Subject to change draft version

PiPhi Network

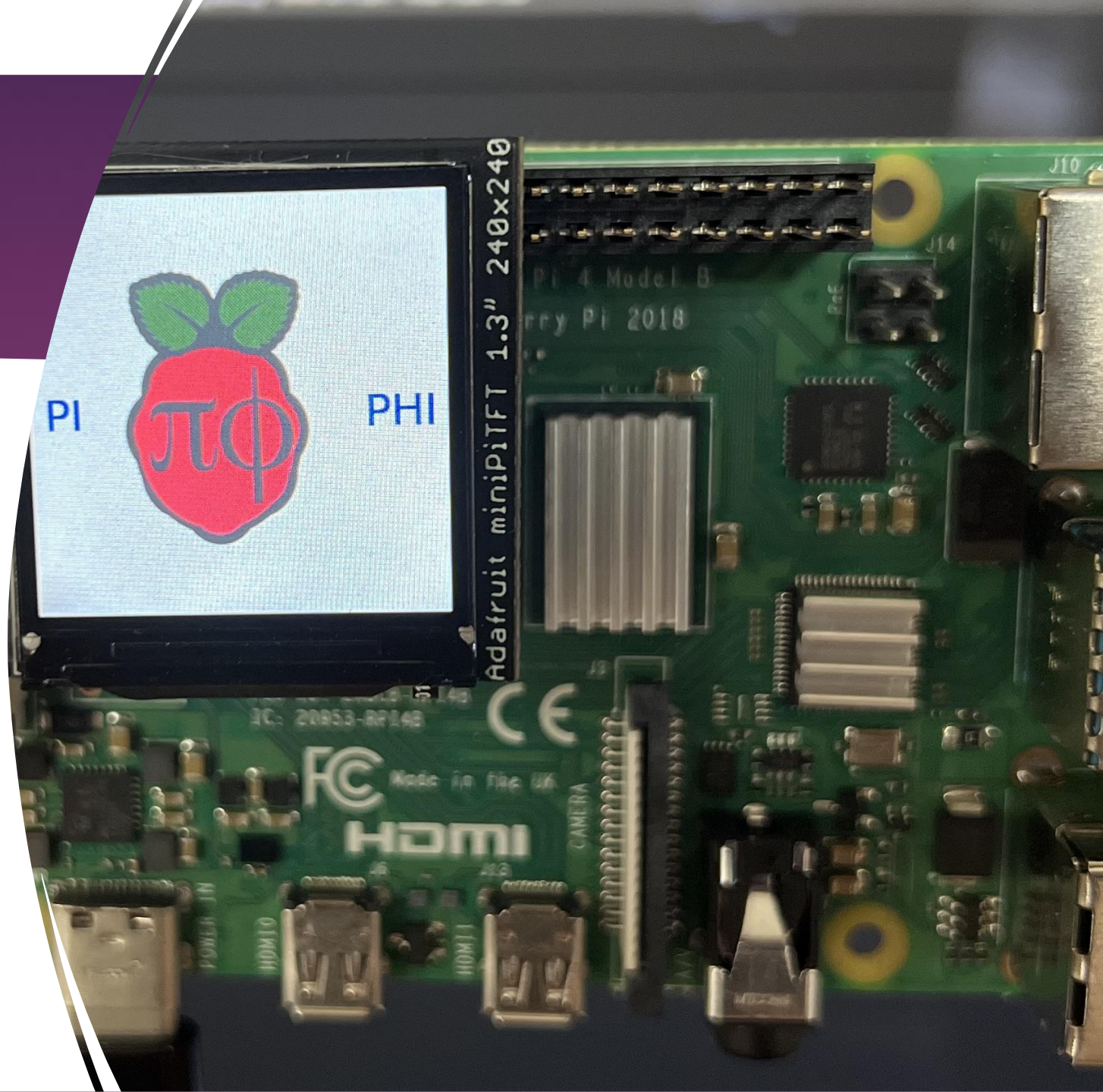
LITEPAPER V1.01

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

Q1

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

Q2

SMART HOME INTEGRATION

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

MAINNET LAUNCH

Refine Utility Token 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

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

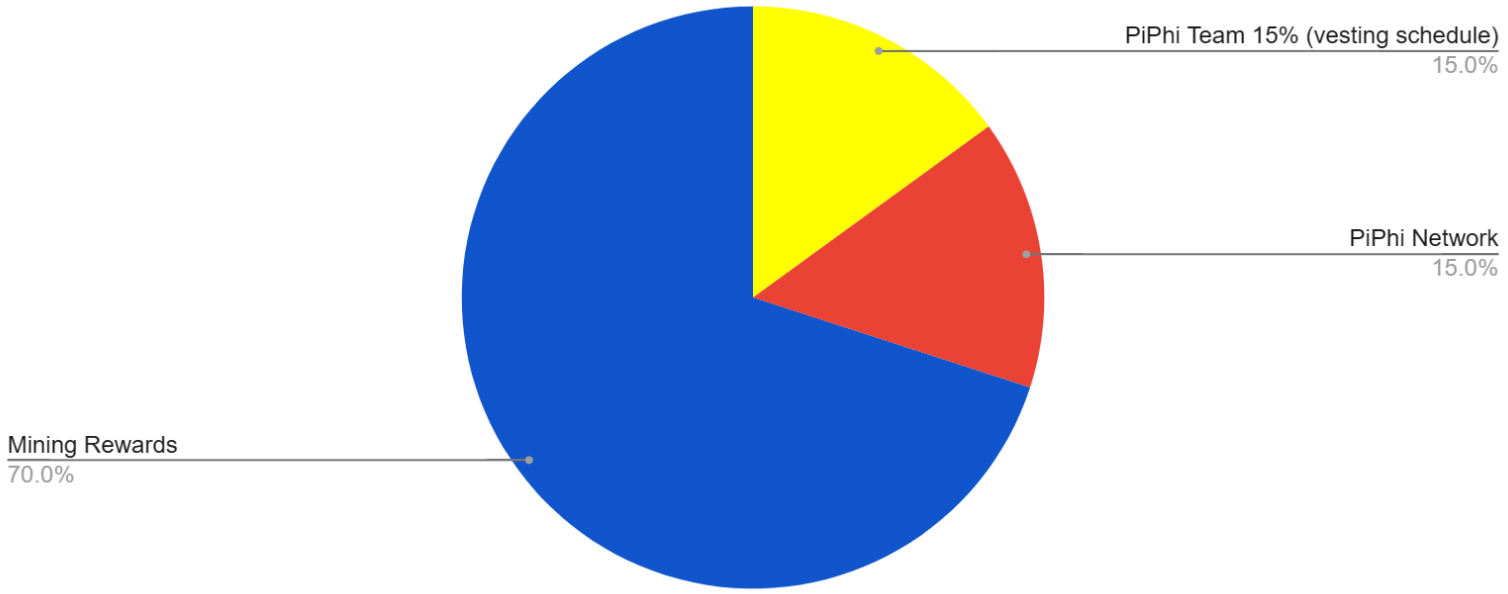
SMART HOME AUTOMATION

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 (Data Stream)

Data Stream Score x Sensor Data Score x PiPhi multiplier = Daily Reward

1. Data Stream Score Calculation
   - Max streams sent to network per day 288 (every 5 minutes)
   - Submitted data streams by user

   Data Stream Score = Submitted by User / Max data streams

Reward Calculation Phase 1 Breakdown

- Indoor Sensor Data Score
  - Max Rewards 1.0
    plus duplicate datapoints boost
  - Current Top Earning Sensors
    - Sense Edge Mini = 1.0
    - Awair Element = 1.0
    - BME680/BME688 = 0.7
    - BME280 = 0.35
    - PM2.5 = 0.3
  - As new sensors get added to category max rewards will be adjusted, this is to incentivize users to update/expand to new sensors. If you want max rewards add new sensors.
  - Duplicate
    datapoints are rewarded fractionally.

Reward Calculation Phase 2 & 3 Breakdown

- PHASE 2 - OUTDOOR DATA SCORE
  - MAX REWARDS 1.0
    PLUS DUPLICATE DATAPOINTS BOOST
  - WEATHER STATIONS = 1.0
  - OUTDOOR PM SENSOR = 0.8
  - SOIL MOISTURE = 0.4
- PHASE 3 - ENERGY DATA SCORE
  - MAX REWARDS 1.0 PLUS DUPLICATE DATAPOINTS BOOST
  - POWERBOX MONITORS = 1.0
  - POWER STRIPS = 0.8
- As New Sensors Get Added To Category Max rewards Will Be Adjusted, This Is To Incentivize users To update/Expand To New sensors.
- Duplicate datapoints are rewarded fractionally.

Reward Calculation Summary

- FINAL SCORE
  - DATA STREAM SCORE
    - EXAMPLE 288/288 OR 265/288
  - SENSOR DATA SCORE
    - INDOOR DATA SCORE + OUTDOOR DATA SCORE + ENERGY DATA SCORE
- FORMULA
  - Rewards = Data Stream * Sensor Data Score Example
  - DATA STREAM SCORE = 288/288
  - INDOOR DATA SCORE = 1
  - OUTDOOR DATA SCORE = 1
  - ENERGY DATA SCORE = 1
  - 3.0(SENSOR DATA SCORE) * DATA STREAM SCORE(1.0 288/288) * PI MULTIPLIER = REWARD

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

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

Currently supported Single Board Computers

(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

WINDOWS RELEASE NOTES

Soon To Come…

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

This information is subject to change as sensor integration is a sustained effort from the PiPhi Team

https://twitter.com/PiPhi_Network/

https://discord.gg/83xD6W6Fmn

PiPhi Network

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

LEONARD NIMOY