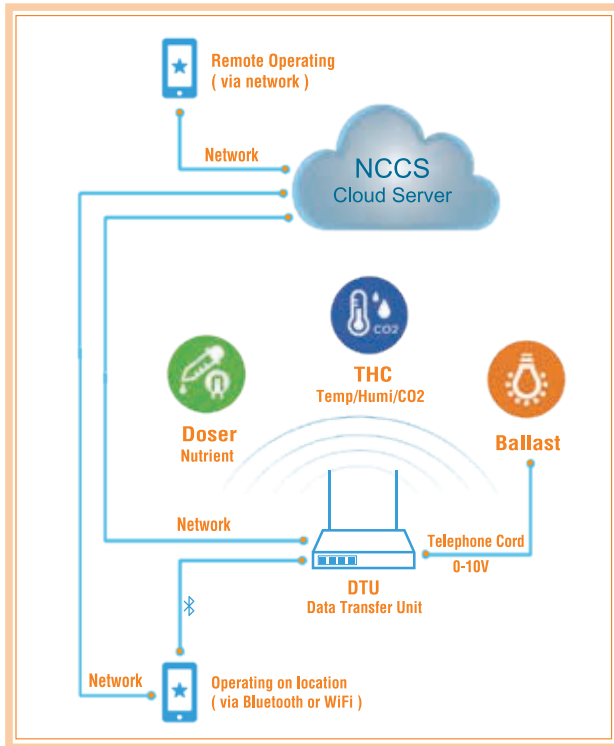


Nanolux Cloud Control System

USER MANUAL

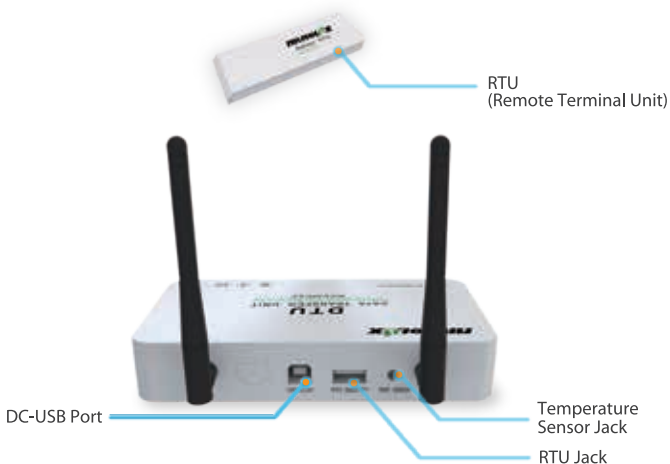
APP COMPATIBLE VERSION

The New DTU NCCS-APP-2.0 provides a hardware fix for operation with Android Oreo 8.0 Bluetooth which will work with the next version of Android also.

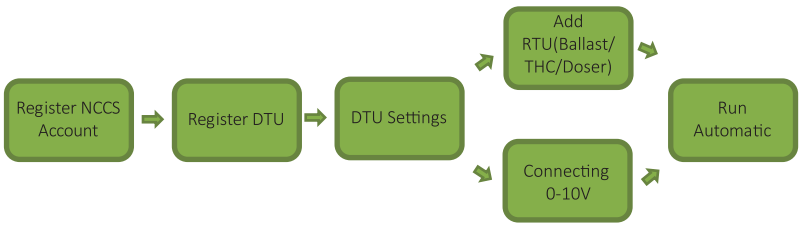


Welcome to the Nanolux Cloud Control System Application (NCCS APP). Please read and agree to the Terms of Service & Privacy Policy prior to using the NCCS APP.

DIAGRAM



QUICK GUIDE

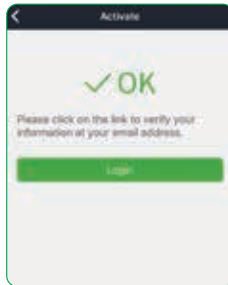
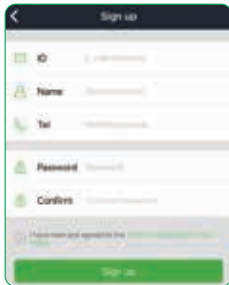


0-10V TECHNICAL SPECIFICATIONS

Maximum control voltage	11.0V
Maximum cable length per group	180m
Maximum number of ballasts per group	60pcs
Maximum output power per group	20mA
Total number of ballasts per group	60pcs

1. Download & Install NCCS APP from Apple Store or Google Play

2. Register NCCS Account



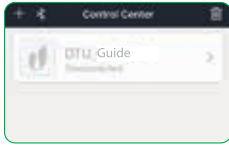
- 2.1 **Sign up** with email address & password.
- 2.2 **Activate** NCCS account through email verification.

CONTROL CENTER

3. Subscribe to NCCS Premium Services

To access your NCCS system remotely, you must purchase NCCS premium service. The NCCS APP will work on location by Bluetooth as a free included function.

4. DTU Guide

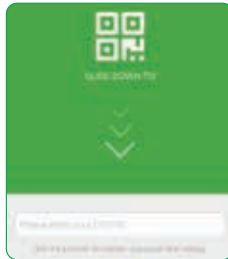
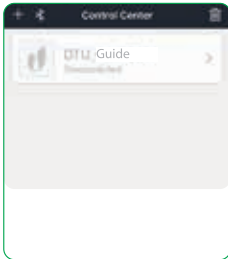


NOTE:

- 1) The DTU Guide is a sample DTU installation to help users become familiar with the system.
- 2) The DTU Guide will disappear when an actual DTU is registered.

5. Register DTU

5.1 Scratch the silver coating to reveal registration code on the back of DTU.



5.2 Click + to add DTU.

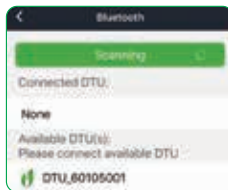
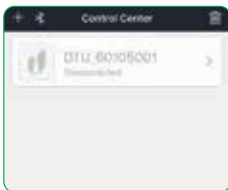
5.3 Slide down arrow to scan QR code.

NOTE:

- 1) If it fails to scan the QR code, you can also type the registration code(32 digits).
- 2) A maximum of 5 DTU's are allowed to be added to one account.

6. DTU Settings

6.1 Connect cellphone to DTU via Bluetooth

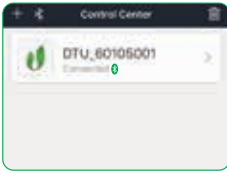


6.1.1 Turn on your cellphone bluetooth.

6.1.2 Click  icon.

6.1.3 Select the desired DTU.

6.2 DTU WiFi Settings



- 6.2.1 Click your desired DTU.
- 6.2.2 Click the gear icon.
- 6.2.3 Enter WiFi username (SSID) & password.

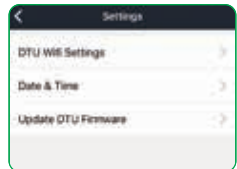
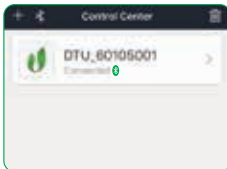
NOTE:

- 1) All configurations must be set with Bluetooth turned on.
- 2) The SSID and password are case sensitive.
- 3) The WiFi has been successfully set up if the WiFi signal status on the top of the DTU is flashing. You can also attempt to access login with the SSID & password.
- 4) When setting the DTU WiFi, you have to type SSID with finger on iOS platform but it is able to be searched automatically on Android platform.

6.3 DTU LED Signal Status

Icon	Flashing Status
	WiFi Mode
	Bluetooth Mode
	Functioning Properly

6.4 DTU Date & Time

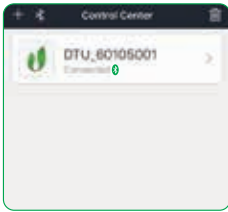


NOTE:

- 1) DTU Date & Time is the time at the location where the DTU is located.

6.5 DTU Update Firmware

- 6.5.1 Click your desired DTU.
- 6.5.2 Click the gear icon.
- 6.5.3 Click **Update** DTU firmware.

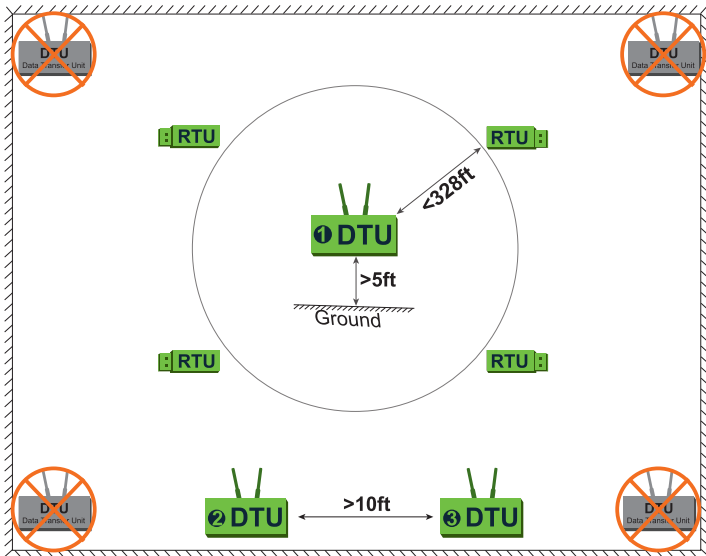


NOTE:

1) Ensure your cellphone connects to DTU Bluetooth with good communication.

6.6 DTU Installation

6.6.1 When Using RTU into USB Port of Nanolux Ballasts



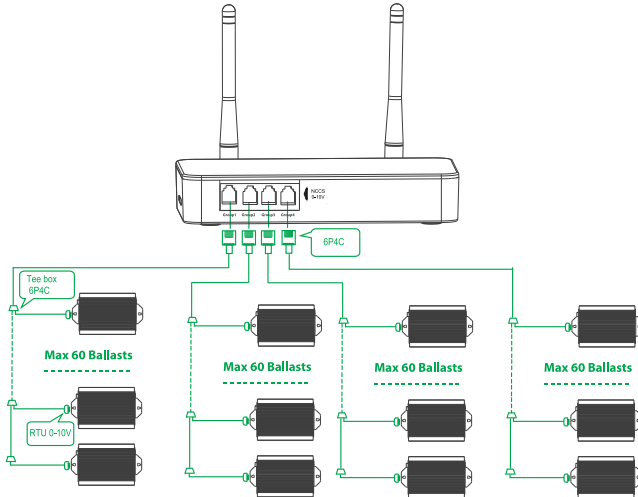
NOTE:

- 1) DTU should be centered in the room.
- 2) The distance between DTU's should be more than 10 feet to stop signal interference.
- 3) The height of the DTU from the ground should be greater than 5 feet.
- 4) The distance between the RTUs and the DTU should be no greater than 328 feet.
- 5) No obstacles should be placed between RTU & DTU.

6.6.2 For 0-10V Dimming (Takes the Ballast as an Example)

6.6.2.1 0-10V MODULE INSTALLATION

- 1) Plug in DTU, and program it on your NCCS APP to turn the lights on. Make sure the ballasts are on and have power.
- 2) Run wire from DTU to ballast closest to DTU.
- 3) Plug module into Tee Box.
- 4) Peel off protective sticker from module and insert module into ballast.
- 5) Repeat this process, one ballast at a time, until you are at the end of the line.

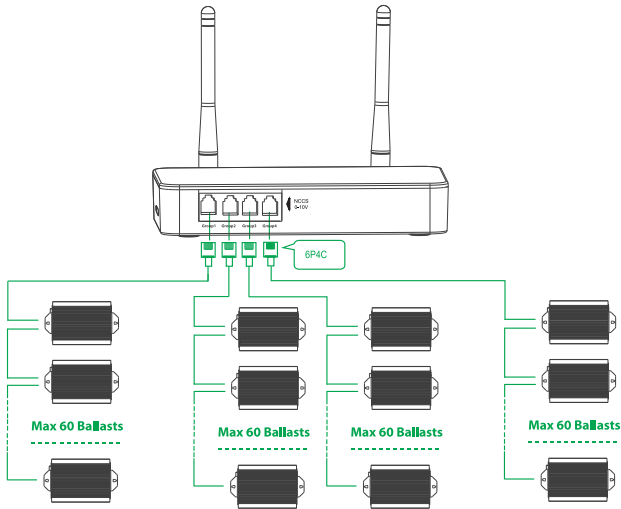


TROUBLESHOOTING:

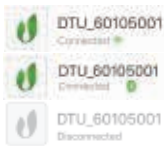
- 1) If at any point you plug a module in and previous lights shut off OR the DTU gives an error, start with replacing the wire, then Tee Box, then module, to figure out the cause of the error. Replace the defective component.
- 2) If you plug in module and ballast shuts off (despite DTU telling ballasts to remain on), replace module.
- 3) After installation, verify installation was a success by cycling the lights on/off a few times through NCCS APP.

6.6.2.2 DUAL 6P4C PORTS ON YOUR BALLASTS

- 1) Plug in DTU, and program it on your NCCS APP to turn the lights on. Make sure the ballasts are on and have power.
- 2) Run wire from DTU to ballast closest to DTU.
- 3) In & Out jacks included on the ballast allows for multi-fixtures connected in parallel. Repeat above process, one ballast at a time, until you are at the end of the line.



6.7 DTU Connecting Status



DTU is on WiFi.

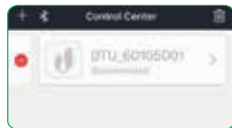
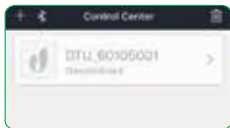
DTU is on Bluetooth.

DTU is disconnected.

NOTE:

1) When connecting DTU to cellphone, you'd better take priority to use Bluetooth.

6.8 Delete DTU



6.8.1 Click icon.

6.8.2 Click icon.

NOTE:

- 1) If you are not going to use a registered DTU again, delete it and all configurations for that DTU will be cleared at your account.
- 2) If you want to remove and add the DTU back later, you will need to reconnect the cellphone to the DTU via Bluetooth. All the configurations are saved on the DTU.

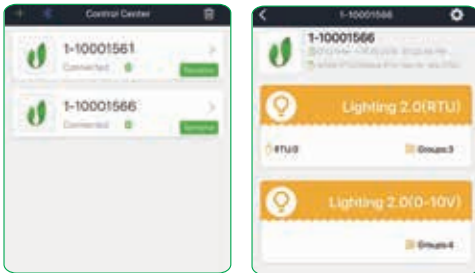
7. Lighting

7.1 Dimming Selection

NEW ARRIVAL (“DTU 2.0”) allows your choice and diversity in dimming with use of RTU or 0-10V output, making your DTU experience more powerful and delightful. Wireless network feature that RTU supports is left unchanged making devices communicate without internet cord. But the good news for anyone who ever troubles in Wi-Fi yet: 0-10V output supports to dim with telephone cord, intelligently and remotely regulating indoor facilities on NCCS APP.

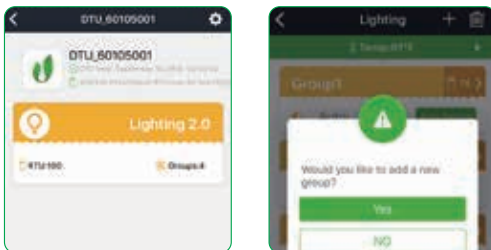
Guide to Dimming Selection:

- 1) Access Control Center first
- 2) Select DTU
- 3) Click your preferred choice on Lighting 2.0 (RTU) or Lighting 2.0 (0-10V)



7.2 Lighting 2.0(RTU) Mode

7.2.1 Adding Groups

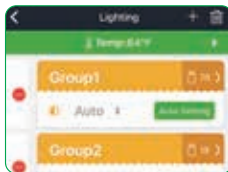


- 1) Click Lighting Group.
- 2) Click the + icon.

NOTE:

- 1) Add lighting groups are designed to set different dimming modes for each group.
- 2) A maximum of four groups are allowed on one DTU.

7.2.2 Delete Lighting Groups



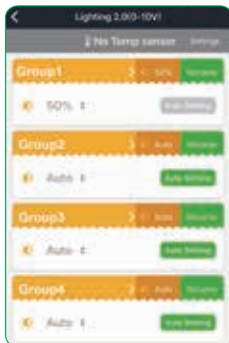
1) Select the desired Lighting Group.

2) Click the  &  icon.

NOTE:

1) You may move RTU's to other groups before delete lighting group.

7.3 Lighting 2.0(0-10V) Mode



NOTE:

Group Number#1 to 4 matches respectively Jack Number#1 to 4 in the DTU 2.0.

8. RTU Settings

8.1 Add RTU to DTU



8.1.1 Select the desired Group.

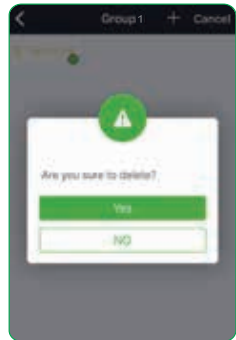
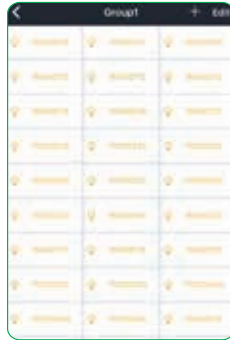
8.1.2 Click **+** button.

8.1.3 Insert RTU into DTU.

NOTE:

- 1) A maximum of 100pcs RTU's are allowed to add on one DTU.
- 2) Add RTU when Bluetooth is on.
- 3) Number each RTU prior to assigning a lighting group.

8.2 Delete RTU

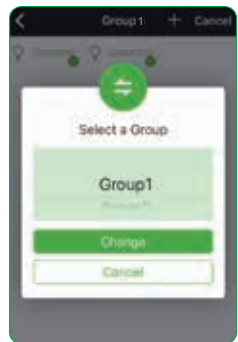
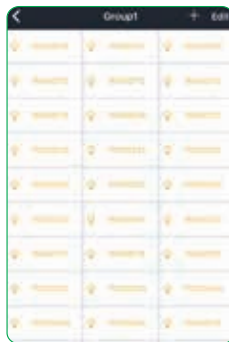
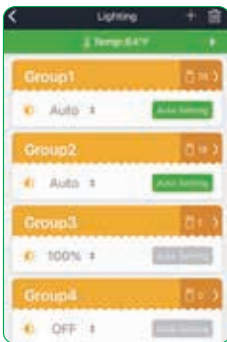


8.2.1 Select the desired Group.

8.2.2 Click Edit icon.

8.2.3 Select the desired RTU & Click  icon.

8.3 Change Group of RTU



8.3.1 Select the desired Lighting Group.

8.3.2 Click Edit icon.

8.3.3 Select the desired RTU & click  icon.

8.4 RTU Lighting Status



Light on



Light off



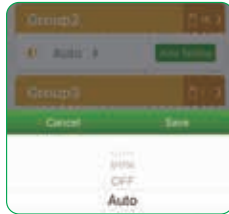
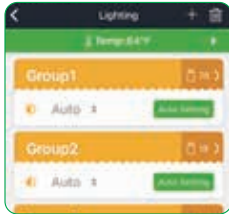
Communication break



Ballast / Lamp failure

9. Lighting Dimming

9.1 Auto Setting



Start Time	End Time	Power
00:00	06:00	OFF
06:00	12:00	80%
12:00	14:00	95%
14:00	19:00	65%
19:00	23:00	OFF

9.1.1 Select the desired Lighting Group.

9.1.2 Tap \updownarrow icon.

9.1.3 Select **Auto** & then **Save**.

9.1.4 Customize End Time & Power.

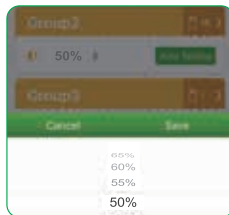
NOTE:

1) Start Time is default setting.

2) End time will sync with the next round of Start Time automatically.

3) A maximum of five dimming periods are allowed to set up.

9.2 Percentage Power Dimming

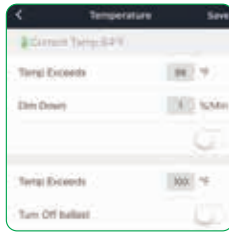
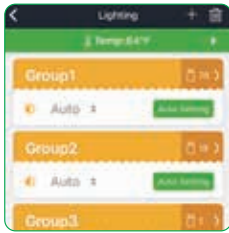


9.2.1 Select the desired Lighting Group.

9.2.2 Tap the \updownarrow icon to adjust.

9.2.3 Select rated power dimming & then **Save**.

9.3 Temperature Protection Settings



9.3.1 Click the arrow beside Temp.

9.3.2 **Dim Down:** Ballast dims down % **per minute** if the temperature exceeds °F you set.

9.3.3 **Turn Off Ballast:** Ballast will turn off automatically if temperature exceeds max °F set.

NOTE:

1) Insert the temperature sensor into the back of the DTU before programming.

2) Only use the temperature sensor supplied with the DTU when purchased.

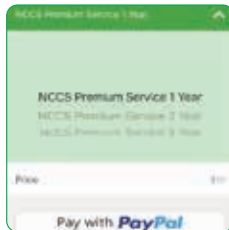
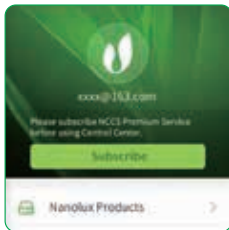
**10. Environmental Controller (Temp, humidity, CO2) & Nutrient dosing...
Coming soon.**



ME

11. Me

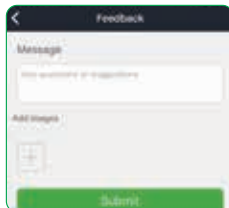
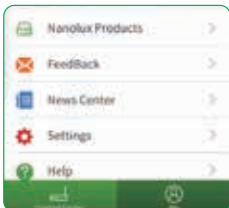
11.1 Subscribe Premium Service



11.1.1 Click **Subscribe** icon.

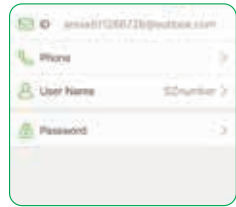
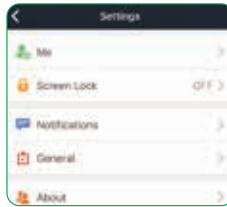
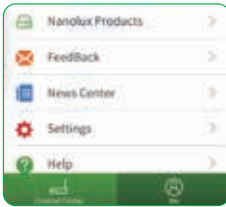
11.1.2 Select the service period you prefer.

11.2 Feedback



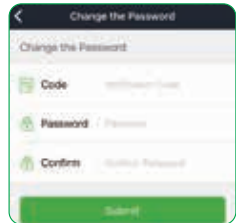
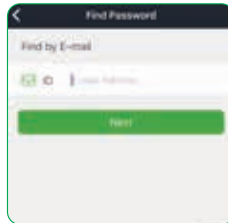
11.2.1 Click **Feedback > Submit**.

11.3 Change Password



11.3.1 Click **Settings > Me > Password**.

11.4 Forgot Password

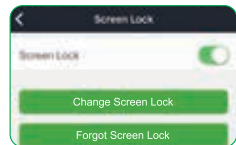
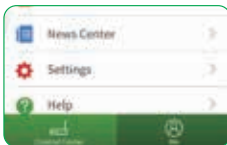


11.4.1 Click **Forgot Password**.

11.4.2 Enter your email address to get the verification code.

11.4.3 Reset the password & **Submit**.

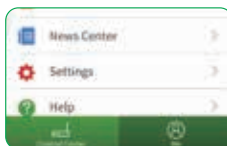
11.5 Screen Lock



11.5.1 Click **Settings > Me > Screen Lock**.

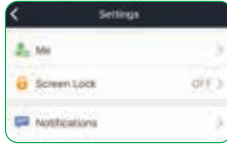
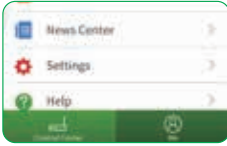
11.5.2 Click **Settings > Me > Change/Forgot Password**.

11.6 Edit/Change Profile Photo



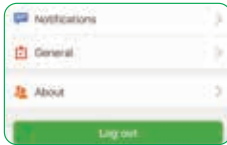
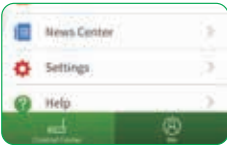
11.6.1 Click **Settings** > **Me** > **Photo**.

11.7 Change User Name



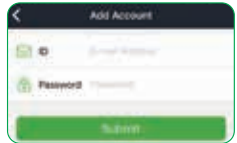
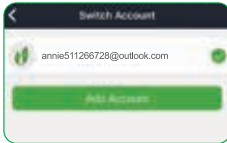
11.7.1 Click **Settings** > **Me** > **User Name**.

11.8 Log out



11.8.1 Click **Settings** > **Logout**.

11.9 Add Account



11.9.1 Tap your profile photo.

11.9.2 Click **Add Account** & enter a new ID and password.

11.10 Switch/Edit Account



11.10.1 Tap your profile photo.

11.10.2 Click the account to switch.

11.10.3 Click **Edit** icon to delete account.

12. NCCS APP Updates

NANOLUX Inc. will notify users through emails or messages when NCCS APP has a new version available. Please update at your earliest convenience to get the newest services from Apple store or Google Play.

13. Notice

13.1 Time Out

For security reasons, sessions end due to inactivity or network issues. Your session has timed out, and you need to restart the application.

13.2 Ballast Malfunction

Make sure the ballast, lamp or DTU is connected to a power source and confirm DTU is connecting with Bluetooth or WiFi.

13.3 DTU Time Error

Check Date & Time settings of cellphone.

13.4 Ballast is Turning Off

The ballast will automatically turn off after 10 minutes if the RTU has no communication with the DTU for any reason. At this point, turn off power and reset the ballast. If it happens once again, replace the RTU and ensure communications between DTU and RTU is stable.

13.5 DTU Adaptor

You must use the DTU adaptor (5V/2A) come with the DTU at purchase.

For any further assistance and support, please visit www.nanoluxtech.com or contact techsupport@nccstech.com



NCCS App (iOS)



NCCS App (Android)

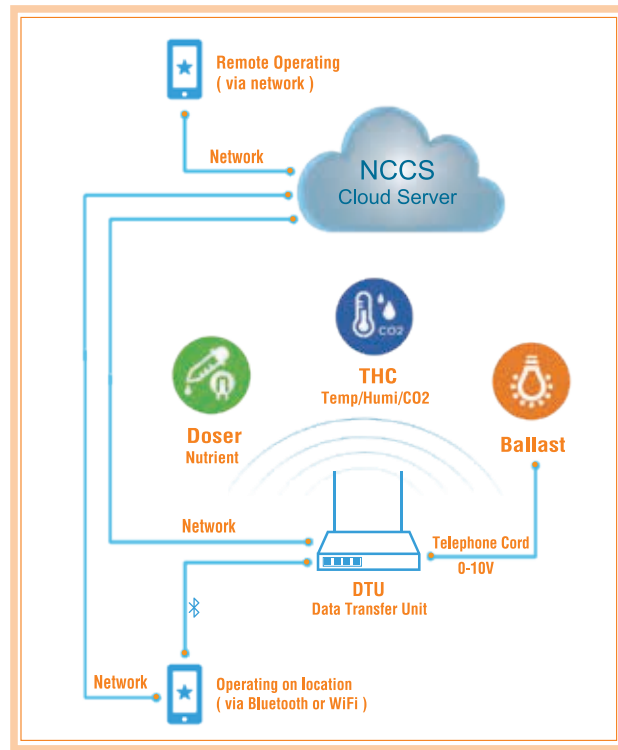
PATENTED PRODUCTS, COUNTERFEITING NOT ALLOWED.

Designed by NANOLUX in California
Made in China

Nanolux Cloud Control System USER MANUAL

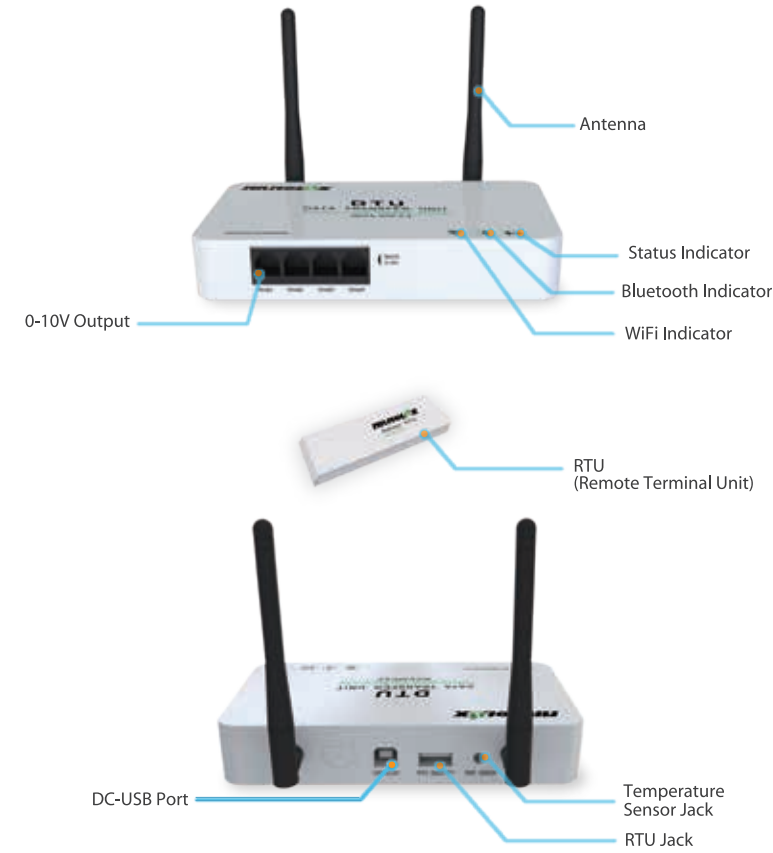
APP COMPATIBLE VERSION

The New DTU NCCS-APP-2.0 provides a hardware fix for operation with Android Oreo 8.0 Bluetooth which will work with the next version of Android also.



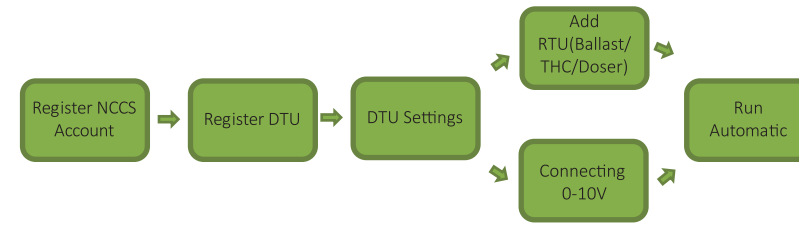
Welcome to the Nanolux Cloud Control System Application (NCCS APP). Please read and agree to the Terms of Service & Privacy Policy prior to using the NCCS APP.

DIAGRAM



QUICK GUIDE

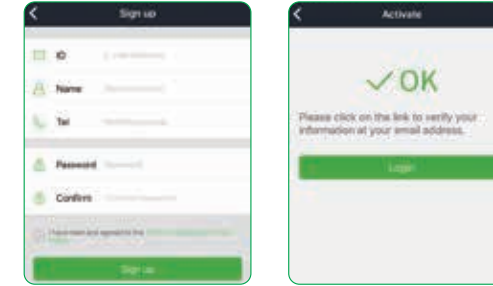
1



0-10V TECHNICAL SPECIFICATIONS

Maximum control voltage	11.0V
Maximum cable length per group	180m
Maximum number of ballasts per group	60pcs
Maximum output power per group	20mA
Total number of ballasts per group	60pcs

1. Download & Install NCCS APP from Apple Store or Google Play
2. Register NCCS Account



- 2.1 Sign up with email address & password.
- 2.2 Activate NCCS account through email verification.

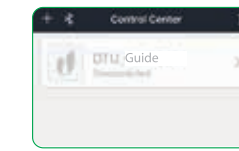
CONTROL CENTER

3. Subscribe to NCCS Premium Services

To access your NCCS system remotely, you must purchase NCCS premium service. The NCCS APP will work on location by Bluetooth as a free included function.

2

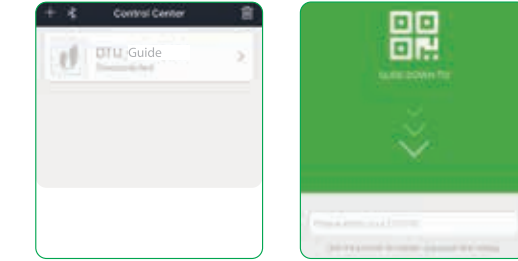
4. DTU Guide



- NOTE:**
- 1) The DTU Guide is a sample DTU installation to help users become familiar with the system.
 - 2) The DTU Guide will disappear when an actual DTU is registered.

5. Register DTU

- 5.1 Scratch the silver coating to reveal registration code on the back of DTU.

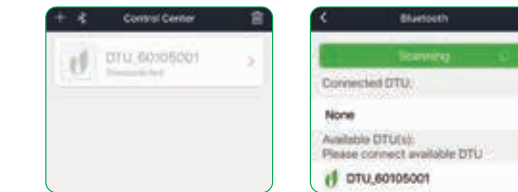


- 5.2 Click + to add DTU.
- 5.3 Slide down arrow to scan QR code.

- NOTE:**
- 1) If it fails to scan the QR code, you can also type the registration code(32 digits).
 - 2) A maximum of 5 DTU's are allowed to be added to one account.

6. DTU Settings

6.1 Connect cellphone to DTU via Bluetooth



- 6.1.1 Turn on your cellphone bluetooth.
- 6.1.2 Click Bluetooth icon.
- 6.1.3 Select the desired DTU.

6.2 DTU WiFi Settings

3



- 6.2.1 Click your desired DTU.
- 6.2.2 Click the gear icon.
- 6.2.3 Enter WiFi username (SSID) & password.

NOTE:

- 1) All configurations must be set with Bluetooth turned on.
- 2) The SSID and password are case sensitive.
- 3) The WiFi has been successfully set up if the WiFi signal status on the top of the DTU is flashing. You can also attempt to access login with the SSID & password.
- 4) When setting the DTU WiFi, you have to type SSID with finger on iOS platform but it is able to be searched automatically on Android platform.

6.3 DTU LED Signal Status

Icon	Flashing Status
	WiFi Mode
	Bluetooth Mode
	Functioning Properly

6.4 DTU Date & Time



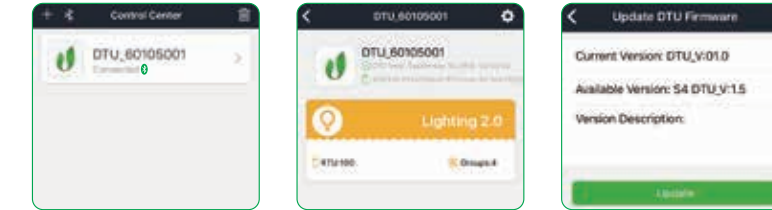
NOTE:

- 1) DTU Date & Time is the time at the location where the DTU is located.

6.5 DTU Update Firmware

- 6.5.1 Click your desired DTU.
- 6.5.2 Click the gear icon.
- 6.5.3 Click **Update** DTU firmware.

4

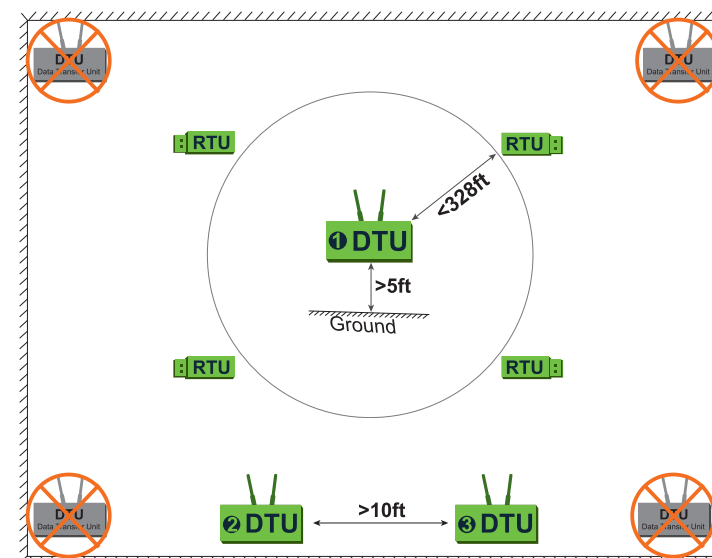


NOTE:

- 1) Ensure your cellphone connects to DTU Bluetooth with good communication.

6.6 DTU Installation

6.6.1 When Using RTU into USB Port of Nanolux Ballasts



NOTE:

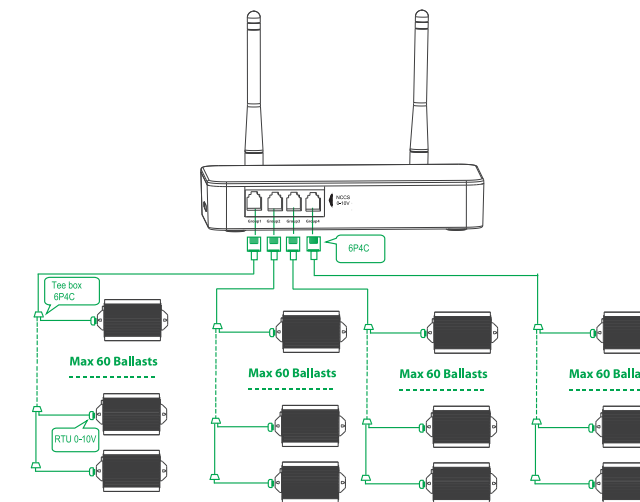
- 1) DTU should be centered in the room.
- 2) The distance between DTU's should be more than 10 feet to stop signal interference.
- 3) The height of the DTU from the ground should be greater than 5 feet.
- 4) The distance between the RTUs and the DTU should be no greater than 328 feet.
- 5) No obstacles should be placed between RTU & DTU.

5

6.6.2 For 0-10V Dimming (Takes the Ballast as an Example)

6.6.2.1 0-10V MODULE INSTALLATION

- 1) Plug in DTU, and program it on your NCCS APP to turn the lights on. Make sure the ballasts are on and have power.
- 2) Run wire from DTU to ballast closest to DTU.
- 3) Plug module into Tee Box.
- 4) Peel off protective sticker from module and insert module into ballast.
- 5) Repeat this process, one ballast at a time, until you are at the end of the line.



TROUBLESHOOTING:

- 1) If at any point you plug a module in and previous lights shut off OR the DTU gives an error, start with replacing the wire, then Tee Box, then module, to figure out the cause of the error. Replace the defective component.
- 2) If you plug in module and ballast shuts off (despite DTU telling ballasts to remain on), replace module.
- 3) After installation, verify installation was a success by cycling the lights on/off a few times through NCCS APP.

6.6.2.2 DUAL 6P4C PORTS ON YOUR BALLASTS

- 1) Plug in DTU, and program it on your NCCS APP to turn the lights on. Make sure the ballasts are on and have power.
- 2) Run wire from DTU to ballast closest to DTU.
- 3) In & Out jacks included on the ballast allows for multi-fixtures connected in parallel. Repeat above process, one ballast at a time, until you are at the end of the line.

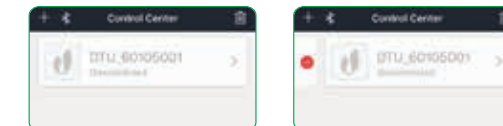
6

6.7 DTU Connecting Status



- NOTE:**
- 1) When connecting DTU to cellphone, you'd better take priority to use Bluetooth.

6.8 Delete DTU



- 6.8.1 Click Delete icon.
- 6.8.2 Click Delete icon.

NOTE:

- 1) If you are not going to use a registered DTU again, delete it and all configurations for that DTU will be cleared at your account.
- 2) If you want to remove and add the DTU back later, you will need to reconnect the cellphone to the DTU via Bluetooth. All the configurations are saved on the DTU.

7

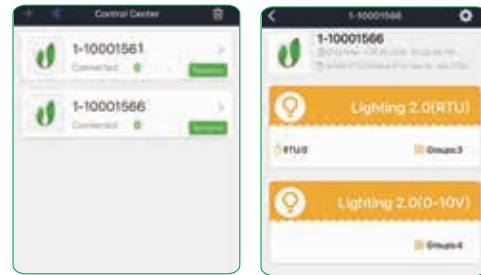
7. Lighting

7.1 Dimming Selection

NEW ARRIVAL ("DTU 2.0") allows your choice and diversity in dimming with use of RTU or 0-10V output, making your DTU experience more powerful and delightful. Wireless network feature that RTU supports is left unchanged making devices communicate without internet cord. But the good news for anyone who ever troubles in Wi-Fi yet: 0-10V output supports to dim with telephone cord, intelligently and remotely regulating indoor facilities on NCCS APP.

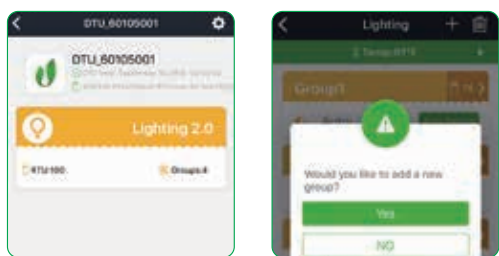
Guide to Dimming Selection:

- 1) Access Control Center first
- 2) Select DTU
- 3) Click your preferred choice on Lighting 2.0 (RTU) or Lighting 2.0 (0-10V)



7.2 Lighting 2.0(RTU) Mode

7.2.1 Adding Groups



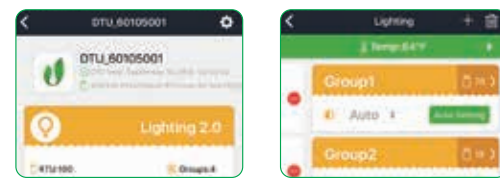
- 1) Click Lighting Group.
- 2) Click the + icon.

NOTE:

- 1) Add lighting groups are designed to set different dimming modes for each group.
- 2) A maximum of four groups are allowed on one DTU.

8

7.2.2 Delete Lighting Groups



- 1) Select the desired Lighting Group.
- 2) Click the [trash] & [minus] icon.

NOTE:

- 1) You may move RTU's to other groups before delete lighting group.

7.3 Lighting 2.0(0-10V) Mode

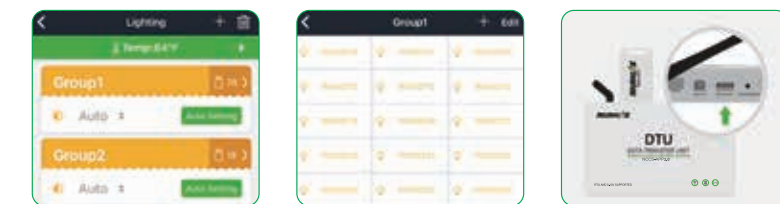


NOTE:

Group Number#1 to 4 matches respectively Jack Number#1 to 4 in the DTU 2.0.

8. RTU Settings

8.1 Add RTU to DTU



- 8.1.1 Select the desired Group.
- 8.1.2 Click + button.

9

8.1.3 Insert RTU into DTU.

NOTE:

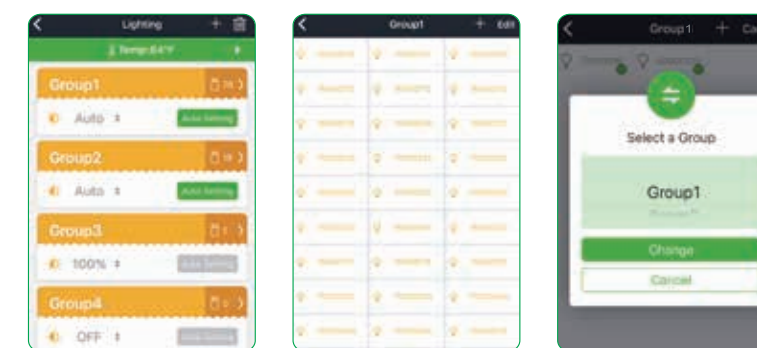
- 1) A maximum of 100pcs RTU's are allowed to add on one DTU.
- 2) Add RTU when Bluetooth is on.
- 3) Number each RTU prior to assigning a lighting group.

8.2 Delete RTU



- 8.2.1 Select the desired Group.
- 8.2.2 Click Edit icon.
- 8.2.3 Select the desired RTU & Click [trash] icon.

8.3 Change Group of RTU



- 8.3.1 Select the desired Lighting Group.
- 8.3.2 Click Edit icon.
- 8.3.3 Select the desired RTU & click [change] icon.

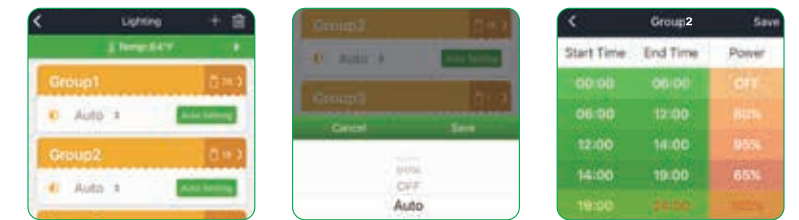
10

8.4 RTU Lighting Status

- Light on
- Light off
- Communication break
- Ballast / Lamp failure

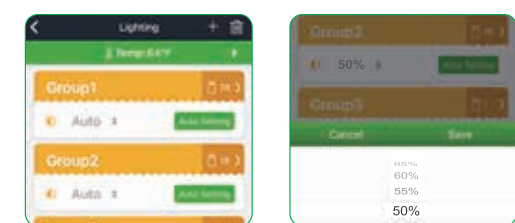
9. Lighting Dimming

9.1 Auto Setting



- 9.1.1 Select the desired Lighting Group.
 - 9.1.2 Tap [up] icon.
 - 9.1.3 Select **Auto** & then **Save**.
 - 9.1.4 Customize End Time & Power.
- NOTE:**
- 1) Start Time is default setting.
 - 2) End time will sync with the next round of Start Time automatically.
 - 3) A maximum of five dimming periods are allowed to set up.

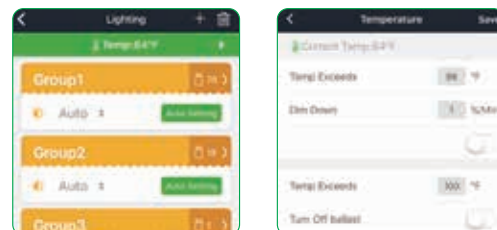
9.2 Percentage Power Dimming



- 9.2.1 Select the desired Lighting Group.
- 9.2.2 Tap the [up] icon to adjust.
- 9.2.3 Select rated power dimming & then **Save**.

9.3 Temperature Protection Settings

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- 9.3.1 Click the arrow beside Temp.
- 9.3.2 **Dim Down:** Ballast dims down % per minute if the temperature exceeds °F you set.
- 9.3.3 **Turn Off Ballast:** Ballast will turn off automatically if temperature exceeds max °F set.

NOTE:

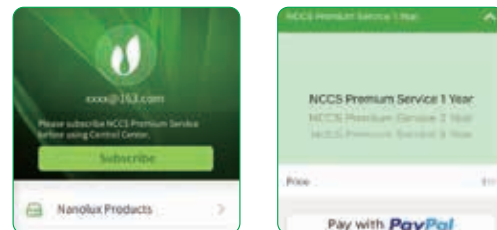
- 1) Insert the temperature sensor into the back of the DTU before programming.
- 2) Only use the temperature sensor supplied with the DTU when purchased.

10. Environmental Controller (Temp, humidity, CO2) & Nutrient dosing... Coming soon.

ME

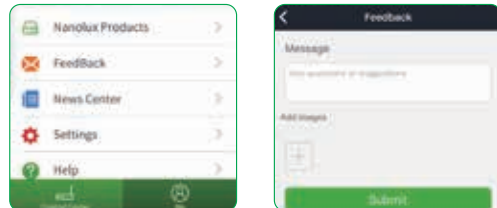
11. Me

11.1 Subscribe Premium Service



- 11.1.1 Click **Subscribe** icon.
- 11.1.2 Select the service period you prefer.

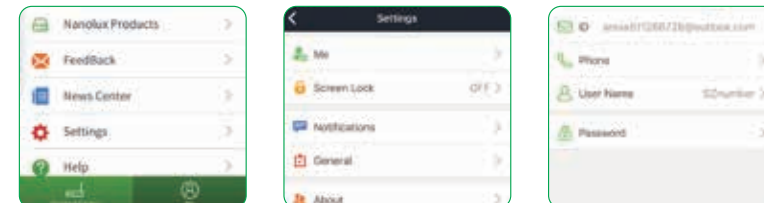
11.2 Feedback



12

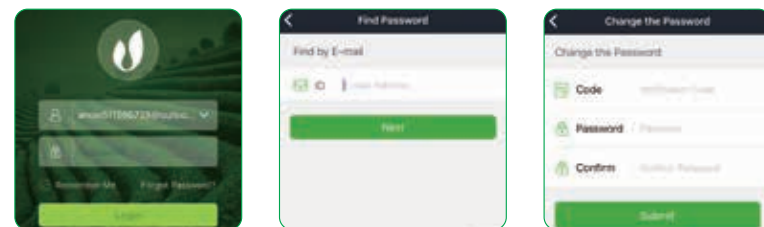
11.2.1 Click **Feedback** > **Submit**.

11.3 Change Password



11.3.1 Click **Settings** > **Me** > **Password**.

11.4 Forgot Password



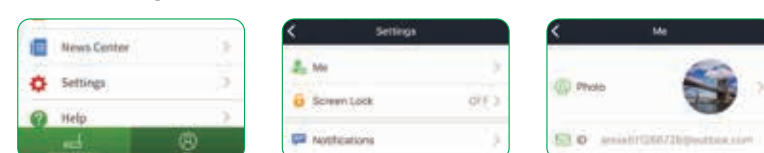
- 11.4.1 Click **Forgot Password**.
- 11.4.2 Enter your email address to get the verification code.
- 11.4.3 Reset the password & **Submit**.

11.5 Screen Lock



- 11.5.1 Click **Settings** > **Me** > **Screen Lock**.
- 11.5.2 Click **Settings** > **Me** > **Change/Forgot Password**.

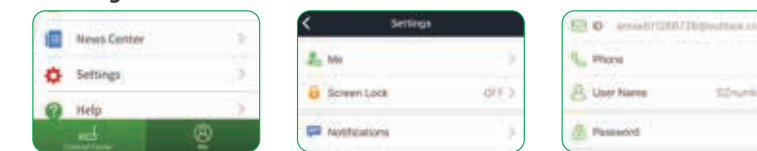
11.6 Edit/Change Profile Photo



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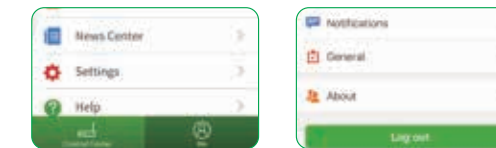
11.6.1 Click **Settings** > **Me** > **Photo**.

11.7 Change User Name



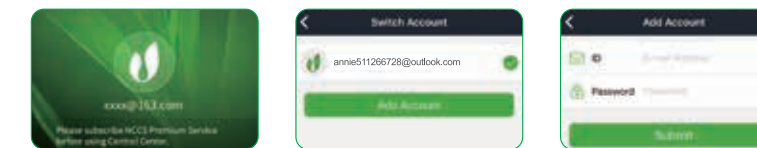
11.7.1 Click **Settings** > **Me** > **User Name**.

11.8 Log out



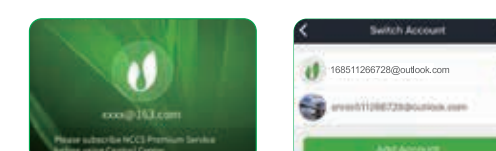
11.8.1 Click **Settings** > **Logout**.

11.9 Add Account



- 11.9.1 Tap your profile photo.
- 11.9.2 Click **Add Account** & enter a new ID and password.

11.10 Switch/Edit Account



- 11.10.1 Tap your profile photo.
- 11.10.2 Click the account to switch.
- 11.10.3 Click **Edit** icon to delete account.

12. NCCS APP Updates

NANOLUX Inc. will notify users through emails or messages when NCCS APP has a new version available. Please update at your earliest convenience to get the newest services from Apple store or Google Play.

13. Notice

13.1 Time Out

For security reasons, sessions end due to inactivity or network issues. Your session has timed out, and you need to restart the application.

13.2 Ballast Malfunction

Make sure the ballast, lamp or DTU is connected to a power source and confirm DTU is connecting with Bluetooth or WiFi.

13.3 DTU Time Error

Check Date & Time settings of cellphone.

13.4 Ballast is Turning Off

The ballast will automatically turn off after 10 minutes if the RTU has no communication with the DTU for any reason. At this point, turn off power and reset the ballast. If it happens once again, replace the RTU and ensure communications between DTU and RTU is stable.

13.5 DTU Adaptor

You must use the DTU adaptor (5V/2A) come with the DTU at purchase.

For any further assistance and support, please visit www.nanoluxtech.com or contact techsupport@nccstech.com



PATENTED PRODUCTS, COUNTERFEITING NOT ALLOWED.

Designed by NANOLUX in California
Made in China

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