to each pump.
 - One output per tank for an electro-pneumatic valve to prevent tank overflow.
 - One output for controlling an air solenoid valve to stop the air supply to all pumps when the workshop is closed.
 - One output per tank for controlling a flash warning light or an acoustic alarm.
- U-tank supports CAN BUS wired communication with other NEX·U·[®] Pro system components. It requires a 110 - 240 V AC supply.

- 1 U-tank
- 2 Level sensors
- 3 Pressure gauge
- 4 Solenoid valve
- 5 Remote flash light or siren
- 6 CAN BUS
- 7 U-connect



Ordering information

Part No.	Description
383 100	U-tank tank monitoring module. Can control up to two tanks. Supports CAN BUS communications. 110 - 240 V

⁽¹⁾ The use of digital probes does not allow real-time inventory monitoring. NEX·U·[®] Pro will use declining balance for inventory control and will require manual inventory adjustment when fluid is supplied to the tank.

NEX·U·® Pro Accessories:

NetWork Extender

Part No.	Description
383 211	The device makes possible to extend the coverage of the wireless network deployed by U-net Pro



383 211

U-connect: CAN BUS to Wi-Fi® converter

Part No.	Description
383 210	U-connect allows wireless communication among the different components instead of CAN BUS wired communication. Equipped with an external antenna, it allows for extended signal coverage. It can be configured from a Windows or Android application.



383 210

Tank monitoring accessories

Part No.	Description
382 120	Tank level pressure gauge. Allows real-time monitoring of the volume in a tank. Maximum tank depth 350 cm



382 120

Part No.	Description
382 201	Digital level gauge. Detects minimum, intermediate or maximum volume in a tank. Does not allow real-time monitoring. Adjustable height, includes 5 m cable



382 201

Part No.	Description
382 005	Remote flash and acoustic alarm.

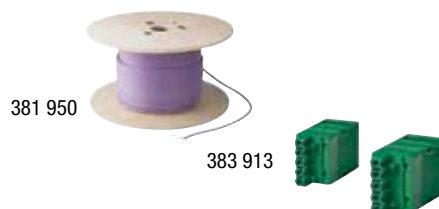


382 005

Cable

3082A 15/18AWG communication and power CAN BUS cable

Part No.	Description
381 950	CAN BUS communication cable
383 913	2 connectors that allow wiring connecting U-tank with U-connect



381 950

383 913

Solenoid valves for compressed air - pump control

Part No.	Application and wetted materials	Connection threads	Voltage	Type	Max. Working pressure
389 013	Compressed air. Brass and NBR	1/2" (F)	24V AC	N.C.*	10 bar
389 019	Compressed air. Brass and NBR	1/4" (F)	24 V DC	N.O.*	10 bar



389 013

* N.C.= Normally closed. / N.O.= Normally open.

NEX-U[®] Pro can also be wired

Benefits



- Increased fluid compatibility.
- A constant and reliable power source is always present to power the solenoid valves that control fluid delivery.
- Hard-wired data transmission to avoid interferences and other obstacles which may interfere with wireless data transmission.
- Fully adjustable to customer needs.

System Access and Control

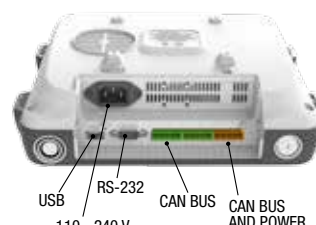
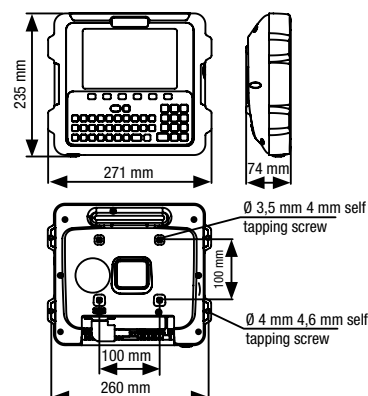
Udat

Udat power⁺

U-dat: System Access Keypad

U-dat allows system access to technicians either through a PIN code or using a RFID card.

- U-dat includes a 7" full colour graphics display and a complete QWERTY keypad.
- U-dat supports CAN BUS cable communications that transmits data and power to open the solenoid valves in the system. "Plug-and-play" connectors make cabling easy.
- U-dat includes the transformer required to simultaneously open up to 8 solenoid valves.
- U-dat requires 110 - 240 V 50/60 Hz power supply.



Ordering information

Part No.	Description
383 020	U-dat keypad Same as above, but with a 75 W transformer to open 2 solenoid valves.
383 000	U-dat power⁺ keypad NEX-U [®] access keypad with 7" colour screen and QWERTY keypad. One USB, one RS232 and in/out CAN BUS ports. 110 - 240 V AC 50/60 Hz, with a 320 W transformer to open 8 solenoid valves, supports CAN BUS communications.
383 915	Universal VESA 100 bracket
383 650	Virtual Keypad license. Converts any terminal (PC, laptop, tablet or smartphone) into a NEX-U [®] Pro access Keypad. Contact SAMOA for further information regarding the virtual keypad license.

U-vision⁺: Hand-held display and keypad module

U-vision⁺ includes a six-button keypad and it can replace the U-dat keypad for data entry in the system.

U-vision⁺ has a backlight display connected using Bluetooth[®] with a U-valve, U-meter⁺ or U-count.

U-vision⁺ adapts to any SAMOA oil control handle and transforms the handle into a hand-held display and keypad for access to the NEX-U[®] system.

Uvision⁺

Ordering information

Part No.	Description
383 401	U-vision ⁺ hand-held keypad and display module. (Outlet and handle not included).

U-vision⁺ is powered with 4 "AA" 1.5 V alkaline batteries.

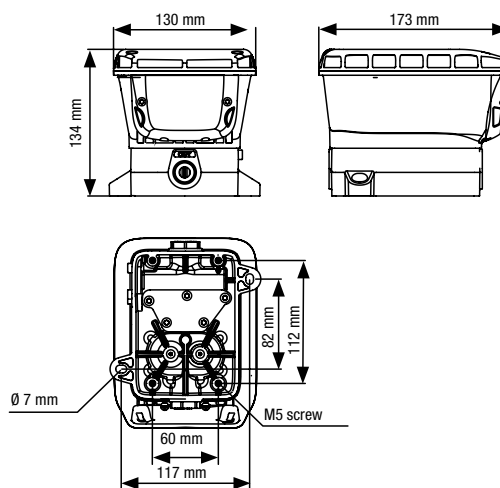


Volume Meters

U-valve: compact unit of pulse meter, solenoid valve, filter and communications

U-valve is a compact unit combining a high accuracy pulse meter, a solenoid valve and a large cleanable fluid screen filter with an electronic module. This module is required to control the meter and valve operation and to communicate with other system components.

Uvalve Uvalve+

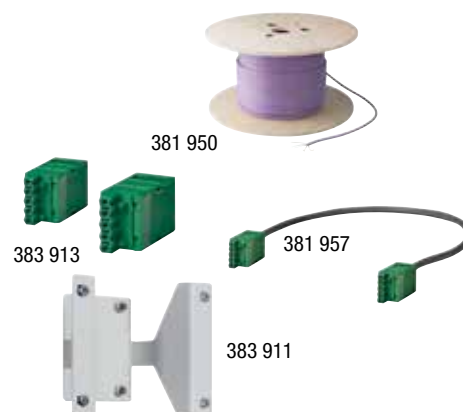


Product Specifications

Applications	Lubricants, antifreeze solutions. If fluid additives are used, it is recommended to install stainless steel pulse meter and stainless steel solenoid valve
Wetted parts	Aluminium, NBR, stainless steel, acetal
Connection threads	1/2" BSP (F)
Flow range	1 - 30 l/min
Pulses per litre	328 ppl
Accuracy	+/- 0,5 %
Max. working pressure	100 bar
Solenoid valve	24 V DC
Communication	CAN BUS, Bluetooth®, Wi-Fi® (U-valve+ only)

Ordering information

Part No.	Description
383 501	U-valve meter, solenoid valve and electronic module. Includes Bluetooth® communication for connecting to a U-vision or U-vision+.
383 500	U-valve+ meter, solenoid valve and electronic module. Includes Bluetooth® connection to a U-vision or U-vision+ and Wi-Fi® for data transmission to other components in the system.
381 950	CAN BUS communication cable
381 957	Jumper cable. 0,5 m cable with prewired connectors 381 908 for connecting adjacent elements with a CAN BUS cable
383 913	2 connectors that allow wiring connecting U-valve with U-connect
381 908	In/Out electrical connectors. For use with U-meter or U-meter+
383 911	U-valve bracket



Volume Meters

U-meter U-meter+

High accuracy, compact pulse meter including the electronic module required to control the meter and valve operation and to communicate with other system components through CAN BUS.



383 520



383 514

U-meter+ includes Bluetooth® for connecting to a U-vision or U-vision+.

U-meter Part No.	381 513	383 525	383 522	383 520
Wetted parts	Aluminium, NBR, stainless steel, acetal	Aluminium, NBR, stainless steel, acetal	PVC, Vectra®, stainless steel, Viton®	Stainless steel, Vectra®, Viton®
Applications	Lubricants	Lubricants, diesel	DEF/AdBlue®, windshield wash and antifreeze solutions (low pressure)	DEF/AdBlue®, windshield wash and antifreeze solutions (high pressure)
Connection threads	1/2" BSP (F)	3/4" BSP (F)	1/2" BSP (F)	1/2" BSP (F)
Flow range	1 - 30 l/min	8 - 80 l/min	1 - 50 l/min	1 - 50 l/min
Pulses per litre	328 ppl	109 ppl	320 ppl	320 ppl
Accuracy	+/- 0,5 %	+/- 0,5 %	+/- 0,5%	+/- 0,5%
Maximum working pressure	100 bar	100 bar	30 bar	100 bar
Communications	CAN BUS	CAN BUS	CAN BUS	CAN BUS
U-meter+, models with Bluetooth® Part No.	383 514	383 526	383 523	383 521

Only for connection with U-dat, U-valve, or an adjacent U-meter. Requires a 24 V DC solenoid valve.

U-meter and solenoid valve kits

U-meter and solenoid valve kits include a high precision U-meter or U-meter+ meter, a solenoid valve and a Y-strainer.

Part No.	Application	Pulse meter	Y-strainer	Solenoid valve
383 550	Lubricants, antifreeze solutions	U-meter 381 513	950 372	389 001 ⁽¹⁾
383 551	Lubricants, antifreeze solutions	U-meter+ 383 514	950 372	389 001
383 552	High delivery lubricants, antifreeze solutions	U-meter 383 525	950 373	389 002
383 553	High delivery lubricants, antifreeze solutions	U-meter+ 383 526	950 373	389 002
383 554	Diesel fuel	U-meter 383 525	950 374	389 002
383 556	DEF / AdBlue®, windshield wash (low pressure)	U-meter 383 522	950 372	389 004
383 557	DEF / AdBlue®, windshield wash (low pressure)	U-meter+ 383 523	950 372	389 004

NEX·U·® requires 24 V DC, normally closed except for overfill (normally open) solenoid valves to operate. U-valve and U-valve+ include a solenoid valve. For other metering elements, a solenoid valve compatible with the fluid and the application requirements must be used.



Part No.	Application and wetted materials	Connection threads	Voltage	Type	Max. Working pressure
389 001 ⁽¹⁾	Oil and antifreeze solutions. Brass and NBR	1/2" BSP (F)	24 V DC	N.C.	50 bar
389 002	Coolant, diesel, water, oil. Brass and NBR	3/4" BSP (F)	24 V DC	N.C.	50 bar
389 004	DEF / AdBlue®; antifreeze and windshield wash solutions, stainless steel and EPDM	1/2" BSP (F)	24 V DC	N.C.	10 bar
389 021	Electro-pneumatic valve. Prevents over fill of waste fluid tanks. Brass and NBR	1-1/2" BSP (FF) for fluids 1/4" BSP (FF) for air	24 V DC and 1-4 bar compressed air	N.O.	10 bar

N.C.= Normally closed. / N.O.= Normally open. / ⁽¹⁾ for use in standard delivery applications, with a 1/2" U-meter.

U·power

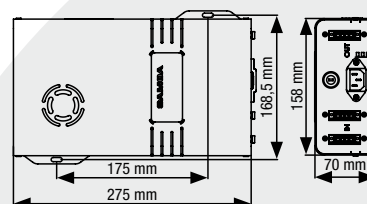
U·power+

Power supply to solenoid valves and other system components. U·power connects using CAN BUS cable to a U·valve, U·valve+, U·meter, U·meter+ or U·view whenever the power supplied by a U·dat keypad is not present.



Ordering information

Part No.	Description
383 151	U·power. Power supply unit with a 75 W transformer for use with 2 solenoid valves.
383 150	U·power+. Power supply unit with a 320 W transformer for use with 8 solenoid valves with 2 CAN BUS connectors.
383 152	U·power+. Power supply unit with a 320 W transformer for use with 8 solenoid valves with 3 CAN BUS connectors (1 IN and 2 OUT).

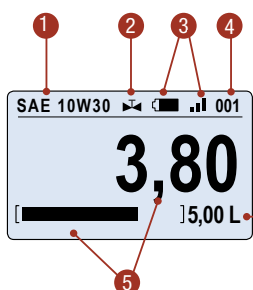


NEX·U.® Remote Displays:

Hand-held display module to fit a SAMOA oil control handle. Includes a backlight display connected via Bluetooth® with a U·valve, U·meter+ or U·count module and it displays the following parameters:

- Hose reel (fluid outlet number and fluid dispensed type).
- Battery life and Bluetooth® signal strength.
- Volume delivered and operation progress.
- Solenoid valve open or closed.

U·vision



- 1 Fluid dispensed type.
- 2 Solenoid valve open or closed.
- 3 Battery life and Bluetooth® signal.
- 4 Hose reel / fluid outlet number.
- 5 Volume delivered and operation progress.
- 6 Preset Volume.

Ordering information

Part No.	Description
383 400	U·vision hand-held display module. (Outlet and handle not included).

U·view

Remote, high visibility, LED display that shows the volume delivered through various U·valves (no simultaneous operation supported). U·view supports Wi-Fi® and hard-wired communication.

U·view requires hard-wired connection (data and power) to a U·dat keypad or to a 110 - 240 V AC power supply using a 24 V DC external transformer (U·power or U·power+).

Ordering information

Part No.	Description
383 700	U·view remote display module.



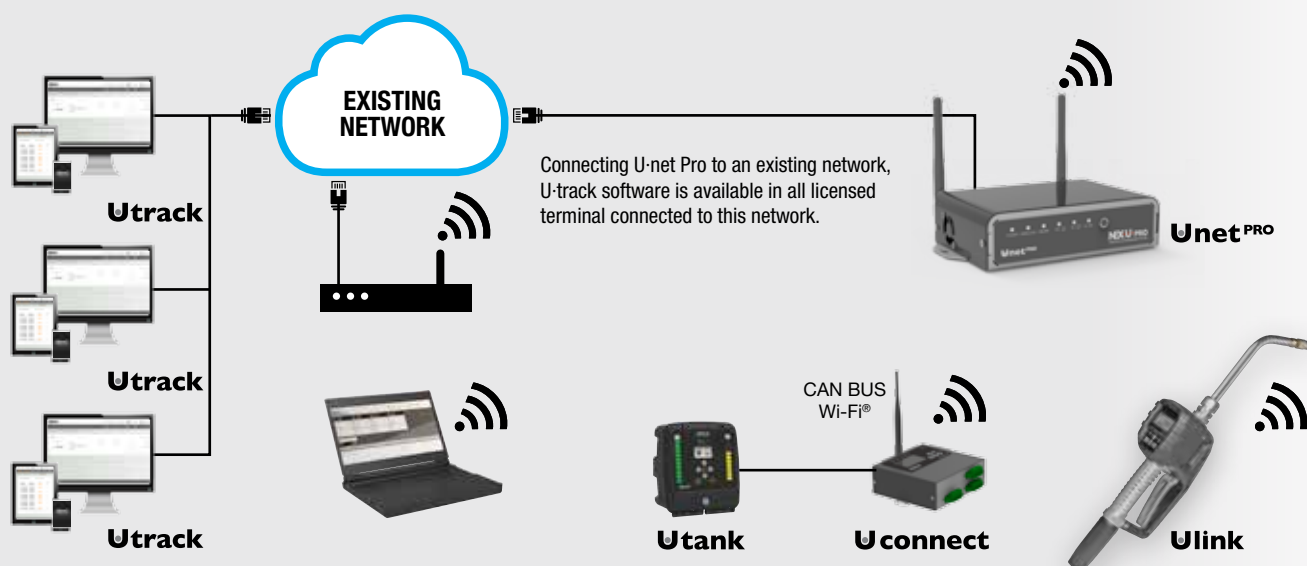
Creating a Wireless Network

There are two ways to create a wireless network:

- **Using an existing Wi-Fi® network.** Requires access to existing wireless network credentials.
- **Creating a dedicated Wi-Fi® network.** New wireless credentials are created for this network.

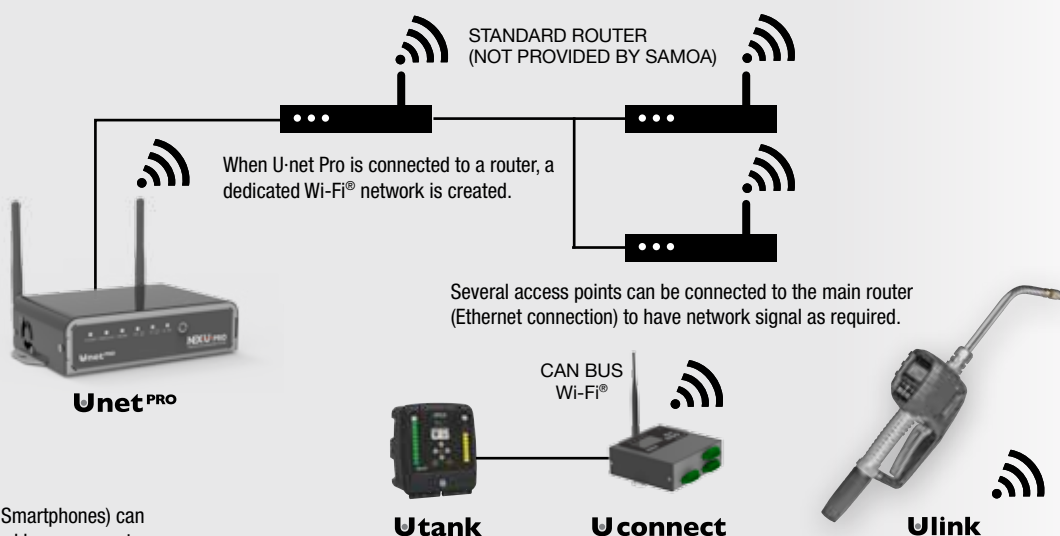
In both cases IP addresses, network and default gateway, are required. The key component is U-net Pro.

Using an existing Wi-Fi® network



If the network uses Wi-Fi®, NEX-U-® components with Wi-Fi® can connect to the network via Wi-Fi®. Additionally, other licensed terminals (laptops, tablets, Smartphones) can have access to U-track.

Creating a dedicated Wi-Fi® network



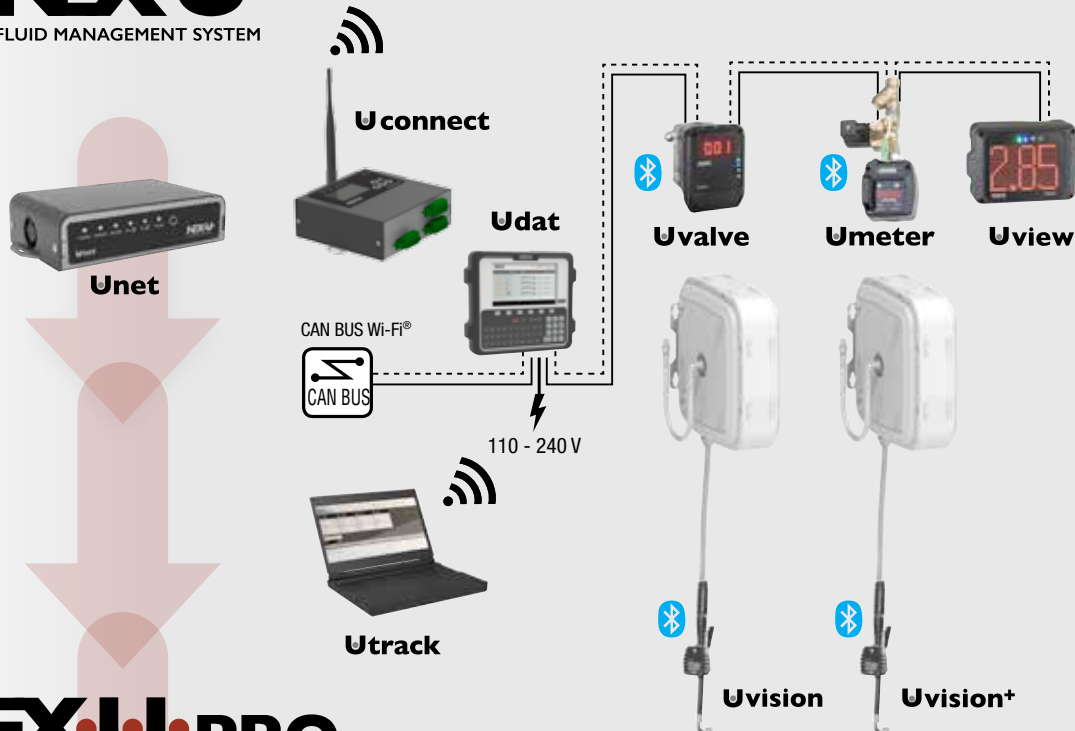
Licensed terminals (PC's, tablets, Smartphones) can connect to the NEX-U-® network and have access to the NEX-U-® system through U-track.

NEX-U-® components can connect to the NEX-U-® wireless network for data communication among them.

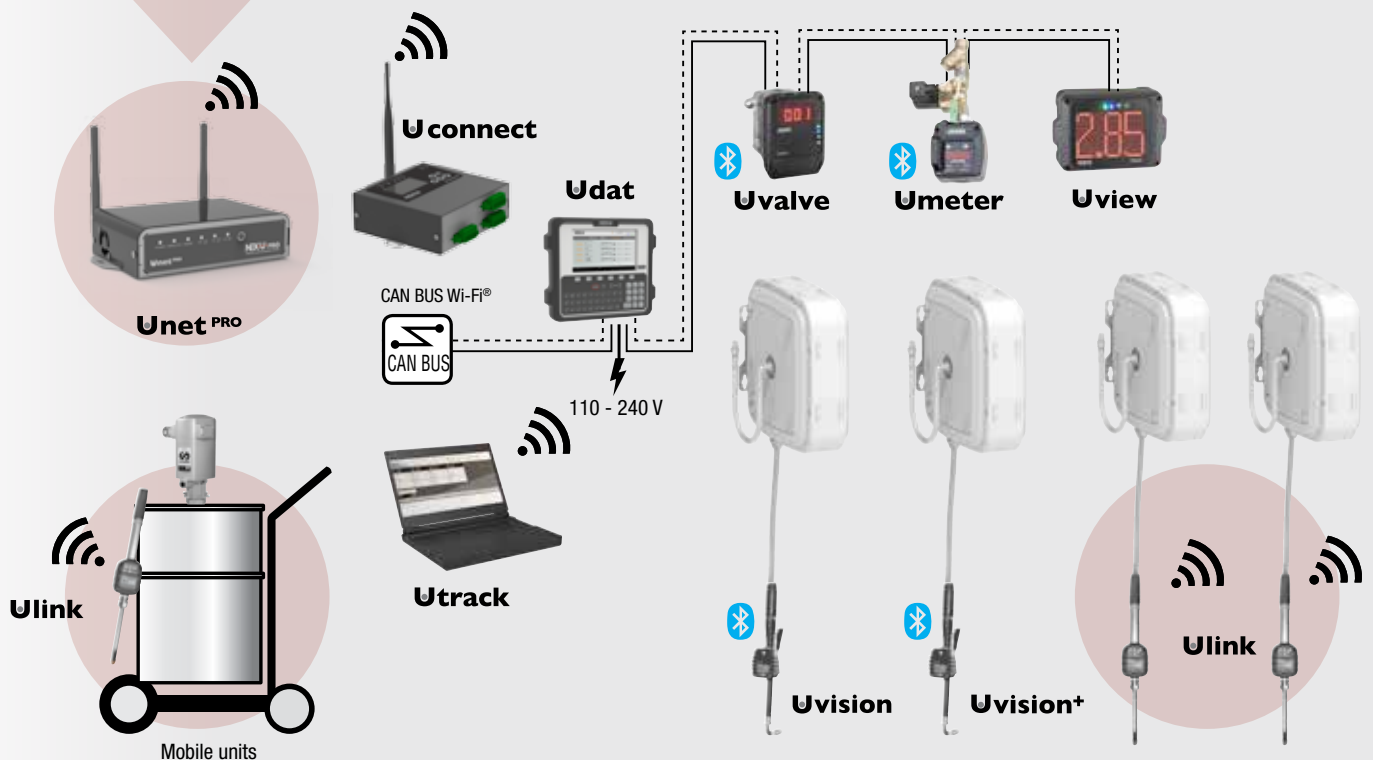
Looking for an upgrade from NEX·U.® to the NEX·U.® Pro version?

Easy! Just substitute your old U-net for the new U-net Pro, and add U-link wireless dispensing meters to your existing installation

NEX·U.
FLUID MANAGEMENT SYSTEM



NEX·U·PRO
WIRELESS FLUID MANAGEMENT SYSTEM





Vehicle Maintenance Centres and Car Dealerships

Fleet Centres

Heavy-Duty Vehicles Maintenance

Lube-Trucks and Mobile Service Shops



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