

# 841-T6 GATEWAY



# **NHTC Customer User Guide**

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# Overview

The 841-t6 is a carrier-class, tri-band (2x2x4), WiFi 6 multi-gigabit Residential gateway and mesh access point (AP) designed to deliver top-end WiFi 6 performance, gigabit throughput, and advanced service delivery capabilities.

## Features

The features of the 841-t6 include the following:

- 2.5G WAN interface (RJ-45)
- 1G LAN interface (RJ-45)
- USB 3.0 host port (Type A)



Figure 1. 841-t6 Mesh AP





#### NOTE

Refer to the national, state and local electrical codes for the requirements for power, grounding, wiring, and installation methods.

## **Package Contents**

- Adtran's 841-t6 Wi-Fi 6 Mesh AP
- 12V DC power adapter
- Ethernet cable

#### CAUTION!

The product is intended for indoor use only. Ethernet and attached equipment are intended for use within the same building with equipotential bonding, and not intended to be placed in separate buildings or structures. Failure to deploy as described could result in permanent damage from lightning or other electrical events and voids the warranty. Furthermore, all connections from outside of the building must be disconnected prior to use.

## Installation

Physical installation of your 841-t6 Router will have been performed by a New Hope Telephone Cooperative technician. See Figure 1 if you have any questions about the install.

Table 1: Recommended Minimum Distance Between the Gateway and Household Appliances				
Household Appliance	Recommended Minimum Distance (in feet and meters)			
Microwave ovens	30 feet / 9 meters			
Baby monitor – analog	20 feet / 6 meters			
Baby monitor – digital	40 feet / 12 meters			
Cordless phone – analog	20 feet / 6 meters			
Cordless phone – digital	30 feet / 9 meters			
Bluetooth devices	20 feet / 6 meters			
ZigBee	20 feet / 6 meters			

#### Warning!

Ensure that the 841-t6 does not come in contact with water or other liquids.



/ľ

Caution!

Ensure that the 841-t6 is not located in direct sunlight or next to any thermal obstructions.

## **Subscriber Connections**

The following subscriber connections are available on the back of the 841-t6:

- 1G Ethernet port (RJ-45 Connector) LAN port
- 2.5G Ethernet port (RJ-45 Connector) WAN port
- USB 3.0 (Type A Connector) port

To connect the Ethernet interfaces, refer to Figure 1 and insert a Category 5E (or better) RJ-45 cable into the LAN port (labeled LAN) and the WAN port (labeled 2.5G WAN) until there is an audible "click".

The USB 3.0 host port is reserved for future use. This port currently provides +5 VDC for charging external devices.

## Resetting the Gateway

A reset button is available if the 841-t6 needs to be rebooted or restored to factory defaults. To reboot the 841-t6, press the **Reset** button on the back panel of the device for <u>less</u> than **5 seconds**. To reset the device to factory defaults, press the **Reset** button for **5 seconds** or <u>more</u>.

# Understanding the Status LEDs

A multifunction status LED on the front of the unit and status LEDs on the back panel allow you monitor the device status.

## Multifunction Status LED

The multifunction status LED on the front of the unit indicates the device status. Table 2 defines the multifunction status LED state.

Color	LEDState	Event			
Blue	Solid	Cold boot			
Red	Pulsing	Reboot and System Upgrade (persists over uboot)			
Green	Pulsing	Linux booting up			
Green	Blue Pulsing	Quick start			
White	Solid	Hub WAN up, Internet			
Red, Green, Amber	Pulsing	Hub WAN down, no Internet			
Blue	Red Pulsing	Satellite Set Up			
White	Solid	Satellite up			
White	Red Pulsing	Satellite up, fair signal			
Red, Green, Amber	Pulsing	Satellite up, poor signal			
White	Pulsing	Reverting			

#### Table 2: Multifunction Status LED

# **Back Panel Status LEDs**

There are four LEDs located on the back panel of the 841-t6 as shown in Figure 2.



Figure 2. Status LEDs

# 2.4GHz / 5GHz Status LEDs

The 2.4GHz and 5GHz (1 & 2) status LEDs indicate the state of the wireless connections on the gateway.

LED	Color	State	Description			
2.4GHz / 5GHz-1 / 5GHz-2	Green	On	Wi-Fi radio is UP.			
		Flashing	Wi-Fi radio is transferring data.			
	None	Off	Wi-Fi connection is DOWN.			

### Table 3: 2.4GHz and 5GHz Status LEDs

# Logging Into the 841-t6

A browser-based user interface (UI) is used to manually configure the 841-t6. The following steps describe how to connect and login to the device:

- 1. Ensure your computer is connected to the 841-t6 either via Wi-Fi or Ethernet connection to the LAN port.
- 2. Configure your computer's network interface to acquire an IP address automatically using DHCP.
- 3. Open a web browser and enter the following: http://router or http://setup and press the Enter key. A sign-in page should appear. If you are unable to connect to the 841-t6 using either of these shortcuts, you can also enter the IP address of the unit. The default IP address is 192.168.1.1.



Figure 3. The Sign-In Screen

4. The default username is admin. The password is: admin & the last 6 digits of the 841-t6 MAC address. Figure 3 below shows how to locate and identify the MAC address. Using the example below the password would be: <u>adminA1B2C3</u>.



Figure 4. Locating Serial Number and MAC Address

# WiFi Access

Your 841-t6 gateway, allows you to provision your wifi network secured or unsecured. It is strongly recommended that you secure your network using the instructions below. (You may also ask the New Hope Telephone Cooperative technician to set your wifi network up for you while he is there.)

The default SSID (Service Set Identifier), or network name, for your gateway is: NewHope- and the last four characters of the MAC address. Using the example in Figure 4 the SSID will be: NewHope-B2C3. This is the network you will look for on your smartphone, laptop or other wifi capable device. The default wifi password is the last eight characters of the gateway serial number. Using the example in Figure 4 the password will be: 29990817.

## Available Functions

After logging into the 841-t6 you are presented with the Dashboard screen:

Configuration =	Q. Search						8 C 8 🕘 Ann
Derboard	Dashboard					👩 insuliti Davica 🖉 V	mutats. A timetantit inpology
A Network II	WAND STATUS UP	P A108811 205-248.254.243	9         80.03           64.203	.189.1	<u>3</u>	INFORD DEVICES	0
Devices      P	Processing of Downsilement	verteene Network Activity			1114 - artista Up	stream	
	0.006	A A A A A A A A A A A A A A A A A A A	100 100 10	125 (NAM) (NA	100	0.03	3 50
	Top Talkers						Mediana sole 2010 -
	* (10000)		And the Party	788.786.81			TARATT
	1 All in Outline	4411% 85	n salp	1009		0.0000	0.0/16
	2 8-05 or 88.100 (set 7.42)	datis inc	ta sulp	1229		0.000M	0.01 IM
	3 ALT IN OVER Gay		in kalp	1429		0.0000	0.0119
	Device Information	System D	wtails		System Status		
	841-46 Manual	BHI-65-01 Hasteree	-40		Two Mar 12 15:16:21 EDT 202 Local Trees	4	
	CC560-18/07/05/40 80/2 //allines	12351 Primer	Decision		54 62:47:34 Uprime		
	8-4176229230304937 Sector Namilee	New-bog	or (y1.0.3)		2% CPUDoge		

Figure 5. 841-t6 Dashboard Screen

This screen shows various details of the gateway and your Internet connection. On the left side of the screen are the locations you have access to in the gateway. They are:

- Dashboard
- Network
- WiFi
- Devices
- Admin

# Network

Clicking on Network will expand the Network tree which gives you access to LAN Network and under the LAN Network you will have access to the DHCP Server.



#### Warning!

Unless you have a thorough understanding of networks it is recommended that you leave the default settings as they are.

## LAN Network Setup

### Basic IPv4 LAN settings

1. In the left menu, select **Network > LAN Network**. The following page appears.

LAN Network		
IPv4 Configuration		
IP Address	192.168.1.1	
Subnet mask	255.255.255.0	
Create default route		~
Disable NAT		0
IPv6 Configuration		
Enabled		
Prefix length	60	0
Suffix	Random -	

### Figure 6. 841-t6 LAN Network Screen

- 2. Fill in the fields using the information in Table 4 and Table 5.
- 3. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

Field	Description
IP Address	Enter the IP address for IPv4 communications. The default is 192.168.1.1.
Subnet mask	Enter the IP subnet mask for this SDG. The default is <b>255.255.255.0</b> .
Create default route	(Optional) To create the default route for this LAN, select the toggle.

### Table 4. IPv4 Configuration

#### Table 5. IPv6 Configuration

Field	Description
Enabled	This option is disabled by default. To enable IPv6 address configuration, select the toggle to the right of <b>Enabled</b> . The <b>Prefix length</b> and <b>Suffix</b> fields appear.
Prefix length	Enter the prefix length for this IPv6 address. Options are <b>0</b> - <b>64</b> . The default is <b>64</b> .
Suffix	Select the interface identifier for this IPv6 address. Options are <b>Random</b> , <b>MAC Based</b> , and <b>Suffix Address</b> . The default is <b>Random</b> . If you select <b>Suffix Address</b> , the <b>Suffix Address</b> field appears. Enter the address in format: "::a:b:c:d".

### **DHCP Server**

On this page, configure the DHCP settings for the SDG. The Dynamic Host Control Protocol Server (DHCP) feature of this SDG will automatically assign LAN IP addresses to host devices as they connect.

1. In the left menu, select **Network > LAN Network > DHCP Server**. The following page appears.

LAN DHCP Server	
Lease Configuration	
Lease duration:	12 Hours 🔹
DHCPv4 Configuration	
Enabled	
Pool start	2
Pool size	252
Force Local DNS	
DHCPv6 Configuration	
Enabled	
Router advertisement	Managed •
DHCP Custom DNS Servers	+ Add DNS
# IP AD	DRESS ACTIONS
DHCP Static Associations	+ Add host
# DEVICE NAME MAC A	DDRESS IP ADDRESS IPV6 DUID IPV6 HOST ID ACTIONS

Figure 7. 841-t6 LAN DHCP Server Screen

- 2. Fill in the fields using the information in Table 6.
- 3. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

Field	Description			
Lease duration	Select the amount of time for which an IP address will be leased. Options range from <b>5 minutes</b> to <b>24 hours</b> . The default is <b>12 hours</b> .			
	DHCPv4 Configuration			
Enabled	This feature is enabled by default. To disable this feature, select the toggle.			
Pool start	Enter the beginning of the class-C IP address range to be assigned by the DHCP server. The default is <b>100</b> .			
Pool size	Enter the size of the DHCP pool. The maximum size allowed is 252. The default is <b>150</b> .			
	DHCPv6 Configuration			
Enabled	This feature is enabled by default. To disable this feature, select the toggle.			
Router advertisement	<ul> <li>Select how this SDG will be advertised through this DHCPv6 server. Options are:</li> <li>Assisted: Advertises this SDG with all configuration, with stateless auto-configuration, or both.</li> <li>Managed: Advertises this SDG with all configuration. This is the default.</li> <li>Unmanaged: Advertises this SDG with only stateless auto-configuration.</li> </ul>			
DNS and Static Associations				
Custom DNS Servers	(Optional) To define a custom DNS server, follow the steps in <i>Defining a Custom DNS Server</i> .			
DHCP Static Associations	(Optional) To define a static DHCP server, follow the steps in <i>Defining a Static DHCP Association</i> .			

Table 6. LAN DHCP Server Configuration

## Defining a Custom DNS Server

(Defining custom DNS server(s) is an optional step.)

1. To define a custom DNS server, select **Add DNS** to the right of the **DHCP Custom DNS Servers** section heading. The **Add Custom DNS Server** dialog box appears.

Add Custom DNS Server			×	
P Address			•	J
Enter IP Address				
				+ Add DNS
	Close	Save changes		ACTIONS

Figure 8. 841-t6 Add Custom DNS Server Screen

- 2. Enter the IP address of the host device.
- 3. Select **Save changes** to commit your changes.
- 4. To add another DNS server, repeat Steps 1-3.
- 5. To remove a custom server IP address, select the red delete button.

### Defining a Static DHCP Association

(Defining static DHCP associations is an optional step.)

A static IP address can be associated with the MAC address of a specific LAN host device.

1. To select a LAN client device, select **Add host** to the right of the **DHCP Static Associations** section heading. The **Add/Edit DHCP Static Association** dialog box appears.

Add/Edit DHCP Static Association	×		
Connected hosts			
No host selected	•		
Device Name			
Hostname			
MAC Address			
MAC			
IP Address		•	
IPv4 Address			
IPv6 DUID			
IPv6 Duid			+ Add DNS
IPv6 Host ID			ACTIONS
IPv6 Host ID			
			+ Add host
Close	ave changes	UID IPV6 HOST ID	ACTIONS

Figure 9. 841-t6 Add/Edit DHCP Association Screen

- 2. In the **Connected Hosts** field, select the host server to use as a static host. When a connected host is selected, the other fields in the dialog box are populated with the related information. If the host is currently offline or the **None** option is chosen, the information must be entered manually.
- 3. Select Save changes to commit your changes.
- 4. To add another static DHCP configuration, repeat Steps 1-3.
- 5. To edit a static DHCP IP address, select the blue adjacent edit button. The Add/Edit dialog box appears. Change the entries as needed and select **Save Changes** to commit your changes.
- 6. To remove a static DHCP IP address, select the red delete button.
- 7. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

# WiFi Network Settings

### **Specifying Network Settings**

On this page, you can configure the network settings for

- Primary Network
- Guest Network
- Video Network (not used)

In the left menu, select **WiFi** > **Networks**. The following page appears showing the primary wireless network tab. Select from the horizontal row of tabs for the network you want to configure.

Wi-Fi Networks		
Primary	Guest	Video
Primary Wi-Fi		
2.4GHz Enabled		
5GHz Enabled	•••	
5GHz High Enabled		
Multi-band SSID		
Wi-Fi Configuration	1	
SSID	NewHope-B2C3	0
Password		0
2.4GHz Configurati	ion	
Encryption	WPA2-PSK/WPA3-SAE Mixed Mode -	
Broadcast SSID		
Client Isolation		
Fast Roaming (802.11r)		
5GHz Configuration	n	
Encryption	WPA2-PSK/WPA3-SAE Mixed Mode +	
Broadcast SSID		
Client Isolation		
Fast Roaming (802.11r)		
5GHz High Configu	ration	
Encryption	WPA2-PSK/WPA3-SAE Mixed Mode -	
Broadcast SSID		
Client Isolation		
Fast Roaming (802.11r)		

Figure 10. 841-t6 Wi-Fi Networks Screen

### Primary

Use the following steps to configure the Primary network.

- 1. In the left menu, select **WiFi > Networks**. Primary wireless network tab is selected by default.
- 2. Complete the fields for the primary network configuration, using the information provided in Table 7.
- 3. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

Field	Description
Enabled	This option is enabled for the <b>Primary</b> network. To enable Wi-Fi configuration for the <b>Guest</b> and <b>Video</b> networks, select the toggle.
Dual-band SSID	This feature is enabled by default. To disable the dual-band feature for these networks, select the toggle.
SSID	(Optional) Customize the wireless network ID. This field cannot contain quotes (") or back slashes (\) but can contain most other special characters. It is recommended that this ID be no more than 32 characters.
Password	Enter the passphrase for this connection. To show the key characters, select the <b>Show/Hide</b> button (eye icon). This field cannot contain the following characters: " \ ( ) ; &   <> but spaces are allowed.
Encryption	Select the encryption protocol (mode and cypher) for this connection. Options are <b>None, WPA2</b> <b>Personal (PSK + CCMP)</b> and <b>WPA2-PSK/WPA3-SAE Mixed Mode</b> . The default is <b>WPA2-</b> <b>PSK/WPA3-SAE Mixed Mode</b> .
Broadcast SSID	This option is enabled by default. To hide the SSID from end users, select the toggle.
Client Isolation	This option is disabled by default for the <b>Primary</b> and <b>Video</b> networks and enabled for the <b>Guest</b> network. To enable client isolation for the <b>Primary</b> or <b>Video</b> networks, select the toggle.

 Table 7. Primary and Guest Network Settings

### Guest

Use the following steps to configure the Guest network.

- 1. In the left menu, select **WiFi > Networks**. Primary wireless network tab is selected by default.
- 2. Select the Guest tab and complete the fields for the Guest network configuration, using the information provided in Table 7 (above).
- 3. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

#### Video

Video network is not used.

# Managing Connected Devices

The series of features discussed in this section enable you to create groupings of LAN devices to help make management of the devices more efficient.

Along with creating device groups, you'll learn how to assign devices to groups, delete groups, and assign access schedules to groups.

#### NOTE

Before you can assign a device to a group, an access schedule must be configured, then configure a device group, and finally assign the schedule to the group. Each of these procedures is discussed immediately below.

### Warning!

Pausing access for LAN devices not only restricts access to the Internet but access to the LAN as well. This in turn prevents you from logging in to the SDG to make changes from any LAN clients included in the pause. With this in mind, users are strongly advised against pausing all LAN devices at the same time. Instead, exclude at least one browser-equipped LAN device from the device groups to ensure that a means to modify access schedules, device groups and timeout periods is preserved.

## Creating a Schedule

On this page, you can configure the access schedules that are needed to control access for LAN device groups.

1. In the left menu, select **Devices > Access Schedule**. The following page appears. Two default schedules exist in the system: **Bed Time** and **School Nights**.

ccess Sche	dul	9																						
Schedule Co	nfig	urat	ion														ł	Add	sched	lule	Î	Delet	e sche	dule
Schedules								Bed T	ïme														•	
Access Sche	dule	- Be	d Ti	me																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								



2. You can modify the existing default schedules or create a new access schedule. To create a new schedule:

a. Select the **Add schedule** button at the top right. The **Create access schedule** dialog box appears.

Create access schedule		
Name		
Quiet Time		
	Save changes	Close

Figure 12. 841-t6 Create Access Schedule Screen

- b. Enter a descriptive name for the new schedule and select Save changes. Additional fields appear on the Access Schedule page for configuring blocked access time for every day or for specific days. The Delete schedule button appears at the top right of the pane.
- c. Enter start and end times in the fields below the **Pause Times** labels. Use 24-hour format. The separating colon is added for you as you type the numbers.

The entered time periods are shown in red on the grid. When times are entered in the **Daily Pause Times** fields, that period changes to red for every day.

For example, to prevent access between 2 am and 3 am, enter "0200" in the first (start) field and "0300" in the second (end) field for either every day (daily) or specific days. The grid refreshes and displays red, indicating that access is blocked for the 02:00 hour.

The maximum number of blocked periods allowed per day is 3.

d. To add another blocked period for the same day, enter values in the **2nd** and **3rd time** fields.



Figure 13. 1-hour Block Example (entered as 02:00 to 03:00)

	0	1	2	3	4	5
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

### Figure 14. 2-hour Block Example (entered as 02:00 to 04:00)

- 3. To change a schedule, select it in the **Access Schedule** field and modify the fields.
- 4. To delete a schedule, select it in the **Access Schedule** field and select the **Delete schedule** button (at the top right).

$\sim$	NOTE
$\square$	If you delete a schedule that is assigned to a device group, it is removed from the device group configuration.

5. Select the Apply button in the Pending changes dialog box to save your settings.

## Creating a Device Group and Adding Devices

On this page, you can create device groups, assign devices to groups, pause access for devices, delete groups, and assign schedules to groups.

<b>()</b>	
$\sim$	

#### NOTE

Before you can assign a device to a group, an access schedule must be configured, then configure a device group, and finally assign the schedule to the group.



#### Warning!

Pausing access for LAN devices not only restricts access to the Internet but access to the LAN as well. This in turn prevents you from logging in to the SDG to make changes from any LAN clients included in the pause. With this in mind, users are strongly advised against pausing all LAN devices at the same time. Instead, exclude at least one browser-equipped LAN device from the device groups to ensure that a means to modify access schedules, device groups and timeout periods is preserved.

1. In the left menu, select **Devices > Profiles**. The following page appears.

Profiles				+ Add profile
Unassig	gned			Access schedule
#	HOSTNAME	MAC ADDRESS	IP ADDRESS	ACTIONS
1	User-1	44:A8:42:F0:48:86	192.168.1.204	O

#### Figure 15. 841-t6 Profiles Screen

$\bigcirc$	NOTE
$\bigcirc$	The unassigned (default) group cannot be deleted or renamed. You can, however, assign a schedule and pause/restart it.

- 2. To add a new profile:
  - a. Select the **Add profile** button at the upper right. The **Add profile** dialog box appears.
  - b. In the Name field, enter a descriptive name for the device group.
  - c. To assign a schedule to the device group, select the schedule in the **Access schedule** field.

If you do not see the schedule that you want, go to the **Devices > Access Schedule** page and create it. Then, return to this page and select it.

d. Select **Create**. The new group appears on the page and a **Delete profile** button appears at the top right.

Name		
The Family		
Access schedule		
Quiet Time		•

Figure 16. 841-t6 Add Profile Screen

- 3. To add a device to a group:
  - a. Select the **black arrow** button at the far right next to the device that you want to add to a device group. The **Assign device to profile** dialog box appears.

í	Profiles			+ Add profile
			Assign device to profile	×
	Unassigne	ed	Profile	Access schedule
	#	HOSTNAME	The Family	• ACTIONS
	1	User-1	Close	Save changes

#### Figure 17. 841-t6 Assign Device to Profile Screen

b. In the **Profile** field, select a profile.

If you do not see the profile that you want, create it, following the steps provided above.

- c. Select Save changes.
- 4. To delete a profile:
  - a. Select the **Delete profile** button at the top of the profile pane. The Delete profile dialog box appears.

Delete profile		×
Profile		
The Family		•
	Close	Delete

Figure 18. 841-t6 Delete Profile Screen

- b. Select the profile to be deleted from the drop-down list.
- c. Select Delete.
- d. Select the **Apply** button in the **Pending changes** dialog box to save your settings.

## Applying an Access Schedule to a Profile

1. To change or apply an access schedule to a profile, select the Access schedule button to the right of the name of the profile.

Profil	Profile Access Schedule	×	+ Add profile
<b>Stu</b> Prima	Schedule Quiet Time	•	device 🛱 Access schedule 📗 Pause
#		Close Save changes	ACTIONS

Figure 19. 841-t6 Profile Access Screen

a. Select the name of the schedule you wish to apply. Select **Save changes**.

If you do not see the schedule that you want, go to the Devices > Access Schedule page and create it. Then, return to this page and select it.

## Pausing Internet Access

Internet Access can be paused for a single device or an entire profile.

1. You can pause Internet Access for a single device from the **Profiles** page. To pause Internet Access, select the red pause button at the far right next to the device you want to pause.

	Pause Internet Access	×	
Profil	Timeout (ms)		+ Add profile
Stu	28800000	•	levice 🛱 Access schedule
Prima	Expires:		
#		Mar 13, 2024 11:34 PM	ACTIONS
1		Close Save changes	

Figure 20. 841-t6 Pause Internet Access (single device) Screen

- a. Select how long you want Internet access paused. Options are None, 15 through 60 minutes, 2 through 8 hours, and 1 day. Your selection displays in milliseconds.
- b. Select Save changes.
- 2. You can pause Internet Access for a profile by selecting the pause button at the far right next to the name of the profile you wish to pause.

	Pause Internet Access	×	
Profil	Timeout (ms)		+ Add profile Telete profile
Stu	28800000		vice 🛱 Access schedul 🔢 Pause
#	Expires:	Mar 13, 2024 11:34 PM	ACTIONS
1		Close Save changes	

Figure 21. 841-t6 Pause Internet Access (by profile) Screen

- a. Select how long you want Internet access paused. Options are None, 15 through 60 minutes, 2 through 8 hours, and 1 day. Your selection displays in milliseconds.
- b. Select Save changes.

# Performing a Speed Test

On the **Speed Test** page, you can run transmission speed tests for your SDG. Statistics are returned for ping, jitter, download and upload speeds.

1. In the left menu, select **Admin > Speed Test**. The following page appears.

Speedte	st		
		TEST RESULTS	
		Ping	-
	60	Jitter	-
		Download	-
		Upload	-
	Service Provider -	Server Location	Server Address -

Figure 22. 841-t6 Speedtest Screen

2. Select the **Go** button. The test results appear next to the parameters. You can run this test as often as needed.

# **Customer Control Panel**

The Customer Control Panel is a browser-based application that helps the end user to manage, protect and share their home network. It enables the subscriber to easily modify basic home network configuration such as wireless, and port forwarding. The Control Panel provides remote access to the home network, providing a one-select process to access any IP-enabled device in the home.

## Security and Logging In

Upon logging into the Control Panel for the first time, you will be prompted to choose a new password. It is best to select something easy to remember yet difficult for others to guess.

The maximum number of failed Control Panel login attempts is set to 5 attempts. When the maximum number of attempts is exceeded, a message will instruct you to contact New Hope Telephone Cooperative to unlock the account.

To log in to the Customer Control Panel for your service enter the following in the address bar of your browser: **https://nhtc.smartrg.com/prime-home/control-panel**. You will be prompted to enter your Username and Passphrase. These can be found on the Customer Order/Information sheet left with you by our Installer.

Control <b>Panel</b>	
nFO <sub>Manager</sub>	Log in below to manage your local network devices and services.
	Username
	Passphrase
	Sign In
Q D	Forgot your Passphrase?
	English 🗸

#### Figure 23. 841-t6 Control Panel Log In Screen

If this is the first time you have logged into the Customer Control Panel you will be prompted to change your passphrase.



Figure 24. 841-t6 Control Panel Change Passphrase Screen

After logging in you will be presented with a screen to select the device you are working with. You should have only one device to choose from.

Control <b>Panel</b>	
	Log in below to manage your local network devices and services.
	Pick a device ADTRAN - C0 - 841-t6 (CC6618A1B2C3) OK Cancel Replace Device

Figure 25. 841-t6 Control Panel Select Device Screen

After selecting your device, you are presented with the Control Panel main screen.

N	
L ocal Network	
Known Devices: 2	
Devices Online: 2	
-Hosts	
Kegans-MBP-2 MacBook-Pro-3	
192.100.3.2	
	Local Network Known Devices: 2 Devices Online: 2 Hosts Kegans-MBP-2 192.166.3.2 MacBook-Pro-3 192.166.3.3

#### Figure 26. 841-t6 Control Panel Main Screen

The following options are available:

- **Network Status:** Shows whether broadband is connected and whether wireless networking is enabled.
- Wireless Settings: Here you can enable or disable wireless, or modify wireless settings, such as changing the WEP Key, changing the wireless broadcast channel, and enabling/disabling the broadcast of the subscriber's SSID. Refer to Managing Wireless Settings for full configuration details.
- Local Network: This shows how many LAN devices are known to the local network, and how many are online. When you log in, the complete list of devices connected to the network is automatically displayed on the right-hand side of the screen.
- **Port Forward:** You can manage port forwarding configuration from here. Refer to Managing Port Forwarding for full configuration details.

## Viewing Device Information

Hovering over a device with your mouse will display a small window providing more information about applied services. selecting on the device icon or name will load the Device Detail page for that device.

Status	Local Netw	ork			
Broadband: CONNECTED	V				
Local Network	Local Network				
	Known Devices:	2			
Local Network	Cateway > Ke	Z nane_MBP_2			
Known Devices: 2	Galeway - Re	yans-wor-z			
Devices Online: 2	- Device Infor	mation			
			Manufacturer:		
My Wireless Network		Kegans-MBP-2	MAC Address:	98:5a:eb:e0:98:3b	
WiFi		Edit Name and Icon	IP Address:	192.168.3.2	
V					
Network Name(s):			Status:	Online	
Advanced				Thernet Ethernet	
Advanced	-Active Servi	ces			
Port Forwards					
No Port Forwards	View Level	Interface			
No Fort forwards	view Local i	Internace			
	Enable Local	Interface Access			

### Figure 27. 841-t6 Control Panel Device Detail Screen

To change a name or icon for a particular device:

- 1. Select on the required device.
- 2. Select Edit Name and Icon.
- 3. Type in the name of your choosing and if required, choose a different icon.
- 4. Select OK and then select Save.

# My Wireless Network

Status		
Broadband: CONNECTED	WiFi	
ocal Natwork	When the second se	
	Network Name(s):	
Local Network	customerNET	
Devices Online: 0	Wireless Networks	
W Wireless Network	customerNET +	
	Edit Network:	
Network (1) (e(s).	Network: C Enabled	
Advanced	Network Name (SSID): customerNET	
Port Forwards	Passphrase: customerPASSWORD	
No Port Forwards	Create Random Passphrase	
	Security: WPA2 (Recommended) V	
	Enabled Uncheck for a Guest Network	
	Broadcast SSID: C Enabled	
	Network Assigned to Radio:	
	Radio: 1 2.4GHz	
	Wireless Radios	
	Radio: 1 - 2.4GHz Radio: 2 - 5GHz	
	Edit Radio:	
	Frequency Band: 2.4GHz V	
	Radio Mode:	
	AX v	
	Channel Width: 20MHz V	
	Channel: Auto 🗸	
	Current Channel: 6	
	Networks on this Radio:	
	ColesNET	

Figure 28. 841-t6 Control Panel WiFi Detail Screen

Here you can change your WiFi SSID and password. You can also create new wifi networks, assign what radios a network uses and mark networks as a guest.

## **Port Forwarding**

If you wish to reach a device in your local network, you will need to forward ports in order for outside traffic to get into your network. Think of the 841-t6 as being a huge electric fence or wall, with a few doors or openings. This electric fence or wall serves as your barrier and security blanket from the scary outside Internet world. The 841-t6 comes pre-configured with a few of those doors (or ports) open to let you access the internet, but the others are closed tight. So, in order to run a mail server, game server, access your computer remotely, etc. you will need to open an extra door or two in your router in order for the outside traffic to get inside. This is called Port Forwarding and the general steps provided here can guide you in configuration.

Control <b>Panel</b>		nFO
Status Broadband: CONNECTED Local Network Local Network Known Devices: 7 Devices Online: 0 My Wireless Network WiFi Network Name(s): Advanced Port Forwards No Port Forwards	Port Forwards Port Forwards No Port Forwards Active Port Forwards: Device Destination IP Application Protocols Start Port End Port Target Port Action Add Port Forward	
Copyright © 2024 ADTRAN. Inc.	About My Gateway - Synchronize with Gateway - Change Passphrase - Logout	

Figure 29. 841-t6 Port Forwards Screen

Select Port Forwards from the Advanced section on the left side of the screen then click on Add Port Forward.

Add Port Forwards			X
<ul> <li>Select Device:</li> <li>Enter Destinati - * (192.168.1.210 Home Laptop</li> </ul>	)) (192.168.1.164	4)	
Enter Custom: Mary's PC (     Application	192.168.1.156) Protocols Sta	) art Port End Port	Target
	C TCP		
Choose from List: Find an Application:			
			Cancel OK

#### Figure 30. 841-t6 Add Port Forwards Screen

From the Add Port Forwards screen click on the down arrow of the Select Device box and select one of your available devices.

If you are familiar with manually setting up port forwards you can leave the Enter Custom: button selected and enter the values for:

- Application
- Protocols
- Start Port
- End Port
- Target Port

You may also select the Choose from List: button. Using this method enter a search term and then select one of the applications from the large white box.

Add Port Forward	ls					Х
Select Device:	Home Laptop	(192.168.1	.164) 🗸			Ŭ
O Enter Destinatio	onIP Address		,			
O Enter Custom:						
Application		Protocols	Start Port	End Port	Target Port	
		ОТСР				1
Choose from Li Find an Applicat server KDX Server Live For Speed MIX Game Serv Motorhead Serv MyDiskServer	ist: tion: Server ver ver					•
MySQL Server						
Outpost 2 DIVID	ieu Destiny Server					
Rag Doll Kung	Fu Server					
Ragnarok Onlin	ne Server					,
					Cancel	ок

Figure 31. 841-t6 Port Forwards, Choose from List

Add Port Forwards					Х
Select Device: Home Laptop	(192.168.1	1.164) 🗸			
O Enter DestinationIP Address:					
O Enter Custom:				Torget	
Application	Protocols	Start Port	End Port	Port	
	ОТСР				
					_
Choose from List:     Find an Application:					
TCP: 3306					
UDP: 3306					
				Cancel	ОК

Figure 32. 841-t6 Choose from List selection made

After making your choices press the OK button and your port forward will be created.

# Control**Panel**

Status Broadband: CONNECTED	You have unsaved changes.
Local Network Local Network Known Devices: 3 Devices Online: 1	Port Forwards Port Forwards Active Port Forwards: 2 Active Port Forwards: 2
My Wireless Network WiFi Network Name(s):	Device Destination IP         Application         Protocols         Start Port         End Port         Target Port         Action           Home Laptop 192.168.1.164         MySQL Server         TCP         3306         3306         3306         Delete
Advanced Port Forwards Active Port Forwards: 2	192.168.1.164 MySQL Server UDP 3306 3306 3306 Delete Add Port Forward

nFO

Figure 33. 841-t6 Port Forward created

### Table 8. Port Forwarding Fields

Field	Description
Select Device:	The drop-down arrow will show a list of available devices to choose from.
Enter DestinationIP Address:	Instead of choosing a device from the Select Device box, you can enter an IP address from your local area network.

#### Enter Custom:

Application	Enter a name for your port forward.
Protocols	TCP, UDP, or both.
Start Port, End Port, Target Port	Enter the port number or range of numbers. Options are 1 - 65535.
Choose from List:	Using this method will create the Application, Protocol and Port numbers for you.

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