SRG-3352C

IoT Gateway System

User's Manual 1st Ed

Last Updated: January 28, 2021

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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● SRG-3352C	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. All cables and adapters supplied by AAEON are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by AAEON to prevent system malfunction or fires.
3. Make sure the power source matches the power rating of the device.
4. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
5. Always completely disconnect the power before working on the system's hardware.
6. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
7. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
8. Always disconnect this device from any AC supply before cleaning.
9. While cleaning, use a damp cloth instead of liquid or spray detergents.
10. Make sure the device is installed near a power outlet and is easily accessible.
11. Keep this device away from humidity.
12. Place the device on a solid surface during installation to prevent falls
13. Do not cover the openings on the device to ensure optimal heat dissipation.
14. Watch out for high temperatures when the system is running.
15. Do not touch the heat sink or heat spreader when the system is running
16. Never pour any liquid into the openings. This could cause fire or electric shock.

17. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

18. If any of the following situations arises, please the contact our service personnel:

    i. Damaged power cord or plug
    ii. Liquid intrusion to the device
    iii. Exposure to moisture
    iv. Device is not working as expected or in a manner as described in this manual
    v. The device is dropped or damaged
    vi. Any obvious signs of damage displayed on the device

19. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

FCC Statement

This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur.
Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON System QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚(PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	×	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了GB/T 26572的限量要求，然而该部件仍符合欧盟指令2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

China RoHS Requirement (EN)

Hazardous and Toxic Materials List

AAEON System QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	X	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.

O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:

1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

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Chapter 1

Product Specifications

1.1 Specifications

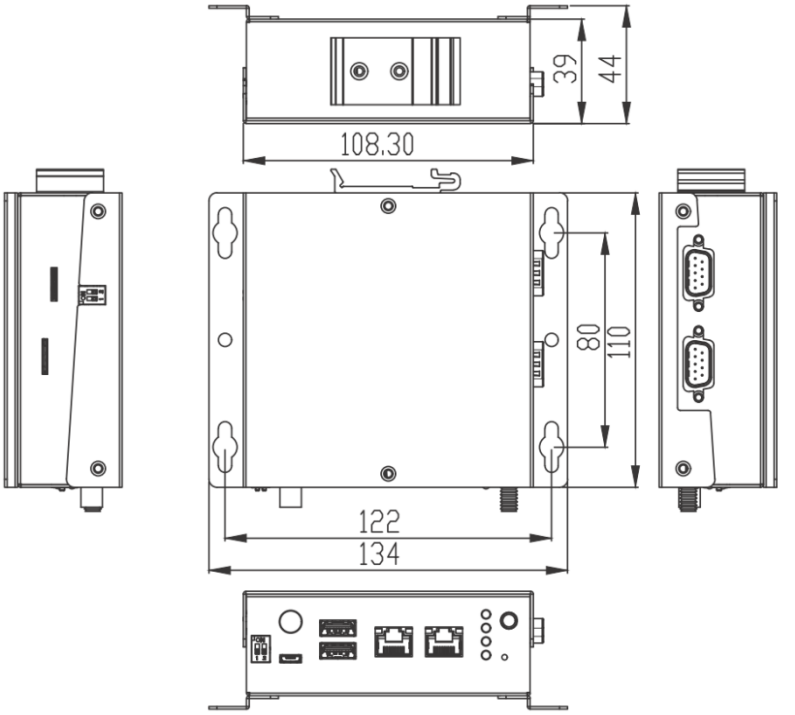
General	CPU	ARM Cortex-A8 800 MHz RISC Processor
	Memory	DDR3L 1 GB
	Storage	eMMC 8G
	OS Supported	Debian 10 (buster)
Interface	Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2
	USB Ports	USB 2.0, (Type A Connector) x 2
	Serial Ports	RS-485-2w ports (terminal block) x 2
	Expansion Ports	Mini PCIe Slot x 1
	SIM Slot	Micro SIM Type x 1
	SD Slot	microSD Type x 1
	Debug Port	Mini USB Type x 1
Radio Frequency Interface	WIFI	IEEE Std 802.11b/g/n
	Bluetooth	Bluetooth 4.2 and Bluetooth low energy
Physical Characteristics	Dimensions	5.67" x 3.94" x 1.73"(144 x 100 x 44mm)
	Weight	512 g
	Mounting	DIN-rail mounting, Wall mount
Environmental	Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
	Operation Humidity	10% ~ 95% relative humidity, non-condensing
	Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Certification	EMC	EN 55032/24
	EMI	FCC Part 15B Class A
	EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: AC Line to Line: 1 kV, Line to Earth: 2 kV IEC 61000-4-6 CS: 0.15 to 80MHz; 3 Vrms IEC 61000-4-8 PFMF: 50Hz/60Hz, 1 A/m
	CE RED	EMC: EN301489-1/-17 RF: EN300328 (WiFi, Bluetooth, 2.4G) Safety: EN 62368-1
	Green Product	RoHS
	MTBF	855,890(Hours)

Others		

Chapter 2

Hardware Information

2.1 Dimensions

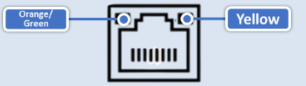


2.2 I/O Location

Position	Function
1	**Antenna Connector** Supports 2.4G or LTE antennas
2	**Reset Button** Reboots the system
3	**Debug Port** User can login into gateway's Linux OS via SSH (Micro-USB port)
4	**RS-485 Terminal Resistor** Used when there are long distances between the gateway and RS-485 device.
5	**Micro SIM Slot** Insert micro SIM card into the slot when using LTE module installed in Mini Card slot
6	**microSD Slot** Increase storage capacity by inserting a microSD card
7	**DC Power Jack** Gateway supports DC 9~36V input
8	**USB2.0 Port** USB2.0 type A connector, supports external storage devices

9 **Gigabit LAN Port**

Standard RJ-45 LAN jack to connect with Local Area Network (LAN).



LED	Function	Status
Yellow	Active Status	ON: LAN link is established. OFF: LAN link is not established. Blinking: Data received and transmitted.
Orange /Green	Link Speed Status	Green: 10/100Mbps. Orange: 1000Mbps.

10 **LED**

LED can be controlled or defined by GPIO settings.

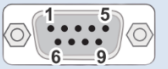
The control command for LED 1:

turn on: echo 1 > /sys/class/leds/srt3352:led1/brightness
turn off: echo 0 > /sys/class/leds/srt3352:led1/brightness

See Chapter 3 for more information.

11 **RS-485 Port**

Serial Port supports 2-wired RS-485 connection.



Pin	Definition	Description
1	TXD+, A+	Transmit Data, Positive
2	TXD-, A-	Transmit Data, Negative
3	-	-
4	-	-
5	GND	Signal Ground
6	-	-
7	-	-
8	-	-
9	-	-

12 **Mini Card Slot**

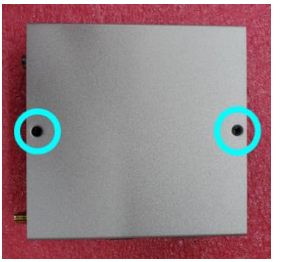
The Mini PCIe slot can support LTE modules (USB signal).

2.3 Wireless Hardware Setup

The SRG-3352C features both a SIM Card and Mini Card slot for connecting to wireless networks such as 4G. This section details how to install a SIM Card and 4G/LTE module on the mini card slot.

2.3.1 Mini Card Installation

Step 1. Remove the top cover by removing the 6 screws.



Step 2. Open the second antenna hole by removing the cover on the hole located on the left side.

Step 3. Install the RF coaxial cable in the antenna hole.

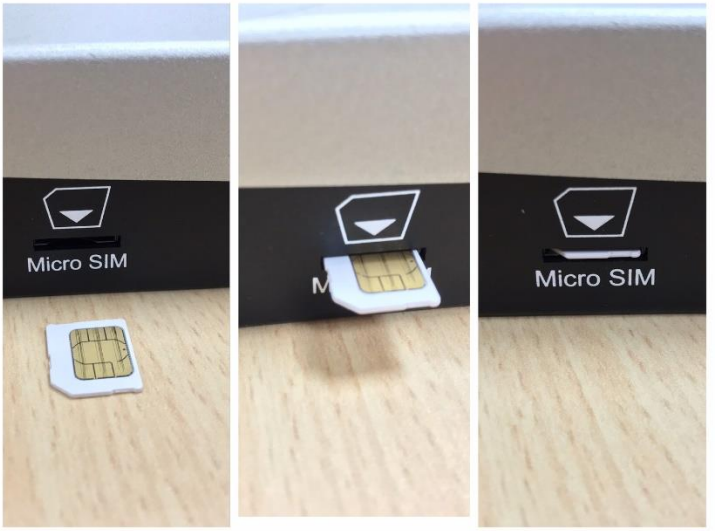
Step 4. Remove the bottom cover and install the 4G/LTE module in the Mini Card slot, and connect the coaxial cable to the 4G/LTE module.

Step 5. Place the bottom cover and secure with screws.

Step 6. Place the top cover and secure with screws.

2.3.2 SIM Card Installation

To install a SIM Card (Micro SIM) simply insert the SIM Card into the slot on the side of the system as shown. Take care to make sure the card is oriented correctly.



Chapter 3

Gateway Setup and Configuration

3.1 Connecting to System

When connecting a PC or laptop to the SRG-3352C system, it is recommended to use PuTTY with Windows 10. Users can download the software from the PuTTY website. https://www.putty.org/

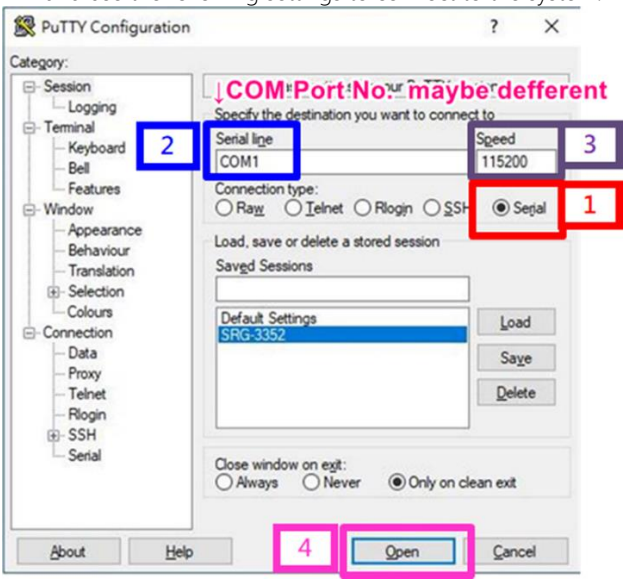
For Windows 7 or older, users must first set up their PC to recognize the system. The following instructions detail how to set up your PC to connect to the SRG-3352C system by installing the CDC Serial Driver. The CDC Serial Driver can be downloaded from the SRG-3352C product page on AAEON.com.

Step 1. Download the PuTTY tools software
Step 2. Connect the gateway with USB cable

Connect your computer to the SRG-3352C using the micro USB port. Open **Device Manager** and locate **Multifunction Composite Gadget**. Double click on the device. A pop-up should appear, with a notice that the CDC Serial is unrecognized.

Step 3. Set the PuTTY configuration

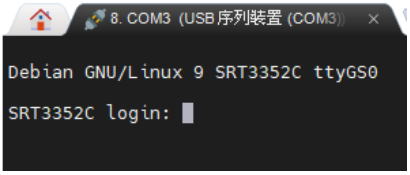
Open PuTTY and use the following settings to connect to the system.



Serial Port Settings	
Baud rate	115200 bps
Parity	None
Data bits	8
Stop bits	1
Flow Control	None

Step 4. Login to the system

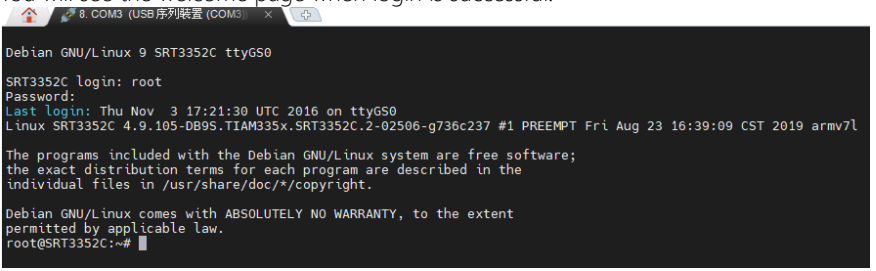
You will see the login prompt when successfully connected to the gateway.



Default login information is:

Login Settings	
Username	root
Password	AAEONiot2017

You will see the welcome page when login is successful.



3.2 User Account Management

This section details how to manage user accounts on the system.

- **Add User Account**
  - ✓ Command Line:

    ```
    $ useradd -m -G sudo -s /bin/bash USERACCOUNT
    ```

    USERACCOUNT -> Account name you want to add
  - ✓ Result:

    ```
    root@SRT3352C:~# useradd -m -G sudo -s /bin/bash ATW
    root@SRT3352C:~#
    ```

- **Delete User Account**
  - ✓ Command Line:

    ```
    $ userdel USERACCOUNT
    ```

    USERACCOUNT -> Account name you want to delete
  - ✓ Result:

    ```
    root@SRT3352C:~# userdel ATW
    ```

3.3 Network Settings

This section details how to check and setup the network settings.
This requires installing the Debian package "Network Manager" to manage the network settings.

➢ Install the "Network Manager" Package

Before performing the following command, make sure the gateway is connected to the internet by a hub, switch or router.
Note: The default network setting of LAN1 and LAN2 is DHCP.

✓ Command:

```
$ apt-get install network-manager
```

✓ Result:

```
root@SRT3352C:~# apt-get install network-manager
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

➢ Check IP Settings

✓ Command:

```
$ nmcli dev show 'DEVICENAME'
```

DEVICENAME -> Device name and associated hardware is as follows:

Device Name	Support Hardware
eth0	LAN1
eth1	LAN2

✓ Result:

```
root@SRT3352C:~# nmcli dev show eth1
GENERAL.DEVICE:                         eth1
GENERAL.TYPE:                           ethernet
GENERAL.HWADDR:                         4C:3F:D3:7A:92:FB
GENERAL.MTU:                            1500
GENERAL.STATE:                          100 (connected)
GENERAL.CONNECTION:                     eth1
GENERAL.CON-PATH:                       /org/freedesktop/NetworkManager/ActiveConnection/1
WIRED-PROPERTIES.CARRIER:               on
IP4.ADDRESS[1]:                         192.168.3.97/24
IP4.GATEWAY:                            192.168.3.1
IP4.DNS[1]:                             192.168.3.1
IP6.ADDRESS[1]:                         fe80::4e3f:d3ff:fe7a:92fb/64
IP6.GATEWAY:                            --
root@SRT3352C:~#
```

➢ Set Static IP

■ Edit the IP Address:

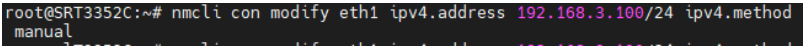
✓ Command:

```
$ nmcli con modify 'DEVICENAME' ipv4.address 'IP' ipv4.method manual
```

DEVICENAME -> Choose either eth0 or eht1

IP-> The IP address you wish to set for this device

✓ Result:



➢ Set Dynamic IP

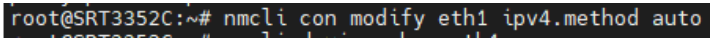
■ Edit the IP Address:

✓ Command:

```
$ nmcli con modify 'DEVICENAME' ipv4.method auto
```

DEVICENAME -> Choose either eth0 or eht1

✓ Result:



3.4 Cellular Network Settings

This section details how to check and manage the cellular network settings.

➢ **Check the Cellular Module's APN**

✓ Command:

```
$ vim /etc/ppp/peers/wcdma-chat-connect
```

✓ Result:

```
ABORT 'NO CARRIER'
ABORT 'ERROR'
ABORT 'NO DIALTONE'
ABORT 'BUSY'
ABORT 'NO ANSWER'
'' AT
OK ATE0
OK ATI;+CSUB;+CSQ;+COPS?;+CGREG?;&D2
OK AT+CGDCONT=1,"IP","internet",,0,0
OK ATD*99#
CONNECT ''
~
~
~
~
~
~
~
~
~
~
~
~
~
"/etc/ppp/peers/wcdma-chat-connect" 11L, 194C                 9,30          All
```

Key in the corresponding APN, for example "internet", then save the script file.

➢ Dial-up the Cellular Module

■ Dial up the Cellular Module:

✓ Command:

```
$ pppd call wcdma &
```

✓ Result:

```
root@SRT3352:~#  pppd call wcdma &
[1] 487
root@SRT3352:~#
```

■ Check the Cellular Module connection:

✓ Command:

```
$ ifconfig
```

✓ Result:

```
root@SRT3352:~# ifconfig
eth0: flags=-28669<UP,BROADCAST,MULTICAST,DYNAMIC>  mtu 1500
        ether 30:45:11:0a:f7:00  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 174

eth1: flags=-28669<UP,BROADCAST,MULTICAST,DYNAMIC>  mtu 1500
        ether 30:45:11:0a:f7:02  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1  (Local Loopback)
        RX packets 320  bytes 21440 (20.9 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 320  bytes 21440 (20.9 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

ppp0: flags=4305<UP,POINTOPOINT,RUNNING,NOARP,MULTICAST>  mtu 1500
        inet 100.70.168.155  netmask 255.255.255.255  destination 10.64.64.64
        ppp  txqueuelen 3  (Point-to-Point Protocol)
        RX packets 8  bytes 851 (851.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 8  bytes 370 (370.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

usb0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.8.1  netmask 255.255.255.0  broadcast 192.168.8.255
        inet6 fe80::dc05:71ff:feb8:4678  prefixlen 64  scopeid 0x20<link>
        ether de:05:71:b8:46:78  txqueuelen 1000  (Ethernet)
        RX packets 2536  bytes 196212 (191.6 KiB)
        RX errors 0  dropped 4  overruns 0  frame 0
        TX packets 181  bytes 25909 (25.3 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

[1]+  Done                    pppd call wcdma
root@SRT3352:~#
```

System will return “ppp0” in the “ifconfig” if dial-up is successful.

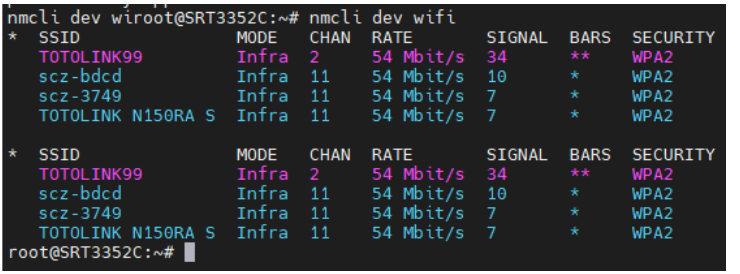
3.5 WiFi and Bluetooth Network Settings

This section details how to check and setup WiFi and Bluetooth wireless networks.

- **Scan for WiFi Access Point**
  - ✓ Command:

    ```
    $ nmcli dev wifi
    ```

  - ✓ Result:



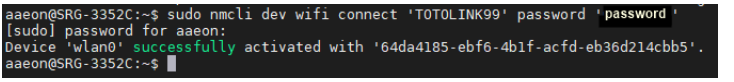
- **Connect to WiFi Access Point**
  - ✓ Command:

    ```
    $ nmcli dev wifi connect ‘SSID’ password ‘PASSWORD’
    ```

    SSID -> The ID of the WiFi access point you want to connect to

    PASSWORD -> Password for the chosen SSID

  - ✓ Result:

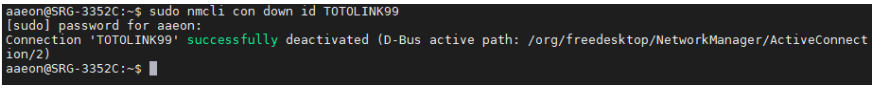


- **Disconnect from WiFi Access Point**
  - ✓ Command:

    ```
    $ sudo nmcli con down id ‘SSID’
    ```

    SSID -> ID for the WiFi access point you want to disconnect from

  - ✓ Result:



➢ Check WiFi Connection Status

✓ Command:

```
$ nmcli dev
```

✓ Result:

If connected, WiFi STATE will display "connected" as below:

```
aaeon@SRG-3352C:~$ sudo nmcli dev
DEVICE     TYPE      STATE         CONNECTION
eth0       ethernet  connected     Ethernet0
wlan0      wifi      connected     TOTOLINK99
eth1       ethernet  unavailable   --
cdc-wdm0   gsm       unavailable   --
lo         loopback  unmanaged     --
aaeon@SRG-3352C:~$
```

If disconnected, WiFi STATE will display "disconnected" as below:

```
aaeon@SRG-3352C:~$ sudo nmcli dev
DEVICE     TYPE      STATE         CONNECTION
eth0       ethernet  connected     Ethernet0
wlan0      wifi      disconnected  --
eth1       ethernet  unavailable   --
cdc-wdm0   gsm       unavailable   --
lo         loopback  unmanaged     --
aaeon@SRG-3352C:~$
```

➢ Enter Bluetooth Control Panel

✓ Command:

```
$ sudo bluetoothctl
```

✓ Result:

```
aaeon@SRG-3352C:~$ sudo bluetoothctl
Agent registered
[bluetooth]#
```

➢ Scan for Bluetooth Devices

✓ Command:

```
$ power on
$ scan on
```

✓ Result:

```
aaeon@SRG-3352C:~$ sudo bluetoothctl
Agent registered
[bluetooth]# power on
Changing power on succeeded
[bluetooth]# scan on
Discovery started
[CHG] Controller 18:93:D7:01:BB:4E Discovering: yes
[NEW] Device 00:07:32:00:00:44 BLEVS_000044
[NEW] Device 6E:22:7D:C5:6A:87 6E-22-7D-C5-6A-87
[NEW] Device C0:EE:40:70:06:D8 GW6506D8
[NEW] Device 62:59:FE:7F:AC:03 62-59-FE-7F-AC-03
[NEW] Device 6E:09:A9:1F:38:43 6E-09-A9-1F-38-43
[NEW] Device 74:35:40:C9:C4:2C 74-35-40-C9-C4-2C
[NEW] Device 00:07:32:00:00:31 BLEVS_000031
[NEW] Device 00:07:32:71:13:92 SV87711392
[NEW] Device 00:07:32:71:14:40 SV87711440
[NEW] Device 75:C3:03:E2:1F:A4 75-C3-03-E2-1F-A4
[NEW] Device 18:04:ED:6E:5F:39 Uspace-CHTIOT-RD
[NEW] Device 6E:64:FF:00:47:F1 6E-64-FF-00-47-F1
[NEW] Device 00:07:32:71:14:41 SV87711441
[NEW] Device 41:AA:02:91:53:80 41-AA-02-91-53-80
[NEW] Device 71:B2:F4:3C:6F:9F 71-B2-F4-3C-6F-9F
[NEW] Device 7B:D4:9E:89:AB:C1 7B-D4-9E-89-AB-C1
[NEW] Device 00:07:32:A3:45:0D SV87A3450D
```

➢ Pair Bluetooth Device

✓ Command:

```
$ pair MAC_ID
```

MAC_ID->Bluetooth MAC ID for device you want to connect

✓ Result:

```
[bluetooth]# pair E8:6F:38:83:CF:10
Attempting to pair with E8:6F:38:83:CF:10
[CHG] Device E8:6F:38:83:CF:10 Connected: yes
Request confirmation
[agent] Confirm passkey 656573 (yes/no): yes
[CHG] Device E8:6F:38:83:CF:10 ServicesResolved: yes
[CHG] Device E8:6F:38:83:CF:10 Paired: yes
Pairing successful
```

➢ Check Paired Bluetooth Devices

✓ Command:

```
$ paired-devices
```

✓ Result:

```
[DESKTOP-6E636SN]# paired-devices
Device E8:6F:38:83:CF:10 DESKTOP-6E636SN
```

3.6 System Management

This section details how to check and setup the system settings like OS version, set RTC, etc.

- **Check OS Version**
  - ✓ Command:

    ```
    $ cat /etc/os-release
    ```
  - ✓ Result:

    ```
    root@SRT3352:~# cat /etc/os-release
    PRETTY_NAME="Debian GNU/Linux 9 (stretch)"
    NAME="Debian GNU/Linux"
    VERSION_ID="9"
    VERSION="9 (stretch)"
    ID=debian
    HOME_URL="https://www.debian.org/"
    SUPPORT_URL="https://www.debian.org/support"
    BUG_REPORT_URL="https://bugs.debian.org/"
    root@SRT3352:~#
    ```

- **Check Storage Status**
  - ✓ Command:

    ```
    $ df -h
    ```
  - ✓ Result:

    ```
    root@SRT3352:~# df -h
    Filesystem      Size  Used Avail Use% Mounted on
    /dev/root       6.7G  1.3G  5.1G  21% /
    devtmpfs        477M     0  477M   0% /dev
    tmpfs           502M     0  502M   0% /dev/shm
    tmpfs           502M   16M  487M   4% /run
    tmpfs           5.0M  4.0K  5.0M   1% /run/lock
    tmpfs           502M     0  502M   0% /sys/fs/cgroup
    tmpfs           101M     0  101M   0% /run/user/0
    root@SRT3352:~#
    ```

- **Shutdown the System**
  - ✓ Command:

    ```
    $ shutdown now
    ```
  - ✓ Result:

    ```
    root@SRT3352:~# shutdown now

    Error reading from serial device
    ```

➢ Set Date and Time

- Check Current Date and Time

✓ Command:

```
$ timedatectl
```

✓ Result:

```
root@SRT3352:~# timedatectl
      Local time: Tue 2021-01-19 09:07:20 UTC
  Universal time: Tue 2021-01-19 09:07:20 UTC
        RTC time: Tue 2021-01-19 09:07:15
       Time zone: Etc/UTC (UTC, +0000)
 Network time on: no
NTP synchronized: yes
 RTC in local TZ: no
root@SRT3352:~#
```

- Set Date and Time

✓ Command:

```
$ date MMDDhhmmYYYY
```

MM -> Month

DD -> Day

hh -> Hour

mm -> Minute

✓ Result:

```
aaeon@SRG-3352C:~$ sudo date 11261400
Thu 26 Nov 2020 02:00:00 PM UTC
aaeon@SRG-3352C:~$ timedatectl
               Local time: Thu 2020-11-26 14:00:10 UTC
           Universal time: Thu 2020-11-26 14:00:10 UTC
                 RTC time: Thu 2020-11-26 06:00:51
                Time zone: Etc/UTC (UTC, +0000)
System clock synchronized: no
              NTP service: inactive
          RTC in local TZ: no
aaeon@SRG-3352C:~$
```

3.7 I/O Management

This section details how to operate I/O functions like GPIO, RS-232/422/485, CAN bus etc.

➢ Control GPIO

✓ Command:

Set GPIO ON:

```
$ echo 1 > /sys/class/leds/srt3352:led1/brightness
```

Set GPIO OFF:

```
$ echo 0 > /sys/class/leds/srt3352:led1/brightness
```

✓ Result:

```
root@SRG-3352C:/home/aaeon# echo 1 > /sys/class/leds/srt3352:led1/brightness
root@SRG-3352C:/home/aaeon# echo 0 > /sys/class/leds/srt3352:led1/brightness
```

Number	Label	Picture	Number	Label	Picture
1 Red	led1		**3 Yellow**	led3	
2 Green	Led2		**4 Orange**	led4	