# User Manual Wifi Router Space Station

**CE**0700①

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## Product Overview

## ■ 1.1 Simply Specification

The SPACE STATION uses the latest 802.11AC protocol, the MAX transmission rate could be 750Mbps, both support the 2.4G IEE802.11N and the 5G IEEE802.11AC wireless transmission technology, it could reduce the Co-Channel Interference, and will get a better transmission performance. The cover range is 3~4 times than the normal routers. We also assemble the USB2.0 interface, make it easier to add more function to the router.



1.1 SPACE STATION

■ 1.2 Main Feature& Specification

#### • 1.2.1 Main Feature

- Support the latest 11AC network protocol, the max rate is 1167Mbps(2.4G
   300Mbps +5G 867Mbps)
- > 1 WAN port +4 LAN port, all of them are Auto MDI/MDIX;
- ▶ 1 USB2.0.
- > Many kinds of encryptions to protect your transmission data

### • 1.2.2 Specification

- Support the latest IEEE802.11 A/AC/B/G/N protocol standard.
- Support TCP/IP、DHCP、ICMP protocol
- > All the ports are Auto MDI/MDIX;
- > Provide the indicator led and the power adapter (12VDC, 1.5A)
- ▶ Work Temperature:  $-20^{\circ}C \sim +35^{\circ}C$
- Work Humidity: 10% to 95% RH

## Hardware Description

- > POWER: DC port for the power supply.
- Note: The power adapter must be 12V 1.5A, if use any other un-suitable adapter, it may damage the device.
- > WAN Port(RJ45) , connect to the modem
- > LAN Port(RJ45), to connect other devices , to share the internet.
- > RESET: Reset button , reset back to the default setting.
- > Antennas: For the wireless signal receiving and sending.

#### 2.2 Reset

If you want to rest to the factory default settings, please refer the below steps

 To plug the power adapter. 2) When the router works normally, press the REST/WPS button for 8 seconds. 3) All the router's LEDs will off and then on again, wait until it work normally.

4) When above 3 steps done, the router will rest to the factory default setting.

Warming:

Before steps finishing, don't cut the power off, or it will break your router.

#### 2.3 System Requirements.

Network card and Ethernet cable;

- > TTCP/TP net software (Windows 95 or higher version has pre-install);
- ▶ IE 5.0 or higher version;



When you install the router, please refer the below:

> Put the device horizontally.

- ➢ Keep away from any heat device.
- > Do not put it in some place which is too dirty or too humidity.

## TCP/IP Configuration

Before using the device, you need to configure the network correctly, this manual is based on the Windows 2000/XP, the IP of the device is 192.168.1.1, subnet mask is 255.255.255.0.

Firstly, connect your PC to the LAN port, and then you can configure the IP of your PC in 2 ways.

#### $\diamond \quad \text{Set the IP} \\$

Set your PC's IP as 192.168.1.xxx(xxx could be any number in 2~254), subnet mask to be 255.255.255.0, default gateway 192.168.1.1, DNS server

192.168.1.1Auto set the IP by the DHCP server.

 $\diamond$  Auto set the IP by the DHCP server.

Set the TCP/IP to "automatically get IP address", after setting, you could use the Ping command to check if the device has connected to the PC. For an example, in Windows 2000, run the cmd.exe, and the enter ping 192.168.1.1 If the screen shows as the below,

means OK, the device connected to the PC.

```
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Documents and Settings\Administrator>\
```

If it shows as below, it means fail C: Documents and Settings Administrator>ping 192.168.1.1 -t Pinging 192.168.1.1 with 32 bytes of data: Request timed out. Request timed out. Request timed out. Request timed out.

When it fails to connect, you could check as below.

1): If the hardware connect in right way?

>> The relevant LED to the PC must be on.

2): If your PC' s TCP/IP sets correct?

>> If the IP of the device is 192.168.1.1, your PC's IP must be 192.168.1.xxx (xxx should be 2~253)

## Configuration Guide

#### ■ 3.1Start and Login

The router provides the UI based on the IE, this solution could work in any MS Windows, Macintosh or UNIX system. Run the browser, unable the VPN (if the VPN is working), and then input the 192.168.1.1 in browser. After doing that, you will see the login page, you should enter it as the administer, which means you should enter the username: root /Password: admin, and then click the

"login" .

OpenWrt   SDK   Load: 0.00 0.00 0.01		
Please enter your username and password.		
Username	- Broot	
Password	<i>»</i> •••••	
		🙆 Reset 🔲 Login

#### 2.1 Start and Login

After login, you will see the below page.

Now will introduce different function on the page.:

penWrt   SDK   Load: 0.00 0.00 0.01   Auto Refresh: on	Chan
Status System Services Network Logout	
Overview Firewall Routes System Log Kernel Log Proce	sses Realtime Graphs
Status	
System	
Hostname	OpenWrt
Model	MT7620
Firmware Version	Host System SDK / LuCI (SVN)
Kernel Version	2.6.36
Local Time	Mon Aug 4 21:31:04 2014
Uptime	0h 43m 17s
Load Average	0.00, 0.00, 0.01
Memory	
Total Available	100568 kB / 125232 kB (80%)
Free	85704 kB / 125232 kB (68%)
Cached	11520 kB / 125232 kB (9%)
Buffered	3344 kB / 125232 kB (2%)
- Network	
TDud MAN Chature	
IPV4 WAN Status	Not connected
Thus MAN Chatrue	
IPV6 WAN Status	Not connected

## ■ 3.2 Network

Click the network, you will see the P 4.1:

nterface Querulow		
Network	Status	Actions
LAN SP (デティー・) br-lan	Uptime: 0h 51m 2s MAC-Address: 78:A3:51:0C:01:D6 RX: 602.61 KB (5487 Pkts.) TX: 1.33 MB (5667 Pkts.) IPv4: 192.168.1.1/24 Upt: ETEFS:65C0.000.000.01.168	🖉 Connect 🥝 Stop 🗹 Edit 💌 Dek
WAN eth0.2	MAC-Address:         78:A3:51:00:01:06           RX:         0.00 (0 Pkts.)           TX:         400.04 KB (1022 Pkts.)	🏽 Connect 🞯 Stop 🖉 Edit 🗶 Dek
WAN6	MAC-Address: 00:00:00:00:00:00 RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	🏽 Connect 🞯 Stop 🖉 Edit 💌 Dek

4.1 Network

## • 3.2.1 WAN

Click the WAN, you could edit it, change the protocol (such as statics

IP,PPPOE),please refer the P 4.2

nterfaces with DHCP and DNS Hostnames Static Ri	outes Firewall Diagnostics		
YAN WAND LAN			
terfaces - WAN			
this page you can configure the network interfaces. You c	an bridge several interfaces by ticking the "bridge	interfaces" field and enter the names of several network interfaces separ.	rated (
aces. You can also use <u>YLAN</u> notation INTERFACE.VLANNR (	B.Q.: eth0.1).		
Common Configuration			
General Setup Advanced Settings Physical Settings	Firewall Settings		
Status	Lintime: 0b 0m 0c		
	mAC-Address: 78:A3:51	:0C:01:D6	
	eth0.2 <b>RX</b> : 0.00 B (0 Pkts.) <b>TX</b> : 422 45 KB (1078 Pkts		
	DR. 122.13 KB (1919 FKB	·/	
Protocol	DHCP client	<u> </u>	
Hostname to send when requesting DHCP	Static address		
	Unmanaged		
	PPP		
	PPtP	🙆 Beset 🖉 Save 🔲 Save	0 P. A
	PPPoL		
	UMTS/GPRS/EV-DO		
	1 2TD		

4.2 WAN Setting



#### LAN setting, you could enable/stop and set all the network function(such as

change the name, IP address , DHCP and so on) as the P 4.3

penWrt   SDK   Load: 0.03 0.04 0.00   Auto Refresh: on		Changes: I
Status System Services Network Logout		
Interfaces Wifi DHCP and DNS Hostnames Static Routes Fire	ewall Diagnostics	
WAN WANG LAN		
Interfaces - LAN		
On this page you can configure the network interfaces. You can bridge so by spaces. You can also use <u>VLAN</u> notation INTERFACE.VLANNR (e.g. et	everal interfaces by ticking the	"bridge interfaces" field and enter the names of several network interfaces separated
Common Configuration		
General Setup Advanced Settings Physical Settings Firewall	Settings	
Status	Uptime: 0h 55m 4 MAC-Address: 78 Br-lan TX: 1.59 MB (672C IPv4: 192.168.1.1, IPv6: FD56:69EC:	05 3:A3:51:0C:01:D6 3:00 Pkts.) 5 Pkts.) /24 9A:0:0:0:0:1/60
Protocol	Static address	
IPv4 address	192.168.1.1	
IPv4 netmask	255.255.255.0	×
IPv4 gateway		
IPv4 broadcast		

4.3 LAN setting

#### ■ 3.3 Wireless

Wireless setting, please refer the P5.1:

terfaces	s Wifi DHCP	and DNS Hostnames	Static Routes	Firewall Diagnostics								
t7612: I	Master "OpenWrt-i	mt7612" mt7620: Ma	ster "OpenWrt-m	7620"		_	_	_	_	_	_	_
reless	s Overview											
	Generic WEXT Channel: 36 (5.18	" <b>802.11a (mt761</b> 80 GHz)   <b>Bitrate:</b> 400 M	2 <b>)</b> bit/s							Scan	1	Add
	SSID: Oper 10% BSSID: 78:	1Wrt-mt7612   <b>Mode:</b> Ma A3:51:07:DC:19   <b>Encry</b>	aster ption: WPA2 PSK,	NONE (WEP-40, WEP-104, TKIP, C	CMP, AES-OCB, CKIP, NONE)		8	Disable		Edit	×	Remove
	Generic WEXT Channel: 1 (2.412	* <b>802.11bgn (mt76</b> 2 GHz)   <b>Bitrate:</b> 300 Mb	5 <b>20)</b> it/s						Q	Scan		Add
	SSID: Oper 10% BSSID: 78:	1Wrt-mt7620   <b>Mode:</b> Ma A3:51:0C:01:D6   <b>Encry</b>	aster <b>ption:</b> WPA2 PSK,	NONE (WEP-40, WEP-104, TKIP, C	CMP, AES-OCB, CKIP, NONE)		8	Disable		Edit	×	Remove
sociat	ted Stations											
	SSID	MAC-Address	:	IPv4-Address	Signal	Noise		RX Ra	te		тх	Rate
				No informatio	on available							

• Wireless Setting.

Click the Network-Wifi, you could do the basic wireless setting(such as SSID, channel,

#### band width and so on) Please refer the P 5.2 -5.3

OpenWrt   SDK   Load: 0.05 0.16 0.08   Auto Refresh: on		Change
Status System Services Network Logout		
Interfaces Wifi DHCP and DNS Hostnames Static Routes	Firewall Diagnostics	
mt7612: Master "OpenWrt-mt7612" mt7620: Master "OpenWrt-m	nt7620"	
Wireless Network: Master "OpenWrt-mt7620" (ra0)		
The Device Configuration section covers physical settings of the rad the radio hardware is multi-SSID capable). Per network settings like	Jio hardware such as channel, trans encryption or operation mode are (	smit power or antenna selection which is shared among all defined wireless networks (if grouped in the Interface Configuration.
Device Configuration		
General Setup Advanced Settings HT Physical Mode		
Status	Mode: Master   SS BSSID: 78:A3:51: AES-OCB, CKIP, NO 10% Channel: 1 (2.412 Signal: -256 dBm   Bitrate: 300.0 Mbi	SID: OpenWrt-mt7620 OC:01:D6   Encryption: WPA2 PSK/NONE (WEP-40, WEP-104, TKIP, CCMP, DNE) 2 GH2)   Tx-Power: 16 dBm   Noise: -256 dBm it/s   Country: 00
Radio on/off	on	
Network Mode	802.11b/g/n	
Channel	auto	
Band Width	40MHz	
General Setup Wireless Security		

#### 5.2 2.4G wireless setting.

hWrt   SDK   Load: 0.71 0.21 0.07   Auto Refresh: on		Char
Status System Services Network Logout		
Interfaces Wifi DHCP and DNS Hostnames Static Rou	tes Firewall Diagnostics	
mt7612: Master "Wrt-mt7612" mt7620: Master "Wrt-mt7620	י"	
Wireless Network: Master "Wrt-mt7612" (rai0)		
The <i>Device Configuration</i> section covers physical settings of the he radio hardware is multi-SSID capable). Per network settings	e radio hardware such as channel, transmi like encryption or operation mode are gro	it power or antenna selection which is shared among all defined wireless networks (if uped in the <i>Interface Configuration</i> .
Device Configuration		
General Setup Advanced Settings HT Physical Mode		
Status	Mode: Master   SSID BSSID: 78:A3:51:07: 4E5-OCB, CKIP, NONE 10% Channel: 36 (5:180 Signal: -256 dBm   N Bitrate: 780.0 Mbit/s	:: Wrt-mt7612 DC:19   <b>Encryption:</b> WPA2 PSK/NONE (WEP-40, WEP-104, TKIP, CCMP, :) :H2)   <b>Tx-Power:</b> 16 dBm iolse: -256 dBm   <b>Country:</b> 00
Radio on/off	on	<b>v</b>
Network Mode	802.11a/an/ac	×
Channel	auto	✓
Band Width	80MHz	
Interface Configuration		

#### 5.3 5 G wireless setting

In this page, you could do more detail setting of the wireless, such as wireless on/off, data transfer protocol, password setting.

#### ◆ 4.1.Interface Configuration

In the Interface Configuration→wireless security, you could set the encryption

mode and the password. Please refer the wireless encryption setting in the P 5.4

Interface Configuration General Setup Wireless Security Encryption	No Encryption	v	
			🛿 Reset) 🖉 Save 🗈 Save & Apply

5.4 Wireless encryption setting.

Wireless Work mode and the parameter:

- > SSID: The name of the wireless.
- > Channel: To choose the wireless work channel, from 1 to 14.
- Mode: To choose the device work mode, you could choose the 2.4G-300M

802.11b/g/n mode, 5.8G-866M 802.11a/n/an/ac

- > Unable the wireless: When you want to shut down the wireless.
- > Access Point: Router work in the AP mode.
- SSID broadcast: If it is enable, the SSID of the device could be connecting.

## ■ 4.2.system

Click **system→Backup/Flash firmware**, you could see the below 6.1:

operations ns Configuration ackup / Restore ck "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with sc	with squashfs images).
sh operations ions Configuration Backup / Restore Jik "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with sc	with squashfs images).
ions Configuration Backup / Restore Jick "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with sc	with squashfs images).
Backup / Restore	with squashfs images).
Dackop / Nestore to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with sc	with squashfs images).
Download backup:	
Reset to defaults: OPerform reset	
To restance configuration files used an environment of a compared to choose excision to an	
to resure configuration mes, you can opioau a previously generated backup archive nere.	
Restore backup: 浏览 未选择文件。 III Upload archive	

6.1Backup/Flash firmware

You could set the cofig file backup or rest and upgrade the firmware.

Upgrade progress:

- > Browse our website(www.worldgmn.com), to download the latest firmware.
- > Clcik the "image", to choose the firmware you just download.
- > Click "Flash image", and click "yes"
- > If the upgrading done, the device will reboot.

#### Note:

Please use the correct version of the firmware. When it is upgrade, please keep the power on, or it will brick the device. After upgrading, the device will reboot automatically. After upgrading, the device will be back to default setting, please save the setting before upgrading.

## FAQ

#### 1、LAN LED off

It is about the hardware connection issue, you could check follow below steps:

> To check if the Ethernet cable plug into the port firmly.

working some time, such as delay and package dropping.

- > To check if the network device is power on
- > Make sure the Ethernet cable are working well.

## 2. The device work normally after setting . But the link will become unsteady after

It means there are some interference in the work environment, you could follow the below steps to solve such problem.

- > To check if each part of the connection are steady.
- If the signal strength are too weak, you can try to change the work channel, in order to reduce the reference.
- Reboot the device.
- > Reset to the factory default setting.

After all the above steps, if it still have the same questions, please contact to the reseller or our FAE.

## FCC Warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only mobile configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

#### IC warning statements:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou

émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

5GHz 5150-5250 MHz band is restricted to indoor operations only.

The product shall only be connected to a USB interface of version USB2.0

Please use common USB Cable or original charger, Otherwise, It may result to danger. When you use a charger for charging, adapter shall be installed near the equipment and shall be easily accessible.

Manufacturer of Power Adapter: BLUE IRON HOLDINGS LIMITED Model: B118-120150-CdU (for US market), B118-120150-CdV (for EU market) Parameters of Power adapter: INPUT: AC 100~240V, 50/60Hz 0.5A OUTPUT: 12V/1.5A Note: different country will be equipped with different adapter, and the difference only lies in the model name and the plug shape, all the ratings are the same, for example, model B118-120150-CdV will only be used when sold in EU market, no other adapter will be in the package together.

### **Declaration Of Conformity**

Hereby, Quality Technology Industrial Co.,Ltd Declares that this Wifi Router is in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC.