Doc. Type:	Product
Sub. Type:	Specification
Status:	**Rev 1.0**
P/N:	Newsteo CUB
Author:	AC

Newsteo CUB
Product Specification

DISCLAIMER

Newsteo makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty described into Newsteo's Terms & Conditions of Supply. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein.

No licenses to patents or other intellectual property of Newsteo are granted by the Company in connection with the sale of Newsteo products, expressly or by implication. Newsteo's products are not authorized for use as critical components in life support devices or systems.

Newsteo cannot be held responsible for any misuse of the products, including the use of radio transmissions in contradiction with the applicable local regulations. The devices covered by this specification are designed to be used solely in the European Union countries. Newsteo cannot be financially held responsible for the financial and material losses due to a misuse and/or a malfunction of its products.

All products are sold subject to Newsteo's Terms & Conditions of Supply and the provisions of any agreements made between Newsteo and the Customer. In ordering a product covered by this document the Customer agrees to be bound by those Terms & Conditions of Supply and agreements and nothing contained in this document constitutes or forms part of a contract (with the exception of the contents of this Notice). A copy of Newsteo's Terms & Conditions of Supply is available on request.

Revisions

Revision	Issue Date	Author	Comments
1.0	July 22th, 2019	AC	

Table of contents

Table of figures

1 Introduction

Object:

Define the products specifications in term of technical characteristics, physical dimensions, aperture, accessories and casing.

Products:

The Newsteo CUB is a 868 MHz Radio – Ethernet & WiFi gateway. It allows remote networked collection, through Ethernet (IP) of data coming from several Newsteo Data Loggers, and storage on a remote secured server.

References:

- PFPN-CUB 12-001 : High Performance Ethernet Gateway, for Indoor use

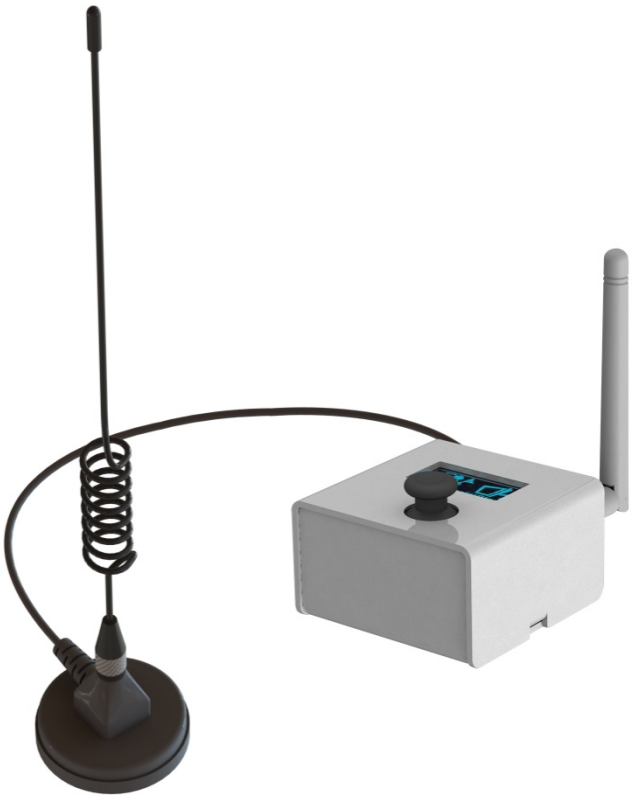

Figure 1: PFPN-CUB12-001

2 Summary of the data collection infrastructure

2.1 Measurements collection

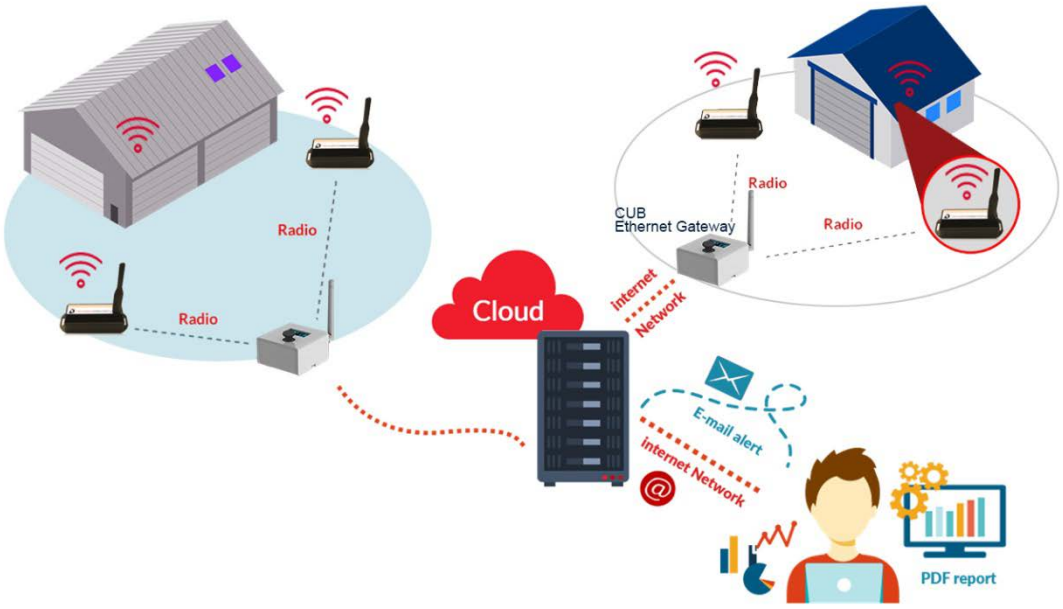

Figure 2: Functioning

- The Wireless Data Logger equipped with a sensor takes the measure and transmits it by radio to the Newsteo CUB,
- The Newsteo CUB (or gateway) transmits the measurements through Ethernet (IP) to a central database,
- A real-time alert can be sent anywhere to the supervisor,
- The supervisor
    a. can access at any time to the measures, via Internet
    b. can modify any data logger's setting though the internet

2.2 Database hosting

Each CUB is delivered with a pre-set web-hosted database, hosted on the Newsteo's servers.

2.3 Displaying of the measures from the database

The data are displayed on www.newsteo-webmonitor.com.
Newsteo Webmonitor is delivered as a cloud based solution based on a SaaS licensing mode.

3 Product characteristics

TBC : To Be Confirmed

3.1 Hardware Key Features

	PFPN-CUB12-001
Application	Indoor Ethernet & WiFi Gateway
Transmission mode	Ethernet IPv4 – 10/100Mbps WiFi IEEE 802.11 b/g/n
CPU cores	2
CPU architecture	32 bits
CPU frequency	240MHz to 1.2 GHz
RAM	512Mo DDR3
Non-volatile memory	SD Card 8Go for the Operating System Additional SPI 16Mbits for data loggers data buffering (equivalent to 128000 time stamped measurements lines)
Antenna connectors	- 1 SMA for ISM antenna - 1 SMA reverse for WiFi antenna **(not to be disassembled)**
Power consumption	Average 5V 300mA , UPS (Uninterruptible Power Supply) on board 1A during first power-up (1 to 2 minutes)
Power supply	**AC adapter included 2A** (USB 3.1 C Format for Power supply) (5V DC input)

3.2 Connection to the Network

2 ways to connect the IP Network:

- Connection through Ethernet cable (connect the CUB to the modem with a RJ45 cable)
- Connection through WiFi (connect the CUB by WiFi to the modem)

3.3 Other features

Figure 3: CUB12 Rear panel

	PFPN-CUB12-001
Casing	Painted aluminium
IP level	IP30 non condensing
Operating temperature	+10°C...+40°C (for other operating temperature, consult us)
Display	Oled white 128x64 pixels for status & settings
Button	5 positions (4 directions & click) for navigation
Connectors	- RJ-45 for Ethernet (cable 10/100 Base-T needed) - USB 3.1 C Format for Power supply & power status led (green/red) - SMA for radio antenna - WiFi antenna (not to be dissembled) - USB A reserved for future extension
Dimensions (without antennas)	Length: 68 mm Width: 68 mm Height: 41 mm To have more details on the casing size, please refer to the Annex 1.
Weight	With accessories : about 400g Without accessories : about 200g

3.4 Supplied accessories

- 1 x External power supply (AC/DC adapter), with USB Type C connector, 1 meter length
- 1 x Ethernet cable, RJ45 connectors, 2 meters length
- 1 x black Radio Antenna, fullwave antenna
- 1 x white WiFi antenna (not to be disassembled)

3.5 Certifications

Products certified for radio use in Europe, on the frequency of 868 MHz (ISM/SRD band). For use in another area, check with local authorities.

4 Hosting server functioning

The Newsteo Gateway communicates with the remote Newsteo Webserver in ‘point-to-point’ mode, which limits the risk on the network itself. Newsteo has implemented the SSL protocol (port 443) to secure the data between the gateway and the server.

ANNEX 1