

# **New Member Information**



### Welcome!

### Welcome to Los Altos Hills Community Fiber!

- By joining our community-owned network you have taken control of your broadband service
- LAHCF's mission is to offer the fastest residential broadband service in America to all LAH residents with our communityowned and operated network model
- LAHCF's infrastructure, operation, governance, and funding is by its members, not the town of Los Altos Hills. As a member, your participation is important!
- As an LAHCF subscriber, you are a voting member
- We encourage you to engage with LAHCF to help grow our network and inform others about our services and model of operation
- To contact LAHCF with questions or concerns, please view the CONTACT page on the website: <a href="https://lahcommunityfiber.org">https://lahcommunityfiber.org</a>



## Welcome!

### **LAHCF Options of Engagement**

- LAHCF is not a typical Telco service provider like Comcast or AT&T, where decisions, pricing, features, and network operations are controlled by a large out-of-state provider
- LAHCF is governed by a member elected board. We encourage you to consider running for board positions when available or join various LAHCF subcommittees or projects
- LAHCF needs both champions and champion mentors to help move new neighborhood projects forward
- LAHCF has multiple other projects that require volunteers
- Please contact LAHCF if you are interested in learning more!



### Welcome!



#### **Welcome to Next Level Networks!**

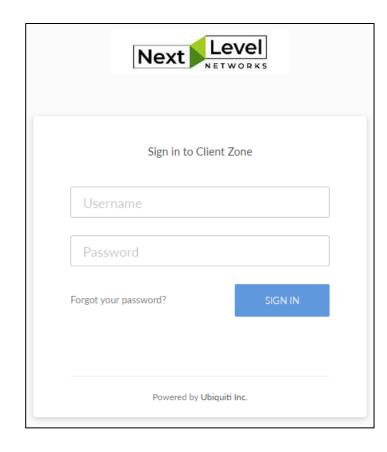
- NLN is LAHCF's professional services company. They are a for-profit company located in Sunnyvale
- NLN's website is www.nextlevel.net
- NLN coordinates the LAHCF fiber installation and also manages the operation and support of our network
- Any support issues will be handled by NLN and its 24x7 network operations center
- NLN provides internet, support, and billing services to LAHCF and its members, as well as other fiber groups
  - Customer Support: 877-413-2137 or support@nextlevel.net
  - Next Level's corporate office: 650-603-0180

# **New Account Setup**

### Client Zone setup\*

- You will receive an email titled "Welcome to Los Altos Hills Community Fiber!"
- Click on "Create Your Password" to finish the setup process
- After logging into the Client Zone portal (located here: https://support.nextlevel.net), you can enter a credit card to set up monthly autopay and check your account balance
  - There is a \$10/month processing fee if you wish to pay via physical check

\*Note: You may have already done this per an earlier email



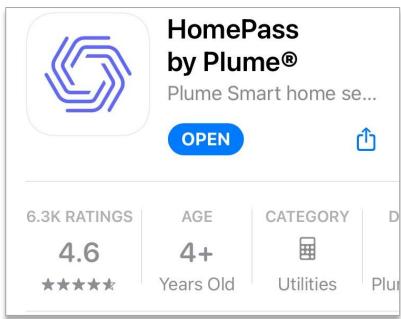




# **New Account Setup**

### Plume HomePass setup

- NLN uses the Plume SuperPod as its standard 1Gbps router and Wi-Fi access point.
  - There is no additional monthly or annual fee (unlike Plume's retail offering).
  - You may alternately use your own router and/or Wi-Fi system.
- To get the full benefit of the Plume system, install the optional HomePass app on your smartphone to gain access to an array of tools for monitoring and controlling your home's internet service.
- When your Plume device is configured, you will receive an email from accounts@plume.com asking you to reset your password for Plume HomePass.
- Download the Plume App for your mobile device (iOS or Android) and choose "Sign in with Plume Account" using the email and password just created.
- CAUTION: When logging into the Plume HomePass app, please DO NOT select "Set up Plume" as this will create a new Plume account requiring a fee that is not associated with your internet service from NLN.







# **Preparing for Home Installation**

#### **Power**

• At least one electrical socket is required at the home equipment install site.

#### Wi-Fi

- If you have an existing Wi-Fi network, you can continue to use it.
- Otherwise, we will enable Wi-Fi on your new router
  - NLN can set up Wi-Fi if provided with a desired network name (a.k.a. SSID) & password.
  - You have the option of replicating an existing Wi-Fi network (i.e. use the same SSID & password of your old system) to avoid making changes to each client device.
  - You can also self-configure Wi-Fi using the Plume HomePass app.
  - Customers can add additional pods to spread the Wi-Fi coverage throughout the home (\$150 each).

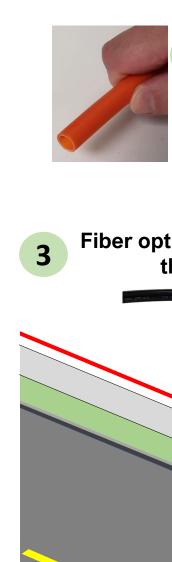
#### **Ethernet**

- Your new router has two ethernet ports; one is used to connect your home to the fiber network.
- If you need more than one port for connecting to your in-home equipment, we will install an 8-port ethernet switch (cost is \$25 per switch).





## **Home Connection Steps**



1 1/2" microduct installed across property

Microduct terminates in 7"x9" wall box installed on exterior of home



Fiber optic cable are pulled/pushed through microduct.

Outdoor/indoor fiber cable installed from wall box into the home via new 3/8" hole or existing home entry point.





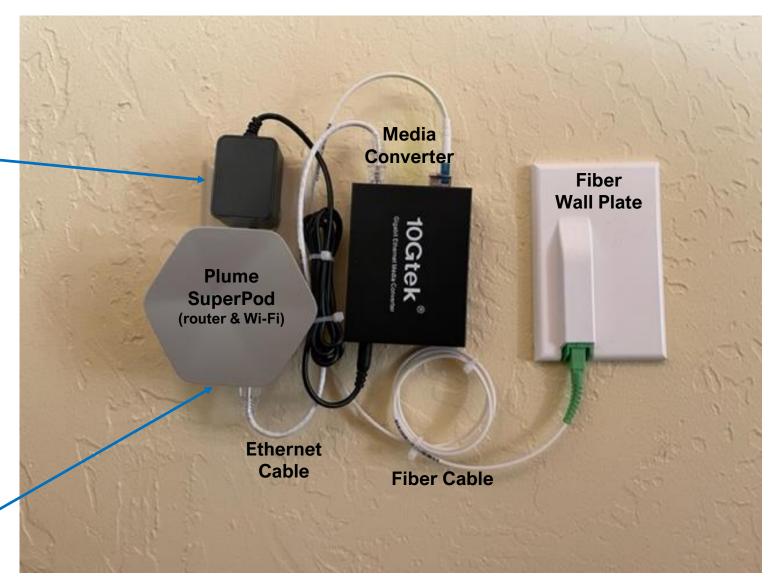




# **Home Equipment Detail**

Power receptacle is required at the equipment mounting site.

Open ethernet jack connects to in-home network.



1/8" wide clear plastic track is installed from the entry point to the fiber wall plate (if needed).



After entering the home, the outdoor/indoor fiber cable's black jacket is pulled back to expose the 1/32" clear fiber cable inside which gets pressed into the pathway track.





# **Home Equipment Detail**

### **1Gbps Media Converter**

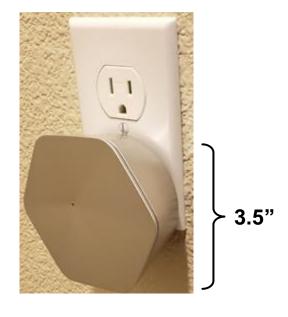
- 10GTek G0101-SFP-UL
- SFP in (fiber) & RJ45 out (e.g. Cat6 ethernet)



### Router & Wi-Fi access point

- Plume SuperPod
- Router/bridge
  - 940 Mbps up/down
  - 2x 1Gbps RJ45 ports (WAN or LAN autosensing)
- Wireless
  - Triple band radios
    - 2.4GHz and 5GHz 2x2 MIMO and 5GHz 4x4 MU-MIMO 802.11b/g/n/ac radios
  - AC3000 Gigabit Wi-Fi (400 + 867 + 1734 Mbps)
  - Best-in-class auto-optimizing mesh Wi-Fi
- Automated speed tests









## Plume & Plume HomePass

- A Plume "SuperPod" can be a gateway router, wireless Wi-Fi extender, or wired Wi-Fi extender.
- Pods perform automated speed tests to ensure consistent high-quality service is being delivered.
- Pods have advanced Wi-Fi capability:
  - Mesh Wi-Fi system automatically optimizes performance across all deployed pods
  - Add as many pods as needed to extend Wi-Fi coverage to all parts of a house
- Advanced features available via Plume HomePass app (iPhone or Android):
  - Graphical visualization of all connected devices and their connectivity status
  - Initiate speed tests and view logs of previous tests
  - Customized Wi-Fi access (e.g. guest accounts, limit access of children's devices, etc.)
  - Option to enable "Al Security" to block malicious websites and block browser ads
  - Option to enable Wi-Fi-based motion detection
- Further info:
  - Plume intro: <a href="https://vimeo.com/486504573/436edb1fe9">https://vimeo.com/486504573/436edb1fe9</a>
  - Plume app overview: <a href="https://www.youtube.com/watch?v=HrAII-yU66Y">https://www.youtube.com/watch?v=HrAII-yU66Y</a>

#### Plume SuperPods



#### Plume HomePass App







# 1 Gigabit vs. 10-Gigabit Service

- Each home is served by a dedicated fiber optic cable and connected to a dedicated
   10Gbps switch port
- Next Level currently provides home equipment that enables 1Gbps service
  - We expect to have a 10Gbps home equipment solution available later this year
- Members with an advanced networking skillset who wish to receive 10Gbps service immediately can do so by providing their own equipment:
  - No additional monthly cost to connect at 10Gbps
  - Next Level will have limited ability to provide customer support beyond the fiber handoff
    - We recommend connecting a Plume pod behind your equipment to enable us to provide better customer support and troubleshooting
    - We reserve the right to bill any customer for troubleshooting, service, and repair caused by customer-owned equipment
  - 10Gbps installation requires an open SFP+ port
    - We will supply a 10GBASE-BX BiDi SFP+ 1330nm-TX/1270nm-RX 10km DOM transceiver for this port (and its SFP twin at the end)
    - Install cost will be \$100 for the SFPs plus a small installation cost





# **Speed Expectations**

- Next Level provides up to 10Gbps internet service but actual network speeds will vary widely due to a number of factors
  - High-end systems such as gaming PCs or PowerMacs outfitted with a 10GBaseT port or PCI-e card can reach speeds in the 8,000 to 9,000 Mbps range when connected to our 10Gbps service. However, you should be aware that most servers on the internet (even speed test servers!) can only support a fraction of this speed. Further, browser-based speed tests max out around 3Gbps. Further details here: https://bit.ly/2Y62DoF
  - Recent model PCs & Macs directly attached via ethernet cable can often reach speeds around 800 to 900 Mbps (up & down) on our gigabit service
  - Laptops and older-model PCs often may not be able to reach 800 Mbps even when directly connected
  - Many USB adapters will considerably limit the maximum network speed per the chart below
  - Performance of any Wi-Fi connected device will vary tremendously depending on proximity to the radio, the distance away and whether walls or
    other objects are in the signal path. The chart below provides some rough guidelines for different generations of Wi-Fi
- Your most reliable test point will be your network gateway. Your Plume SuperPod will regularly test its connection speed and you can use the Plume App to review these tests (or run an on-demand test) at any time

Wireless Generation	Typical Speed (Mbps)	Standard	Year	Frequency (GHz)	Theoretical Max (Mbps)	Actual Max (Mbps)
1	2 to 3	802.11b	1997	2.4	11	6
2	3 to 20	802.11a	1999	5	54	27
3	10 to 20	802.11g	2003	2.4	54	27
Wi-Fi 4	40 to 50*	802.11n	2009	2.4/5	600*	100*
Wi-Fi 5	50 to 300*	802.11ac	2014	5	3,500*	600*
Wi-Fi 6	200 to 800*	802.11ax	2019	2.4/5	9,600*	574 (2.4 GHz)* 2,402 (5 GHz)*

Laptop Ethernet Solution	Typical Speed (Mbps)	Theoretical Max (Mbps)
Built-in ethernet port	750	1,000
USB3 Ethernet Adapter	650	1,000
USB2 Ethernet Adapter	200	480





<sup>\*</sup> Varies based on MIMO implementation (MIMO = Multiple Input Multiple Output = multiple transmitters and receivers operating in parallel)

### **Contact Info**

 During the installation process, please direct questions to Wayne Boissicat, 408-771-5431 <a href="mailto:wayne.boissicat@nextlevel.net">wayne.boissicat@nextlevel.net</a>

 Post installation, please contact customer support 877-413-2137 (available 24x7x365)
 support@nextlevel.net



