



RMU CP CNT

Industrial Gateway

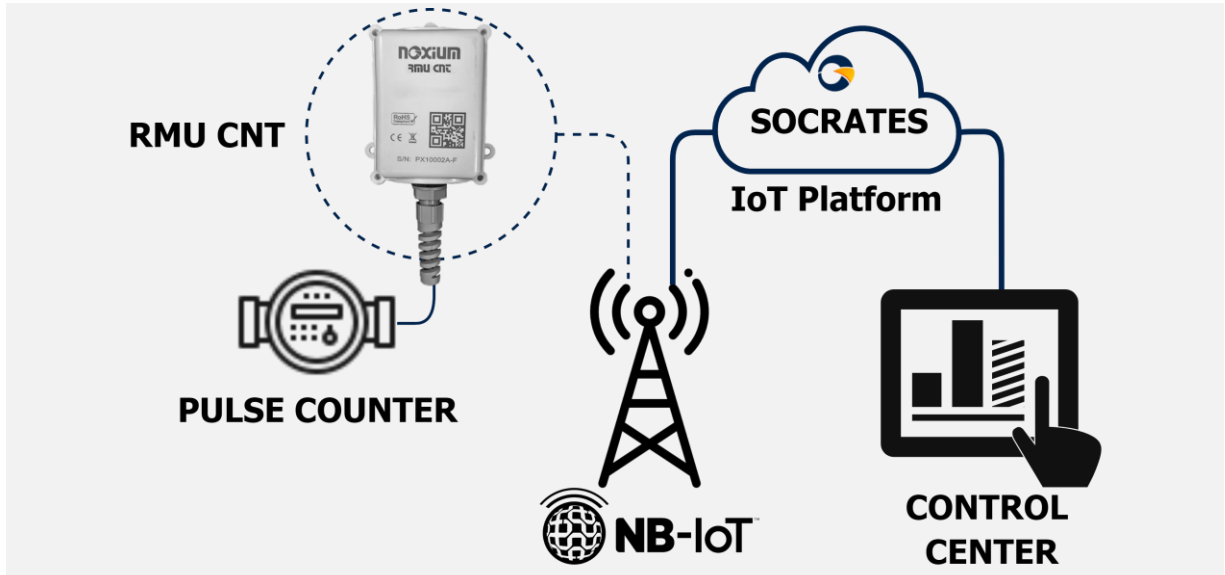
Pulse counter collector with
multiband NB-IoT communications.



Main Features

- Ultra low power consumption with optimized operation mode.
- Reliability in Data Acquisition and Communication Operations.
- Remote Configuration and Maintenance: SOCRATES platform.
- High capacity for logging and local storage of readings.
- Ergonomic, small footprint and quick installation.

Typical Application Pulse water meter collection



TECHNICAL SPECIFICATIONS

Wireless Connectivity NB2/ CatM1 / GPRS	
LTE+ → NB2 + CatM1	LTE+ NB-IoT.2 – data rate (kbps): 32 Download, 70 Upload
	LTE+ CatM.1 - data rate (Mbps): 1 (DL), 1 (UL)
2G → EDGE + GPRS	2G EDGE – data rate (kbps): 296 (DL), 236.8 (UL)
	2G GPRS – data rate (kbps): 107 (DL), 85.6 (UL)

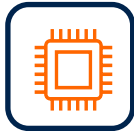
Features and benefits	
Pulse Interfaces	Up to two digital pulse inputs with signal processing capability up to 100 Hz with programmable filtering and noise filtering.
Digital Interfaces	Up to 2 digital inputs with programmable alarm capability per event or edge. Functionalities are configured at the factory.
Batteries	Autonomy according to battery and usage regime.
eSIM support	Integrated eSIM that enables remote switching of communications carriers as specified in GSMA SGP .02 v3.2
FOTA	Sócrates Platform remote firmware upgrade
Recording capacity	It has an internal memory with the capacity to temporarily record more than 20,000 readings, with behavior according to the LIFO/FIFO strategy.
Data sending periods	From 24 hours to weekly programming, according to connection schedules.
NFC mobile app	Obtaining configuration parameters and operating statistics



Connectivity 4G LTE (Cat M1/NB-IoT)
Fallback 2G (s. versiones)



Secure channel communications.
Data encryption and securization.



NFC chipset, allowing configuration parameters and operating statistics to be obtained locally via smartphone



IP67/IK09 and UL94 HB polycarbonate watertight plastic enclosure with sealed screws.



Intelligent self-management mechanisms, noise filtering and alarm signal processing.



Dimensions: 86x66x35 mm
Weight: 500 gr. (version 2C1)
Optional M12 connection fitting



Local interface with two-counter capability, and two auxiliary inputs for error or flow direction detection



High local registration capacity
Versatility of configurations
Complete operation information



Intelligent data transport over wireless networks enables remote FOTA firmware update and configuration



Industrial Working Temperature
From -40 to 80°C



Internal battery power supply.
Efficient energy management that extends battery life.
Ultra low power consumption.



Ergonomic, easy installation and registration of devices, wall or pole mounting

CERTIFICATIONS

Fields	References
Security	IEC 62368-1 / EN 62368-1
EMC requirements	ETSI EN 301 489-1 V2.2.0 (2017-03) & ETSI EN 301 489-52 V1.1.0
Enviromental	IEC 6800xx Cold, Heat and Variations (-40 a 80°C)(*)
Degrees of Protection	IP 67 IK9
(*) consult degradations due to use in extreme ranges	

IoT SOCRATES PLATFORM

This platform is in charge of managing the RMU family of devices, as well as managing the data received from them, offering: **Network Monitoring, Device Management** and **Data Service**.

The screenshot shows the Socrates IoT Platform interface. On the left, there are sections for 'Alarmas' (Alarms) and 'Resumen de unidades' (Unit Summary). The 'Alarmas' section shows a 24h filter and 0 total alarms. The 'Resumen de unidades' section shows 2060 units installed, with 2060 units with alarms and 0 units in storage. The main area displays a 'Listado de concentradores' (Concentrator List) table with 16 records per page and a total of 2124 records.

Inst.	Conf.	Alar.	Conexión	N.D.
--	--	--	--	
		●	2023-02-24 14:32:02	22
		●	2023-02-24 14:31:36	9
		●	2023-02-24 14:31:11	10
		●	2023-02-24 14:30:56	1
	⚠	●	2023-02-24 14:30:56	2
		●	2023-02-24 14:30:46	25
		●	2023-02-24 14:30:31	5
		●	2023-02-24 14:30:26	2

ANDROID NFC Reader: Sócrates Mobile Assistant

This android application, hereinafter SMA, has a mobile viewer that allows to characterize the suitability of the installations and their locations.

It is a key tool in the certification of installations, so that there is a guarantee of proper operation of the installed devices.

The screenshot shows the Noxium RMU mobile application. The left side shows the login screen with the Noxium RMU logo and a prompt to enter an access key. The right side shows the 'Nueva Lectura' (New Reading) screen with the following data:

Datos
F: U.T.NOXIUM
IM: 863266051178104
HW: R3
TO: 2023-09-18 08:14:07
V: FLOW-SADC-R3 13.00
SM: 901288002458823
CI: 8988239000007109925
FM: 2110807SIM7022
NRE: 25

Dimensions

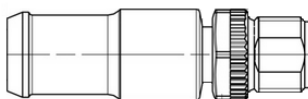


Wall or pole mounting



Typical Connection

PIN	Señal/Color M12 Hembra
1	Entrada Contador 2
2	Entrada Contador 1
3	Masa de señal (SG)
4	Entrada Digital/Analógica 1
5	Entrada Digital/Analógica 2



I/O terminal 1m cable with M12 connector

ORDERING INFORMATION

Available options:

Option	Connectivity	Option	Battery capacity	Option	Accessories
NB	NB2 multiband	2C1	~ 3 years	LM	M12 cable
NBxx	NB2 band xx			LR	RJ11 cable
QM	LTE-CatM1/2G				
Q3	NB/4G CatM/fallback 2G				

*Variable duration according to device configuration.

Active references in production:

RMU CNT NB 2C1 LM

Industrial Gateway Model Pulse Collector/Pulse Counter Gateway, with NB-IoT multiband communications, battery power supply with ~3 years autonomy and a M12 cable. IP67/IK09 and UL94 HB polycarbonate plastic enclosure with inlet cable gland.

