

Subject to change draft
version



PiPhi Network

LITEPAPER V2.01



PiPhi Network

- PiPhi Network is a distributed platform for smart home and environmental data. With our supported hardware and sensors, users collect and visualize data in real time. This data can then be uploaded to our global network.
- In exchange for access to their data, users earn rewards in the form of our utility token \$PIPHI.
- Consumers access this data via the PiPhi web3 API. Communities, researchers, and government agencies are among the many consumers of environmental and smart home data.





THE PROBLEM

- From indoor air quality and humidity to soil temperature and a backyard microclimate, homeowners today want the ability to monitor their home and their environment. Gardeners, weather enthusiasts, and anybody looking to improve their personal well-being can collect this data in real time thanks to readily available and affordable environmental sensors and smart home devices. With all this data often comes multiple platforms, multiple dashboards, and multiple login credentials. It becomes a part-time job to keep up with the flow of information.
- Many of these platforms now require subscription-based services to store and track the data you're collecting. These monthly fees mean more revenue for the manufacturers. Once you have your sensors in place and collecting data, these companies can now sell your data to third parties. Not only do they charge you a monthly fee for monitoring services, but they profit from the sale of the data that you provide them.

At the end of the day, your data is not your data at all.



THE SOLUTION

- PiPhi Network offers a convenient solution that aggregates your data into one application. Our software collects and monitors the data from multiple sensors and devices across multiple platforms onto one custom dashboard. Our software also includes a lifetime license with no additional subscription fees required.
- We also believe your data should remain your data. As part of our business model, we will, with your permission, make your data available for purchase. Unlike the big corporations, we'll return a portion of the revenue back to our community. In exchange for access to your smart home and environmental data, you'll also earn crypto rewards. At the end of the day, without your contribution to the network, there is no data. Without our community, there is no PiPhi Network.

ROADMAP

2023

2024

MULTI-PLATFORM ✓

PiPhi Network will release a new version of the software to include both Raspberry Pi and Windows OS support

MORE SENSORS ✓

Expanded selection of sensor data



DRAFT TOKENOMICS ✓

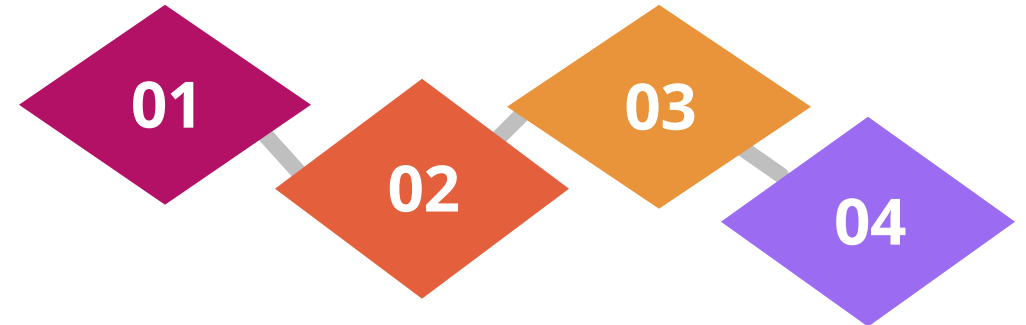
Refine UtilityToken distribution to incentivize a growth model for long term sustainability, while focusing on future network growth and encourage perpetual adoption

FINALIZE TOKENOMICS

Implement community feedback on tokenomics model and refactor elements where needed

SMART HOME INTEGRATION

PiPhi Network will release new smart home integration including Google Home and Alexa compatibility



MAINNET LAUNCH

Refine UtilityToken distribution to incentivize a growth model for long term sustainability, while focusing on future network growth and encourage perpetual adoption

MOBILE APP

PiPhi Network will integrate remote monitoring of your smart home sensors and introduce automation, triggers and alerting (text, mobile)

<https://PiPhi.Network>



Our Services



DATA AGGREGATION

Multi-Sensor data collection repository focused on the integrity and variability of different data points



DATA ACCURACY

Hyper localized datapoints built on an H3 hex-grid for accurate data.



DATA ACCESSIBILITY

Borderless data accessibility and a centralized platform for visualization and analytics



SMART HOME AUTOMATION

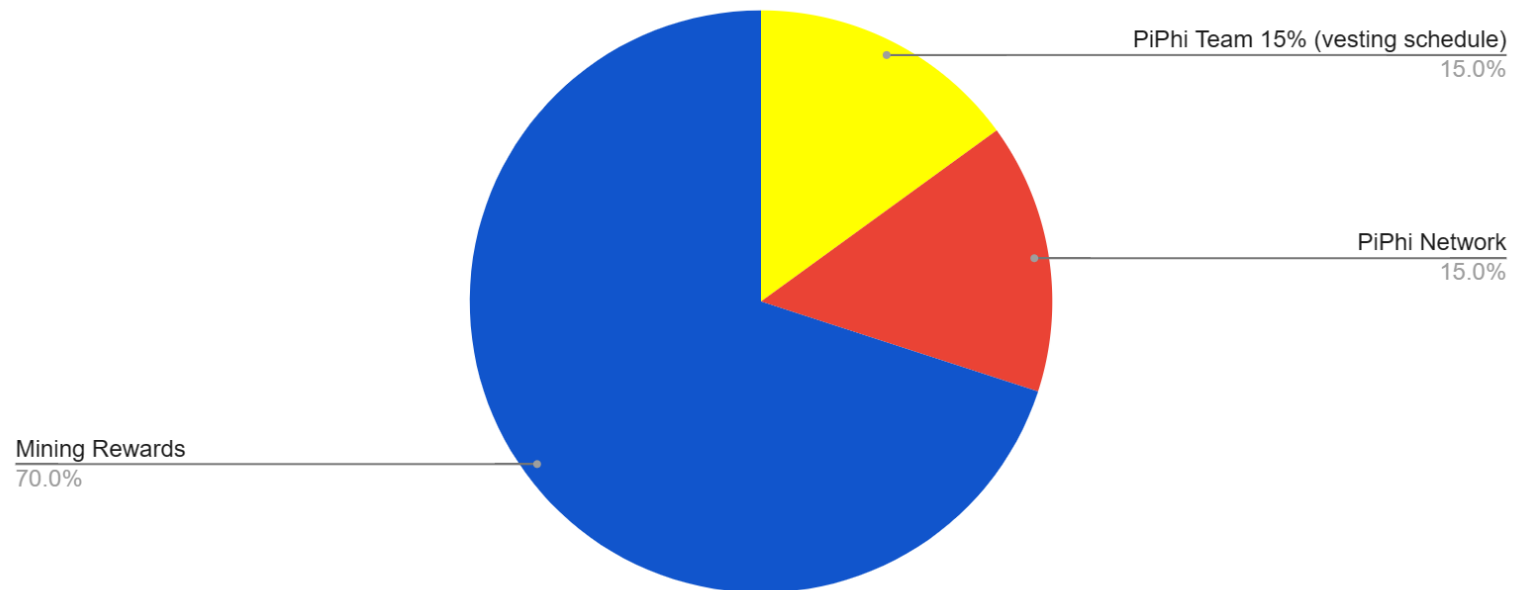
Transform your home or business into a seamlessly integrated, off the shelf, home automation system



Tokenomics and Rewards

Token Distribution

- PiPhi Network
 - Investors
 - Future Development
 - Liquidity
- Team
 - Subject to lock up period
- Rewards
 - Data Sharing
 - TestNet Conversion



Reward Calculation (Sensor Data Score)

Sensor Data Score = Daily Reward (MAX 13)

Sensor Data Score Calculation

- Each unique sensor is equivalent to 1 in the reward calculation
- Duplicate sensors are rewarded 30% (Score = $.3 * \text{Unique Sensor Total}$) of the total unique sensor count (Score = 1)

Sensor Data Score (Max 13) = Unique Sensor Count * 1.0 + Duplicate Sensor Count ($0.3 * \text{Unique Sensor Count Total}$)

Token Rewards Phase 2 Breakdown

- Token Rewards
 - Token Reward Example
 - Awar Element (1) +
 - Acurite 5n1 Weather Station (1)
 - BME680 (1) + BME680 (.3 * UNIQUE SENSOR TOTAL)

TOTAL = 3.9 Tokens / Day
 - As new sensors are added to our catalogue, max rewards may be adjusted, this is to incentivize users to update/expand to new sensors. If you want max rewards add new sensors.
 - *Note: Duplicate datapoints are rewarded fractionally.*

Reward Calculation Summary

SENSOR DATA SCORE = DAILYREWARD TOTAL **(MAX 13)**

SENSOR DATA SCORE FORMULA

UNIQUE SENSOR TOTAL + DUPLICATE SENSORS (.3 * UNIQUE SENSOR TOTAL) = SENSOR DATA SCORE

REWARDS EXAMPLE

UNIQUE SENSORS:

A WAIR ELEMENT (1) + BME680 (1) + ACURITE 5N1 (1) + SENSE EDGE MINI (1) + BME280 (1) + KASA SMART PLUG (1)

= 6

DUPLICATE SENSORS:

MULTIPLE DUPLICATES WILL NOT CHANGE THE EQUATION OF (.3 * UNIQUE SENSOR TOTAL)

A WAIR ELEMENT + BME680 + SENSE EDGE MINI

= 1.8

TOTAL SCORE:

UNIQUE SENSORS + DUPLICATE SENSORS = SENSOR DATA SCORE

6 + 1.8 = 7.8

Token Staking Program

- STAKING TIERS
 - GOLD PIONEERS
 - SILVER PIONEERS
 - BRONZE PIONEERS
- GOLD
 - Stake 100000 PiPhi Tokens
- SILVER
 - Stake 50000 Token
- BRONZE
 - Stake 25000 PiPhi Tokens

Token Quantity Is Subject To Change, For Illustration only.



Sensor Integration Roadmap

Future Sensor Integration

- INDOOR
 - Air quality
 - Hygrometers
- OUTDOOR
 - Weather
 - Air quality
 - Soil moisture
- ENERGY
 - Smart plugs
 - Power Strips
 - Household Powerbox monitor

Smart Home Integration and Automation

Multi-Protocol support

- SMART HOME INTEGRATION –
 - Google Home
 - Amazon Alexa
- AUTOMATION -
 - Daily data Reporting
 - Intuitive Smart automation suite
 - Voice Assistance
- Protocols
 - BLE Sensor Support
 - SDR Radio Support
 - Zigbee Protocol Support
 - Wifi WPA2-AES



CURRENTLY SUPPORTED SENSORS

Currently supported Single Board Computers

(need one of the following computers) <https://rpilocator.com/>

Raspberry Pi Zero 2 W

Raspberry Pi 3B+

Raspberry Pi 3A+

Raspberry Pi 4B 1GB, 2GB, 4GB, 8GB

Raspberry Pi 400

Currently supported GPS Modules

(Need a gps module to share data, but software can be used as personal Indoor air quality monitoring software without one)

VK-162 G-Mouse - https://www.amazon.com/Navigation-External-Receiver-Raspberry-Geekstory/dp/B078Y52FGQ/ref=sr_1_3?keywords=VK-162+G-Mouse&sr=8-3

VK172 G-Mouse - https://www.amazon.com/Receiver-Navigation-Compatible-Raspberry-Aviation/dp/B097T9784Q/ref=sr_1_1?keywords=VK172+G-Mouse&sr=8-1

Currently supported Environmental sensors

(Need one of the following Environmental sensors & Cable Kit)

BME688 - <https://www.adafruit.com/product/5046>

BME680 - <https://www.adafruit.com/product/3660>

BME280 - <https://www.adafruit.com/product/2652>

AHT20 - <https://www.adafruit.com/product/4566>

I2C PM2.5 [PMSA003I] - <https://www.adafruit.com/product/4632>

I2C Cable Kit - <https://tinyurl.com/u8jh4355>

OFF THE SHELF SENSORS

Awair Element - <https://www.getawair.com/products/element>

SenseEdge Mini - <https://www.kaiterra.com/sensedge-mini>

KASA Smart Plug - KASA Energy Monitoring Smart Plug

AtmoTube PRO - <https://atmotube.com/atmotube-pro>

AirThings WavePlus - <https://www.airthings.com/en-ca/wave-plus>

SDR COMPATIBLE SENSORS - RTL2832U-SDR USB DONGLE

SDR - EcoWitt WH51 Soil Moisture - <https://www.ecowitt.com/shop/goodsDetail/19>

SDR - Accurite 5N1 Weather Station - Accurite 5N1



WINDOWS RELEASE NOTES

RELEASED

Windows 10 / Windows 11 Support

Minimum Software Requirements: Win10, Win11

Minimum Hardware Requirements: To be provided upon release

We've been testing on something similar to this:
<https://tinyurl.com/4wd6a4jr>

Required Adapters & Cables

Only needed for I2C Connected Sensors (BME680, BME688, PM2) for use on Windows Machines
MCP2221 (USBc to I2C) Adapter - <https://www.adafruit.com/product/4471>
I2C Cable Kit - <https://tinyurl.com/u8jh4355>

Added Sensors

Sense Edge Mini - <https://www.kaiterra.com/sensedge-mini>

Kasa Smart Plug - <https://tinyurl.com/ynn93jhc>



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"THE MIRACLE IS THIS - THE MORE WE SHARE, THE
MORE WE HAVE"
LEONARD NIMOY