nCounter

Meshed nCounter v3 Data Sheet
Published 27-Nov-23

Description

Meshed nCounter is an omni-directional people counting solution designed to provide an approximate count of the number of people in its vicinity. It achieves this by anonymously counting the number of WIFI – enabled devices in its vicinity in 10 – minute segments & reporting the counts over a LoRaWAN® connection to the nCounter platform where the data can be visualized.

Meshed nCounter devices require LoRaWAN coverage, normally using The Things Stack, or via Packet Broker or Passive Roaming. Annual subscription for platform, dashboard, data access & storage apply. LoRaWAN coverage can be created easily for a nominal additional cost if none exists at your location.

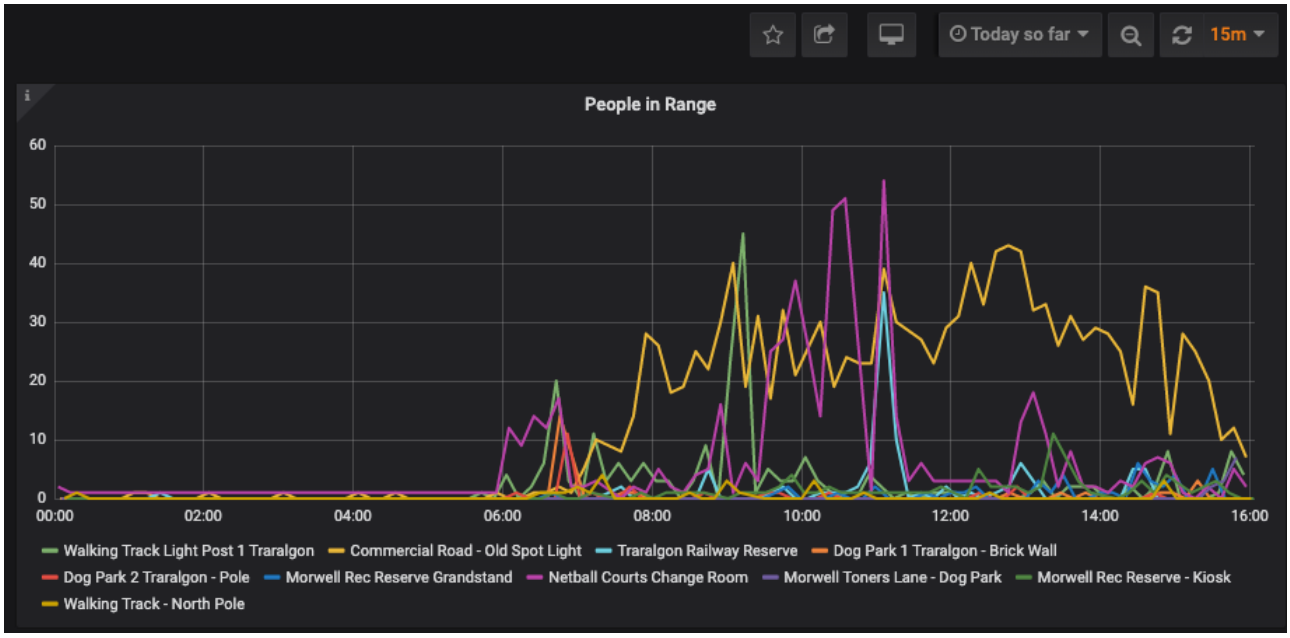
Applications

- 24/7 People counting insights for
- Kerbs/Walking Trails
- Cycle/Bike Ways/Paths
- Malls & Shopping Precincts
- Activity/Central Business Districts
- Town Hall/Libraries/Community Halls
- Smart Precincts & Digital Hubs
- Parks & Playgrounds
- Events Festivals
- Sports Fields
- Public Toilets/Amenities
- Tourism Hotspots
- Entertainment Districts
- Train Stations
- Bus Stops
- & More

Data Metrics

- Number of Devices:
  - Total - Total in range in this period (i.e. current + new)
  - New - Detected in this period who were not here in the previous period.
  - Current - Still in range from previous period.
  - Left - That have left in this period.
- Dwell Times per Hour, Day, Month, Year
- Specify Your Own Time Periods
- Average Dwell Times

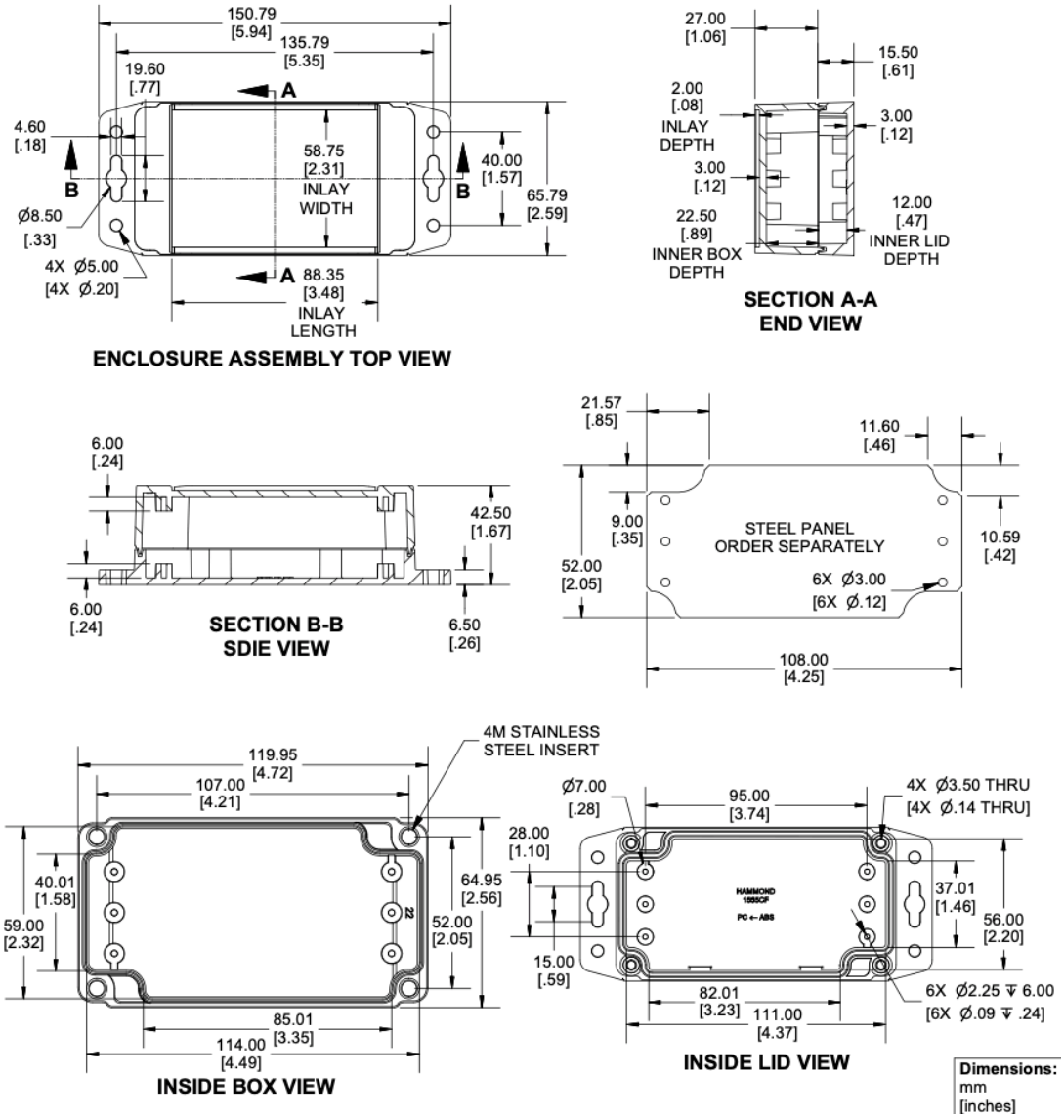
Visualization Dashboard



Key Functionality	
Limits	– **Maximum cell phones per 10-minute period:** 300 – **Maximum Wi-Fi range:** Approximately 164 feet (50 metres). Typical range of any personal electronics with Wi-Fi. – **Default Wi-Fi range:** Around 66 feet (20 meters) Can be increased or decreased by setting Wi-Fi RSSI Threshold remotely (contact Meshed Support). – **LoRaWAN® range:** Up to 10 miles (16 kms) in flat/rural areas, down to 1–2 miles (1.6 to 3kms) in dense urban areas. Typical range for any LoRaWAN®. Physical limitations include terrain, hard obstacles e.g. concrete/buildings & position of LoRaWAN® gateway.
Range	The people counting range can be changed from less than 1 metre all the way up to the maximum range of the Wi-Fi module. Things to consider: – **Accuracy:** There is a trade-off between range, accuracy and the speed at which people pass through the area. Small ranges with fast traffic will yield low accuracy (under-counting). – **Maximum limit:** If the range is too large, the maximum limit will be reached (approx. 300 people per period) and the results may be inaccurate.
Location	– When a device is powered up, the nCounter platform will attempt to locate the device & place it on the map. If there are no (or few) Wi-Fi networks nearby, its location may be inaccurate or unavailable. We can override this with a manual entry if required.
API	– Data can be pushed to a platform of your choice using a REST API call, specifically a HTTP POST.
Privacy	– Only the aggregated device count data is transmitted over LoRaWAN & never any information that can identify an individual mobile device or its owner. – The nCounter LoRaWAN node device has no external interface, other than a power connector, & no data can be read directly from the device.
Conditions of Use	– Meshed offers the nCounter Solution including devices, platform & maintenance subscription using a “licence to use” arrangement. – Customers own the data & can extract/export their data for internal purposes. However, as the licensor of the solution, Meshed needs to be attributed when the nCounter data is re-used or published to public websites, digital twins or third-party platforms. – Meshed also reserves the right to also use the data for our own marketing, product development or commercial purposes.

Product Specifications	
Dimensions	151(W) x 66(D) x 42(H)mm 
Weight	160 gm
Power requirements	5-16 VDC, <300mA (Solar powered optional)
IP Rating	IP67 for nCounter device. USB Power Supply not IP rated
Operating Temperature	-40°C to +85°C
Regional Parameters	LoRaWAN Band Plans AU915, AS923, US915
LoRaWAN Device Type	Class C
Wireless Technology	LoRaWAN® v1.0.4
	LoRaWAN® is a mark used under license from the LoRa Alliance®.

nCounter Device Dimensions



Items Supplied in the Box	
nCounter Device 	Power Cable 2-3m. Various lengths available. 
USB Power Supply 	nCounter Solar Power Kit includes solar panel, bracket, rechargeable battery, cables & connectors