

CipherLab User Guide

Terminal Emulator User Guide For Android Mobile Computer

RS36
RS35
RS51
RK95
RK25
RK26

Version 1.05



Copyright © 2023 CIPHERLAB CO., LTD.
All rights reserved

The software contains proprietary information of CIPHERLAB CO., LTD.; it is provided under a license agreement containing restrictions on use and disclosure and is also protected by copyright law. Reverse engineering of the software is prohibited.

Due to continued product development this information may change without notice. The information and intellectual property contained herein is confidential between CIPHERLAB and the client and remains the exclusive property of CIPHERLAB CO., LTD. If you find any problems in the documentation, please report them to us in writing. CIPHERLAB does not warrant that this document is error-free.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of CIPHERLAB CO., LTD.

For product consultancy and technical support, please contact your local sales representative. Also, you may visit our web site for more information.

The CipherLab logo is a registered trademark of CIPHERLAB CO., LTD.

All brand, product and service, and trademark names are the property of their registered owners.

The editorial use of these names is for identification as well as to the benefit of the owners, with no intention of infringement.

CIPHERLAB CO., LTD.

Website: <http://www.cipherlab.com>

RELEASE NOTES

Version	Date	Notes
1.05	Oct. 12, 2023	<ul style="list-style-type: none">▶ New: RS26 included
1.04	July 17, 2023	<ul style="list-style-type: none">▶ Pictures updated▶ New: RS35, RS36, and RK95 included▶ Modified: 2.2, 4.3 Screen Orientation – location of the icon and options updated▶ Modified: 2.3.2 Session Items – Session Title, Command Prompt and Command added in Host Profile▶ Modified: 2.3.2 Session Items – Port, Barcode settings, Login Name, Login Password, Login Name Prompt, Login Password Prompt descriptions▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Remote Character Set removed and Sever Language added in VT Settings▶ Removed: 2.3.2 Session Items, 4.1.2 Emulator Settings – Code Page, Auto Reset, and Custom Device Name in TN Settings▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Sever Language, WorkStation ID, and Override field properties added in TN Settings▶ Removed: 2.3.2 Session Items, 4.1.2 Emulator Settings – Show Session Number, Set HW Key to Exit App, Set HW Key to Control SIP, Show Navigation Bar, Show Wi-Fi/Battery Info on Full Screen, Update Wi-Fi/Battery Icon Interval, Choose Wi-Fi Alert level, and Choose Battery Alert Level in Screen Setting▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Floating Action Button, Auto Popup SIP On Connection, Haptic Feedback On Keypress, Popup On Keypress, Keyboard Layout, Line Spacing, and Show Status Bar added in Screen Setting▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Font Size and Color Settings options updated in Screen Setting▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Control Reader By Command, Feedback By Command/Text options updated in VT Alarm▶ Modified: 2.3.2 Session Items, 4.1.2 Emulator Settings – Connect Timeout added in Network Setting▶ Removed: 2.3.4 Activation Key, 2.3.6 Program Name▶ Modified: 2.4.2 Option, 2.4.3 Register, and 2.4.5 Session Details added▶ Modified: 2.4.6 About – Keypad Type and Serial Number added▶ Modified: 4.1.1 Settings – Generate Log file path updated▶ Modified: 4.1.2 Emulator Settings – Key Mapping and SSH descriptions▶ Removed: Appendix

1.03	May 21, 2019	<ul style="list-style-type: none"> ▶ Pictures updated ▶ Removed: 2.3.6 Languages ▶ New: RS51 included ▶ Modified: 4.1.1 Settings – Generate Log file path ▶ Modified: 4.1.2 Emulator Settings – Remote Character Set descriptions ▶ Modified: 4.1.2 Emulator Settings – Override Server Color added in Screen Settings ▶ Modified: 4.1.2 Emulator Settings – Sound and Sound File Name descriptions
1.02	Nov. 02, 2018	<ul style="list-style-type: none"> ▶ New: RK25 included
1.01	Apr. 12, 2018	<ul style="list-style-type: none"> ▶ Modified: 2.2.2 Session Items – “Clear field before inputting scan data” updated for TN Settings ▶ Modified: 2.2.2 Session Items – font size options updated ▶ Modified: 2.2.2 Session Items – Volume Up → VT ESC function added ▶ Modified: 4.1.2 Emulator Settings – “Clear field before inputting scan data” updated for TN Settings ▶ Modified: 4.1.2 Emulator Settings – font size options updated ▶ Modified: 4.1.2 Emulator Settings – Volume Up → VT ESC function added
1.00	Jan. 04, 2018	<ul style="list-style-type: none"> ▶ Initial release

CONTENTS

RELEASE NOTES	III
CONTENTS	I
INTRODUCTION	1
Features	2
CHAPTER 1. SETUP	3
1.1. Install	4
1.2. Launch Terminal Emulator	4
CHAPTER 2. USER INTERFACE	5
2.1. Screen Terminology	6
2.2. Screen Orientation	7
2.3. Session List & Session Settings	8
2.3.1. Session Management	8
2.3.2. Session Items	9
2.4. More Button	16
2.4.1. Full Screen	16
2.4.2. Option	17
2.4.3. Register	20
2.4.4. Export/Import Settings	22
2.4.5. Session Details	23
2.4.6. About	23
2.4.7. Exit	24
2.5. Connection	25
2.6. Terminal Screen	26
2.7. Using On-Screen Keyboard	27
CHAPTER 3. USAGE AND DATA COLLECTION	28
3.1. Start a Telnet Session	29
3.2. Collect Data	30
3.3. End a Telnet Session	30
CHAPTER 4. SETTINGS	31
4.1. Session	32
4.1.1. Settings	32
4.1.2. Emulator Settings	35
4.2. Host Session	48
4.3. Screen Orientation	49

INTRODUCTION

Terminal Emulator is brought to support mobile devices, which are high performance products powered by the Android platform. The application is developed for industries which make extensive use of terminal emulators. It enables your mobile computer to act as a terminal emulator while communicating with a host of the same environment.

Terminal Emulator is a telnet client with extended ability to launch and configure reader module(s). It links to available reader module(s) when a physical scan button is pressed, to collect decoded data and submit data to the host afar.

This manual details the setup and usage of Terminal Emulator. The application is simply addressed as "Terminal Emulator" hereinafter. We recommend that you keep one copy of this manual at hand for quick reference.

Thank you for choosing CipherLab products!

FEATURES

- ▶ Supports CipherLab Android mobile computers:
 - Android 7.0 Nougat (RK25)
 - Android 8.0 Oreo (RS51)
 - Android 9.0 Pie (RK25 & RK95)
 - Android 10 (RS35)
 - Android 11 (RK25, RS35 & RS51)
 - Android 12 (RK26, RK95 & RS36)
- ▶ Support TN5250 and TN3270 terminal emulators
- ▶ Support VT100, VT102, VT220, and ANSI terminal emulators
- ▶ Full-screen maximization with a double tap
- ▶ Control over reader module(s)
- ▶ Data auto-insertion by reading printed barcodes or RFID tags
- ▶ Data submission to a remote host
- ▶ Password control for accessing settings and exiting the application
- ▶ Easy reproduction of settings by means of a configuration file
- ▶ Support auto login, cursor tracking, etc.
- ▶ Support key mapping
- ▶ Audio/tactile feedback control
- ▶ Font size, line spacing configuration
- ▶ Font, background, cursor color configuration (for activated devices only)
- ▶ Multi-language support for TN 5250 and TN 3270 emulators
- ▶ Support multiple host sessions and Macro operation (for activated devices only)

1 SETUP

This chapter provides a straightforward guide for setting up the Terminal Emulator. It only requires a few clicks to activate the installer and complete the installation process.

IN THIS CHAPTER

1.1 Install	4
1.2 Launch Terminal Emulator	4

1.1. INSTALL


Terminal Emulator is pre-installed and pre-licensed only on mobile devices with physical keyboards. Some functions may be disabled on other models before users purchase the license.

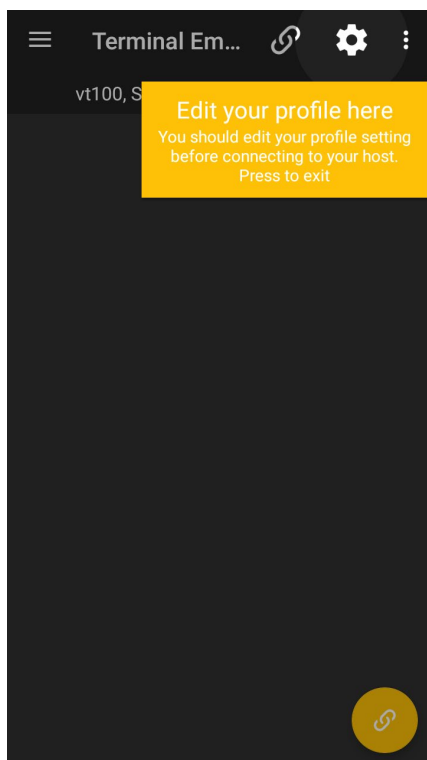
To update this app on your mobile device, you can transfer the installation file (.apk) from the computer to your device through USB connection. It is strongly recommended to install applications from trusted sources.

1.2. LAUNCH TERMINAL EMULATOR

Once the installation finishes, proceed to launch Terminal Emulator:



Tap the  icon to run the Terminal Emulator.



2 USER INTERFACE

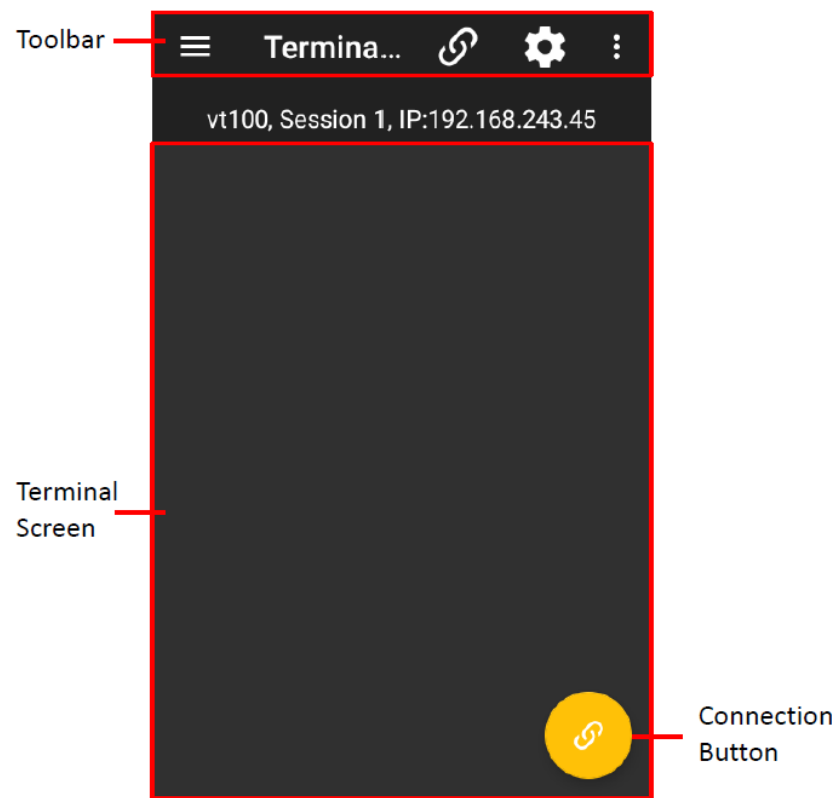
This chapter introduces the user interface of Terminal Emulator. Understanding user interface helps escape confusion and jump seamlessly within the application.


IN THIS CHAPTER

- 2.1 Screen Terminology 6
- 2.2 Screen Orientation..... 7
- 2.3 Session List & Session Settings..... 8
- 2.4 More Button16
- 2.5 Connection.....25
- 2.6 Terminal Screen26
- 2.7 Using On-Screen Keyboard27



2.1. SCREEN TERMINOLOGY

The screenshot below shows Terminal Emulator opened on the mobile computer. On-screen elements include the following:

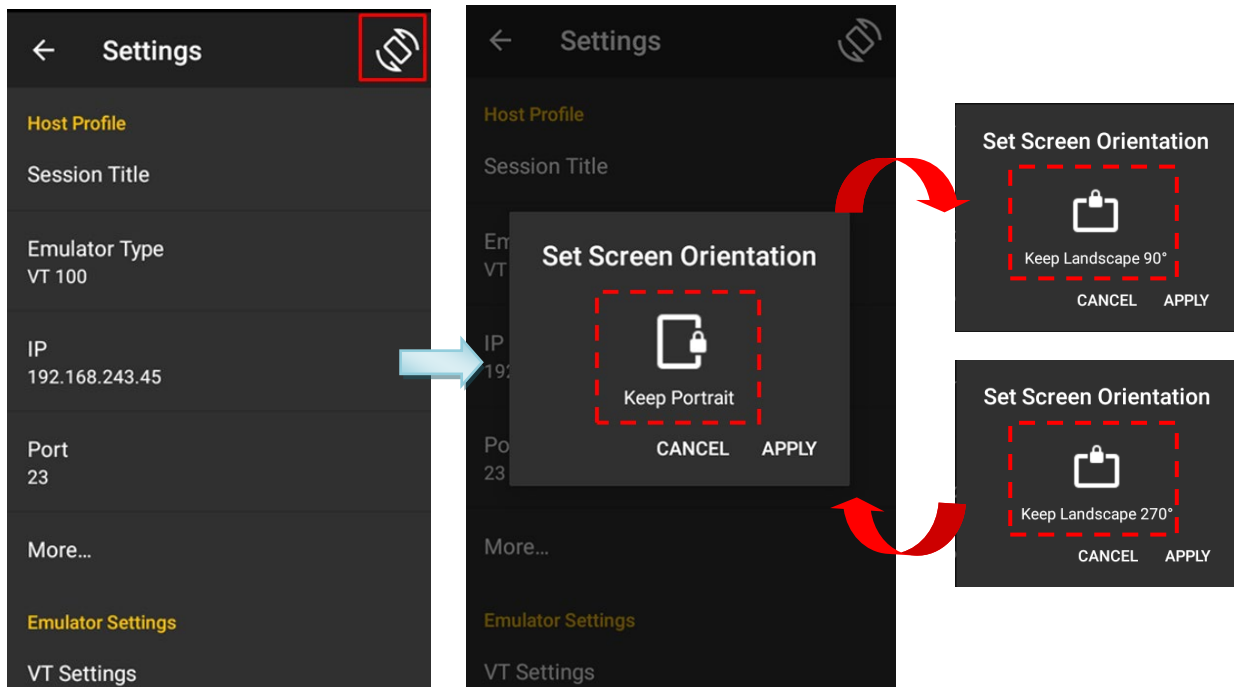


Term	Description
Toolbar	Present a few icons that quickly launch some actions from Terminal Emulator.
Terminal screen	Show the exact output displayed on the emulated terminal.
Connection button / Open On-screen Keyboard	<p>On a session screen where the current session is not yet connected, tap on this button to build up connection.</p> <p>On a screen of a connected session, this button turns into ; tap on it to open on-screen keyboard to input text.</p>

2.2. SCREEN ORIENTATION

To set screen orientation, tap  icon in the toolbar. Then tap  icon in the upper-right corner to bring up the dialog.




When the dialog shows up, tap the icon in the center of the dialogue box to switch among **Keep Portrait**, **Keep Landscape 90°** and **Keep Landscape 270°**. Then tap “**APPLY**” to complete the setting.

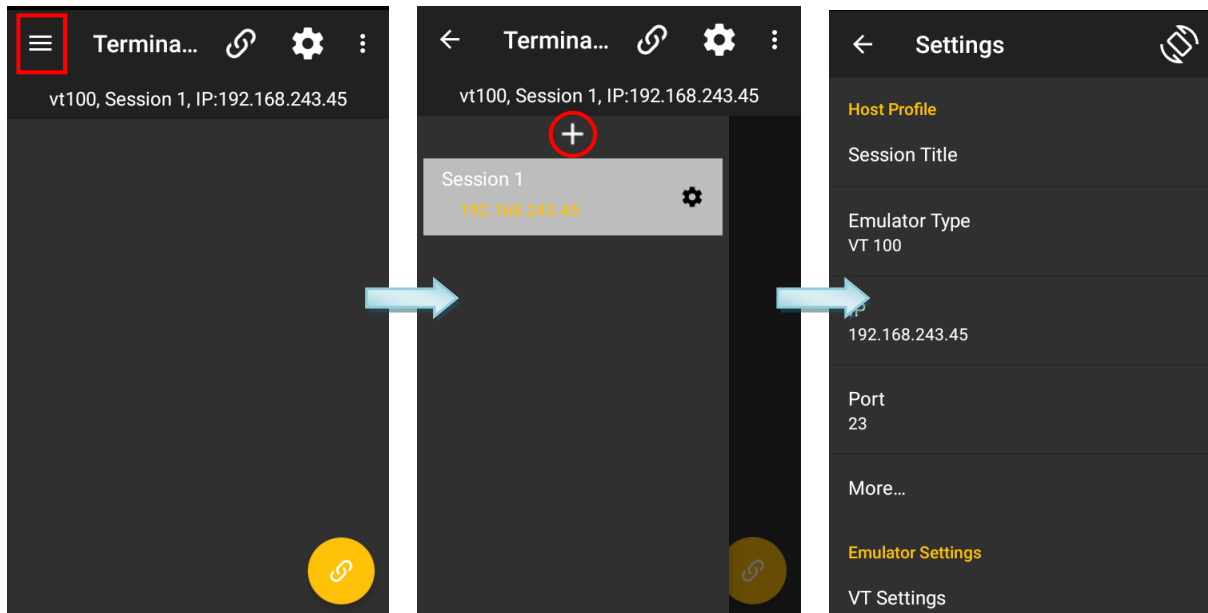


2.3. SESSION LIST & SESSION SETTINGS

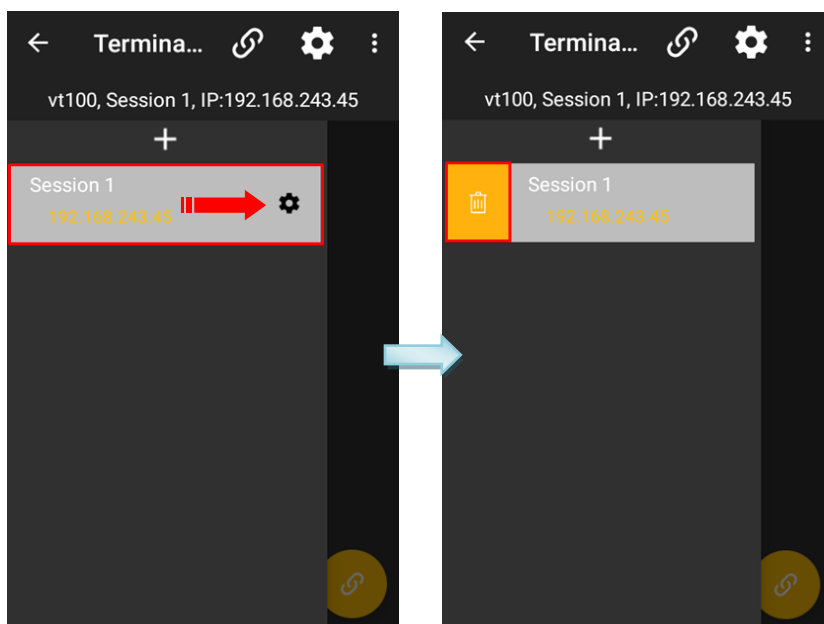
2.3.1. SESSION MANAGEMENT


Terminal Emulator features a menu, which manifests itself as a list of options for accessing Terminal Emulator settings.

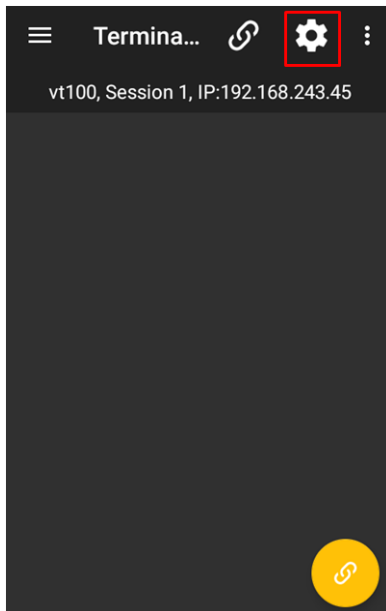
The **Session List**  and **Session Settings**  are mainly designed to configure telnet sessions. Tap  icon in the toolbar and then tap the plus sign icon to add new sessions or tap the setting icon to configure an existing session.



To delete an unwanted session, just swipe the item from left to right. Then tap the trash can icon to remove the session.



Or, you can also tap  icon in the toolbar to configure the current selected session.



2.3.2. SESSION ITEMS

The following tables briefly explain each setting item for a particular session in the list.

Host Profile	
Menu Item	Brief Description
Session Title	Tap this item to bring up the dialog to specify a session title.
Emulator Type	Tap Emulator Type to set the profile to connect to the prospective host, VT or TN type.
IP	Tap this item to bring up the dialog to specify IP address or name of the host.
Port	Tap this item to specify a port number.
Auto Connect	Check this item to enable/disable auto connection.
Auto Login	Check this item to enable/disable auto login.
Login Name	Tap this item to bring up the dialog to specify login name. (This option is available after you enable " Auto Login ")
Login Password	Tap this item to bring up the dialog to specify login password. (This option is available after you enable " Auto Login ")
Command	Tap this item to bring up the dialog to specify the command to send to the host at the command prompt. This function is only available for VT host types. (This option is available after you enable " Auto Login ")
Login Name Prompt	Tap this item to bring up the dialog to specify the text exactly displayed by the host service to prompt for user name. This function is only available for VT host types. (This option is available after you enable " Auto Login ")

Login Password Prompt	Tap this item to bring up the dialog to specify the text exactly displayed by the host service to prompt for password. This function is only available for VT host types. (This option is available after you enable " Auto Login ")
Command Prompt	Tap this item to bring up the dialog to specify the text exactly displayed by the host service to prompt for command. This function is only available for VT host types. (This option is available after you enable " Auto Login ")
Term Login	Tap this item to bring up the dialog. Select the radio buttons between Tab and Enter to assign the key to switch over Login Name and Login Password when Auto Login is enabled. This function is only available for VT host types. (This option is available after you enable " Auto Login ")

Emulator Settings	
Menu Item	Brief Description
VT Settings	
Convert to Uppercase	Capitalize all the letters of input data.
Line Buffer	Show typed text and commands locally on Terminal Emulator, and transmits them to host service only after Enter key is hit to confirm the input. <ul style="list-style-type: none"> By default and by characteristic of VT Emulator, Terminal Emulator sends entered text to host service character by character without hitting Enter key.
Local Echo	Show typed text locally on Terminal Emulator just as it is being transmitted to host service. <ul style="list-style-type: none"> Typed commands will not be shown locally.
Send String when Connect	Define the command that Terminal Emulator sends to host service on connection. Tap the text field to enter the desired command.
New Answer Back	Specify a string to be sent to the host when receiving an ENQ from the host.
Server Language	Assign the character code for displaying the characters received from the server.
Replace Char if Unconvertable	When "UTF-8" is assigned in Server Language, this control bar is available. Swipe it from left to right and tap to assign a replacement character. If the characters received from the server are unconvertable, a replacement will be displayed on the terminal. Options are: <ul style="list-style-type: none"> (Blank), X, %, &, ≠, -, _
TN Settings	
Server Language	Assign the character code for displaying the characters received from the server.
WorkStation ID	Specify a string less than 10 characters to be sent to the host when receiving an ENQ from the host. Users can include the variables as follows for device identification:

	<ul style="list-style-type: none"> ▶ Default (half block cursor) ▶ Underline (underline cursor) ▶ Block (full block cursor)
Auto Tracking	<p>Auto-position Terminal Screen to bring cursor into view. Enable auto tracking by swiping the control bar from left to right and tap to select:</p> <ul style="list-style-type: none"> ▶ Visible (The cursor constantly shows at the upper-right of the screen.) ▶ Center (The cursor constantly shows in the center of the screen.) ▶ Locked Location (The screen is locked to the position set by column and row.)
Locked Location	When Auto Tracking is set to Locked Location, users can tap this item to specify the accurate coordinates.
Font	<p>Tap to assign the font to show characters in Terminal Screen. Options are:</p> <ul style="list-style-type: none"> ▶ Courier New ▶ Lucida Console ▶ Excalibur Monospace ▶ NetTerm ANSI ▶ NetTerm OEM
Font Size	Tap to assign the size to show characters in Terminal Screen.
Line Spacing	Tap to assign the line spacing in Terminal Screen.
Color Settings	Tap this item to customize the font color, background color, and cursor color in the Terminal Screen according to user preferences.
Override Server Color	Check this item to display the customized font, background, and cursor colors in Terminal Screen, instead of the colors assigned by the server.
Full Screen	
Auto Full Screen On Connection	<p>Tap to enable/disable full screen mode automatically when the device connects to the server.</p> <ul style="list-style-type: none"> ▶ With Terminal Screen maximized, both the Android status bar and the application's toolbar are covered up.
Show Status Bar	Tap to enable/disable the Status Bar in full screen mode.
Alarm	
Control Reader By Command	<p>Enable the host service to send commands in order to turn on/off the reader module. Deselected by default.</p> <ul style="list-style-type: none"> ▶ Enable Command: Assign a command (escape sequence) for turning on the reader module. ▶ Disable Command: Assign a command (escape sequence) for turning off the reader module. ▶ Sound: Tap to select a sound from the pop-up list or tap the User Defined radio button to locate a wav file. ▶ Sound File Name: When User Defined is selected, tap to select a wav file for playing when a message is displayed. ▶ Vibration Duration: Tap to specify the time interval ranging from 0 to 5 seconds in increment of 0.5 seconds.


Feedback By Command/Text	<p>Enable the host service to respond to Terminal Emulator by sending a command (escape sequence) for good or erroneous inputs. Deselected by default.</p> <p>▶ Good Feedback: Assign the command (escape sequence) for input success. When Terminal Emulator receives the command, the mobile computer will play the specified beeper sound or vibrate for the specified amount of time.</p> <table><tr><th>Setting</th><th>Description</th><th>Default</th></tr><tr><td>Feedback Type</td><td>Select By Command or By Text.</td><td>By Command</td></tr><tr><td>Command</td><td>Enter the sequence of interest.</td><td>--</td></tr><tr><td>Sound</td><td>Select a sound from the pop-up list or tap on User Defined.</td><td>Mute</td></tr><tr><td>Sound File Name</td><td>When User Defined is selected, tap to select a wav file from the device.</td><td>Deselected (Disabled)</td></tr><tr><td>Vibration Duration</td><td>Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).</td><td>0 sec</td></tr></table> <p>▶ Error Feedback: Assign the command (escape sequence) for input failure. When Terminal Emulator receives the command, the mobile computer will play the specified beeper sound or vibrate for the specified amount of time.</p> <table><tr><th>Setting</th><th>Description</th><th>Default</th></tr><tr><td>Feedback Type</td><td>Select By Command or By Text.</td><td>By Command</td></tr><tr><td>Command</td><td>Enter the sequence of interest.</td><td>--</td></tr><tr><td>Sound</td><td>Select a sound from the pop-up list or tap on User Defined.</td><td>Mute</td></tr><tr><td>Sound File Name</td><td>When "User Defined" is selected, tap to select a wav file from the device.</td><td>Deselected (Disabled)</td></tr><tr><td>Vibration Duration</td><td>Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).</td><td>0 sec</td></tr></table>	Setting	Description	Default	Feedback Type	Select By Command or By Text.	By Command	Command	Enter the sequence of interest.	--	Sound	Select a sound from the pop-up list or tap on User Defined.	Mute	Sound File Name	When User Defined is selected, tap to select a wav file from the device.	Deselected (Disabled)	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec	Setting	Description	Default	Feedback Type	Select By Command or By Text.	By Command	Command	Enter the sequence of interest.	--	Sound	Select a sound from the pop-up list or tap on User Defined.	Mute	Sound File Name	When "User Defined" is selected, tap to select a wav file from the device.	Deselected (Disabled)	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec
Setting	Description	Default																																			
Feedback Type	Select By Command or By Text.	By Command																																			
Command	Enter the sequence of interest.	--																																			
Sound	Select a sound from the pop-up list or tap on User Defined.	Mute																																			
Sound File Name	When User Defined is selected, tap to select a wav file from the device.	Deselected (Disabled)																																			
Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec																																			
Setting	Description	Default																																			
Feedback Type	Select By Command or By Text.	By Command																																			
Command	Enter the sequence of interest.	--																																			
Sound	Select a sound from the pop-up list or tap on User Defined.	Mute																																			
Sound File Name	When "User Defined" is selected, tap to select a wav file from the device.	Deselected (Disabled)																																			
Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec																																			
Key Mapping																																					
	<p>Terminal Emulator supports Key Mapping, enabling users to define a physical key (combined keys) of the mobile device mapping to a specific function performed on the server.</p> <p>Key Mapping settings differ between VT and TN Emulators.</p> <p>Tap to select a Server Key and configure the Mapped Physical Key settings.</p> <p>For more details, please refer to Key Mapping in 4.1.2 Emulator Settings.</p>																																				

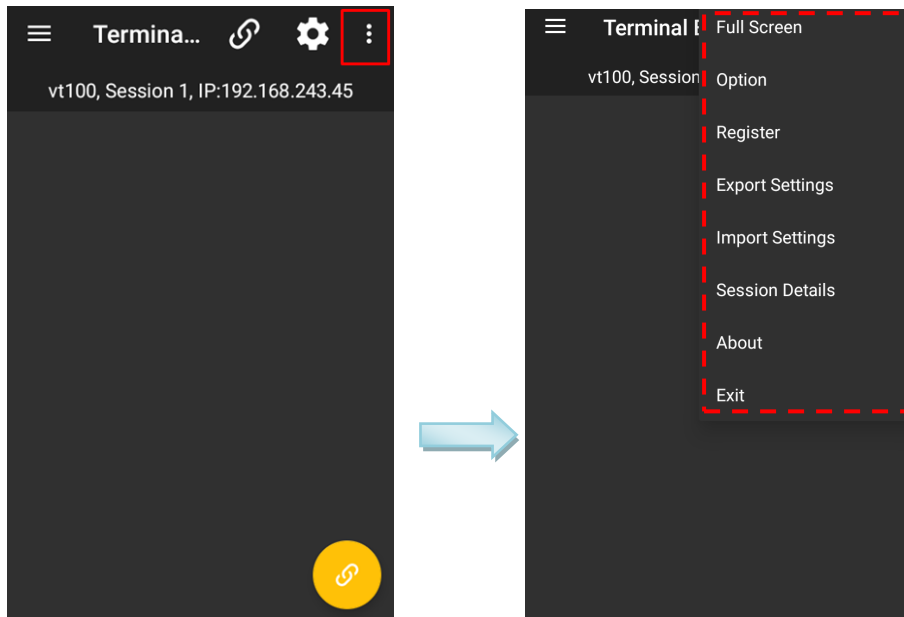
	Setting	Description
	Category	List the categories of Physical Keys. Options are: <ul style="list-style-type: none"> ▶ Alphabets ▶ Numbers ▶ Punctuations ▶ Function Keys ▶ Navigation Keys ▶ Editing Keys
	Physical Key	Serve the function of the Server Key.
	Shift/ Ctrl/ Alt	Function with the physical key if selected.
	Clear Key	Make the selected Physical Key Undefined.
	Trap	Assign the command of a Server Key to a Physical Key by directly pressing the latter one on the mobile computer.
	Reset	Return to default Physical Keys.
Volume Up → VT ESC		
		When this function is enabled and a connection to the VT server is established, pressing the volume up button will send "ESC" to the VT server. This function is only available for VT Emulator.
SSH (VT Only)		
SSH		Swipe the control bar from left to right to enable SSH.
SSH Log		Tap to enable/disable recording data about SSH connections.
Authentication		
Authentication Type		Tap to select the authentication type between Name/Pwd and Key File.
Advanced		
Login Name		Tap to specify login name.
Key File		Tap to manage key files.
General Options		
Use TCP No-Delay		Enable this option to enhance the performance of small-amount data transmission between Server and client Device. However, this function might result in excessive traffic of short packets.
No pseudo-Terminal on Host		The "pseudo-terminal mode" is fundamental for VT (UNIX) host system to build up Emulator sessions between client Devices. Disable it if necessary.
No Host Shell		Enable this option to have TE not run shell or command after connecting to the remote host server. This option is applicable only when: <ol style="list-style-type: none"> 1. SSH connection is used for port forwarding, and your user account on the server is not allowed to run a shell. 2. SSH protocol version 2 is supported on host server.
Re-Key Every 60 Minutes		In RFC 4253 (the SSH Transport Layer Protocol), the Re-Key

Re-Key Every 1G of Traffic	method ensures the key is exchanged only upon per gigabyte of transmitted data or per hour of connection time, whichever occurs sooner. Enable these options to trigger TE to exchange a new key with the server every 60 minutes or following a total data flow of 1 Gigabyte in either direction.
Server	
Environment	Specifies environment variables to be set on the SSH server.
Commands	Represent a special command or subsystem to invoke on the SSH server in lieu of an interactive shell. This is typically used for non-interactive host sessions. For most users this will be blank.
TTY	This setting can be used to add TTY Modes to be sent to the SSH server.
Proxy	
Type	Tap to configure what type of proxy you want CL TE to use for its network connections.
Host	Tap to specify the DNS name or IP address of the proxy server. The default is blank.
Port	Tap to specify the port on which the proxy server is listening. Set this to match the port on the proxy server for connections.
User	If your proxy server requires authentication, enter the username. The default is blank.
Password	If your proxy server requires authentication, enter the password. The default is blank.

Network	
Network Keep Alive	Tap to enable/disable sending a thread to the host according to the time interval to make sure it's connecting to the host.
Detect out of Range	Tap to enable/disable detecting if the device is out of network range.
Connect Timeout	Tap to establish a time period within a connection with the server.
Barcode Settings	
Configuration	Tap to proceed with related settings. Please refer to the device user manual.
Debug	
Generate Log	Tap to determine whether to generate log.

2.4. MORE BUTTON

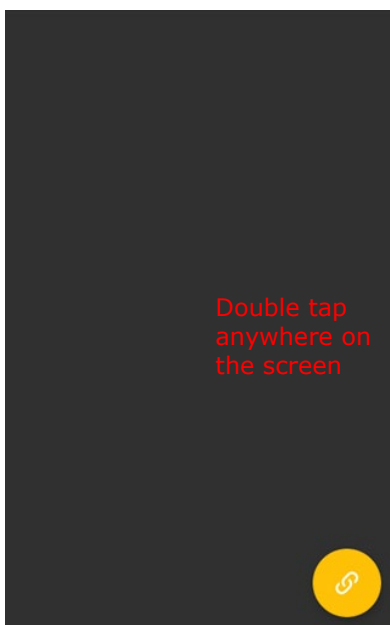
Modify Terminal Emulator by its featured settings to optimize your field applications. Tap the More Button  to proceed with the settings.



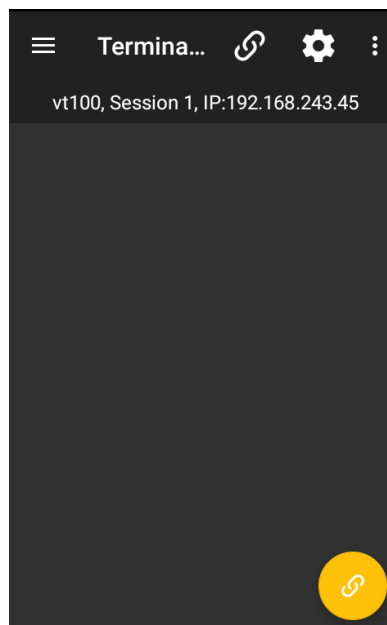
2.4.1. FULL SCREEN

Tap "**Full Screen**" on the list to switch the Terminal Screen to a maximized scale. To exit full screen mode, double tap anywhere on the screen.

Full screen mode

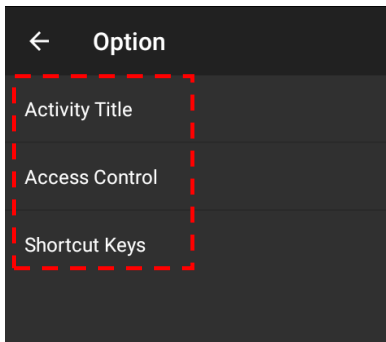


Regular windowed mode

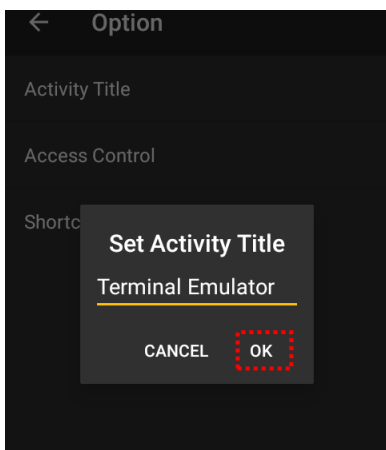


2.4.2. OPTION

“**Option**” is a menu that includes the settings for **Activity Title**, **Access Control** and **Shortcut Keys**.

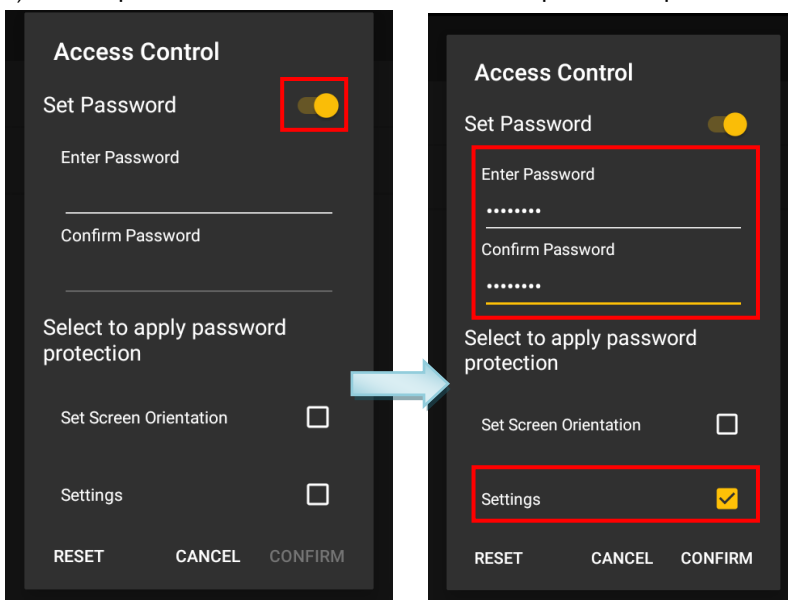


Tap **Option | Activity Title** to specify an activity title to display on screen, and tap on “**OK**”.



To enable **Access Control**:

- 1) Tap **Option | Access Control**.
- 2) On the **Access Control** dialog, switch on “**Set Password**”.
- 3) Set password and select the action for password protection.



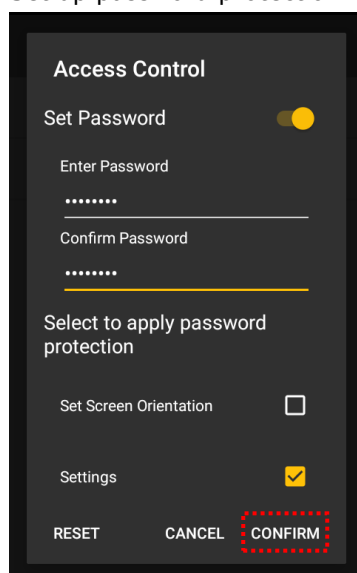
Access Control page provides the following items:

Item	Description
Enter Password/ Confirm Password	Enter the password in the two text fields. The maximum length is 8 characters; allowed characters include numerals, uppercase letters and lowercase letters.
Select to apply password protection	Select the action for which you would like to set up password protection: <ul style="list-style-type: none"> ▶ Set Screen Orientation ▶ Settings (unauthorized users will be unable to access the settings an Access Control) ▶ Exit Application (unauthorized users will be unable to exit the application) ▶ Exit Full Screen (unauthorized users will be unable to exit the full screen)

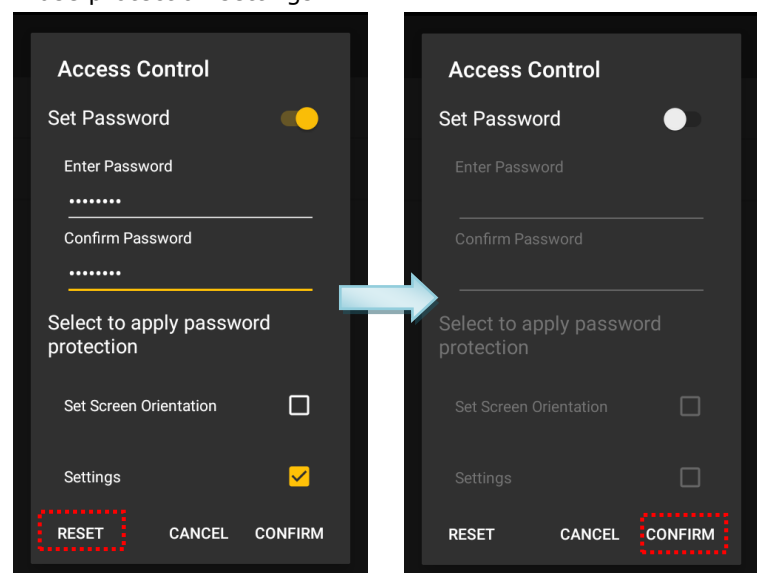
- 4) After setting up password protection as desired, tap **"CONFIRM"** to apply changes and quit settings.

To erase all protection settings or disable Access Control, first tap **"RESET"** and then tap **"CONFIRM"**.

Set up password protection



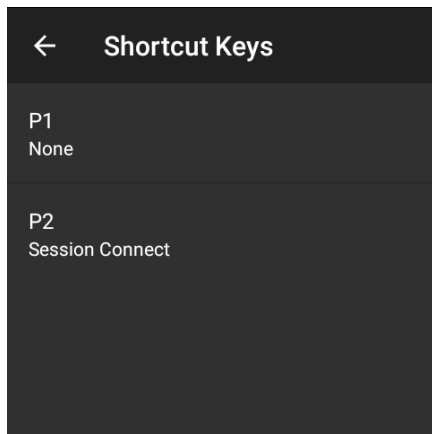
Erase protection settings



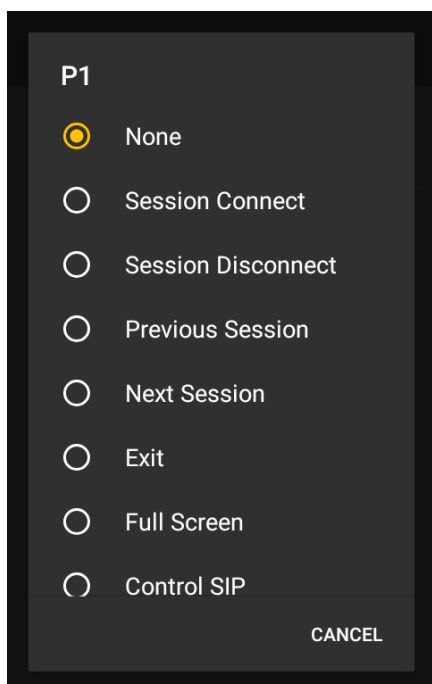
To set P1 and P2 on keypad as shortcut keys :

1) Tap **Option | Shortcut Keys**.

On **Shortcut Keys** screen, **P1** and **P2** along with their assigned actions are listed.



2) Tap **P1** and **P2** respectively to assign actions to the shortcut keys.



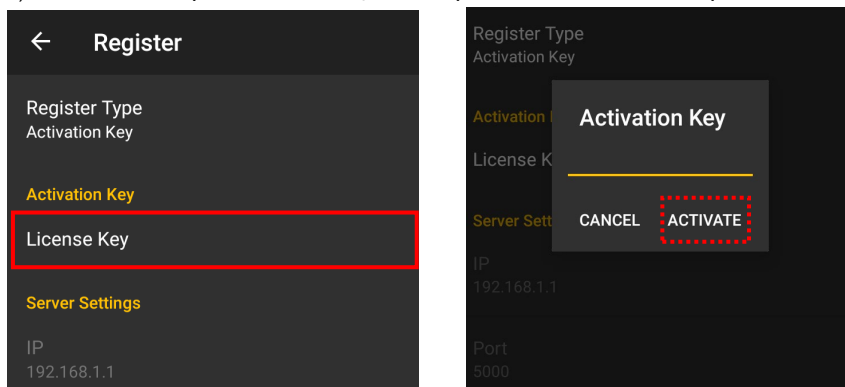
2.4.3. REGISTER

With the exception of RK95 mobile device, users are required to purchase a license to get the **Activation Key** or to connect to the **License Server (Local)**. This allows users to configure up to 5 sessions as well as the font, background, and cursor colors on the device.

- 1) Tap **More**  | **Register**
- 2) Tap **Register Type** to choose between **Activation Key** and **License Server (Local)**.

To register with an **Activation Key**:

- 3) Tap **License Key** under Activation Key.
- 4) Enter the provided code, and tap **ACTIVATE** to complete the registration.



OR

You can register with a **License Server (Local)**.

Please refer to [CipherLab TE License Sever User Guide](#) for more details.


The following table highlights the feature comparison between Lite(unregistered) and Pro(registered) versions:

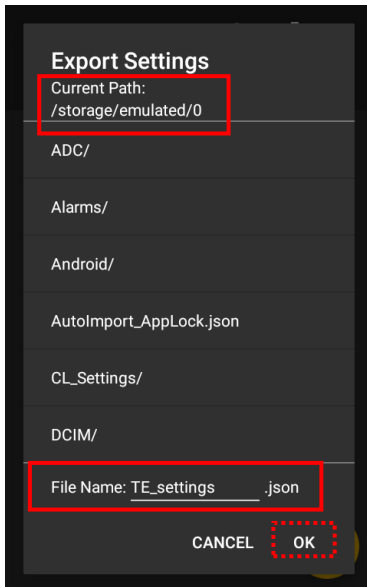
Feature	Lite	Pro
Support TN5250/TN3270	✓	✓
VT100/102/220/ANSI	✓	✓
Support Auto-Connection and Auto Login TE Startup	✓	✓
Support Full Screen during emulation	✓	✓
Support network keep alive (do not support SSH)	✓	✓
Support password protection of TE functions that are not allowed to be accessed	✓	✓
Support Cursor-focus view on host connection screen	✓	✓
Support Variable Font Size	✓	✓
Support Error Message relocation and Error message pop-up (TN Only)	✓	✓
Support screen orientation	✓	✓
Support Operation Log records	✓	✓
Support Export/Import TE Setting file	✓	✓
Support New Answer Back (VT only)	✓	✓
Beeper and Vibration Control	✓	✓
On Feedback of the Commands (e.g. ESC or CR cmd) – VT Only	✓	✓
On Device Alarm – TN Only	✓	✓
On Reader Scanning	✓	✓
Support On Screen Terminal Emulator virtual keyboard	✓	✓
Allow to set up to five host connection information		✓
Support multi-session connections to the same or different servers with the same or different emulator types		✓
Provide session indicator during multi-session connections		✓
Support font color and background color customization during host connection		✓
Allow Macro function - to record and replay the operation in the connected host.		✓
Support Intuitive Host Hot Key Mapping for all physical keys in the device		✓
Support SSH security (VT only)		✓
Detect Out of Range		✓

2.4.4. EXPORT/IMPORT SETTINGS


Terminal Emulator settings are saved in a configuration file as TE Settings.json under */storage/emulated/0*. You can export this file to other locations.

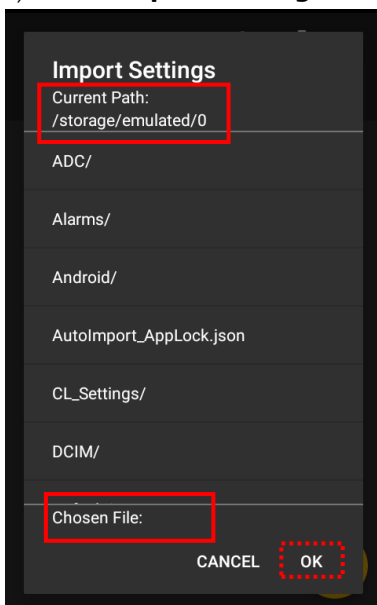
To export configuration files:

- 1) Tap **More**  | **Export Settings**.
- 2) On **Export Settings** screen, specify the save path, rename the configuration file if necessary and then tap on **OK**.



To import a configuration file:

- 1) Tap **More**  | **Import Settings**.
- 2) On **Import Settings** screen, specify the location, select the file, and then tap **OK**.

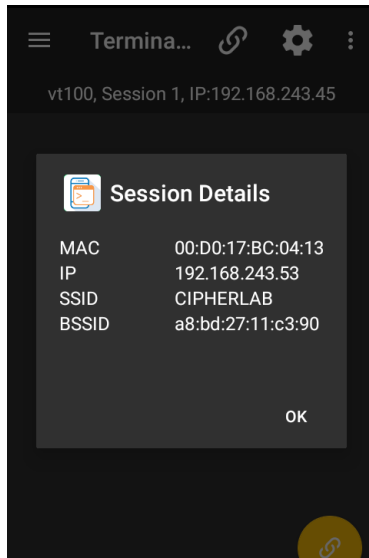


2.4.5. SESSION DETAILS

Session Details displays the information about the server.

To view the information:

- 1) Tap **More** ⓘ | **Session Details**.
- 2) On the **Session Details** screen, Mac address, IP address, SSID and BSSID are listed. Tap on **OK** to close it.



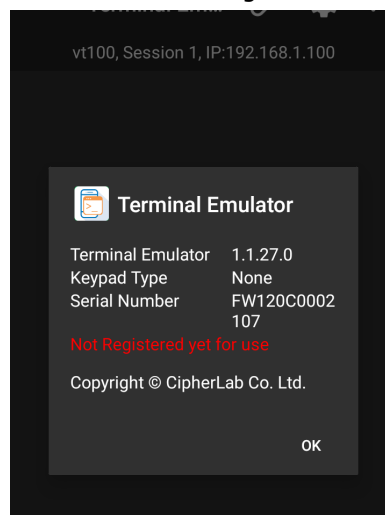
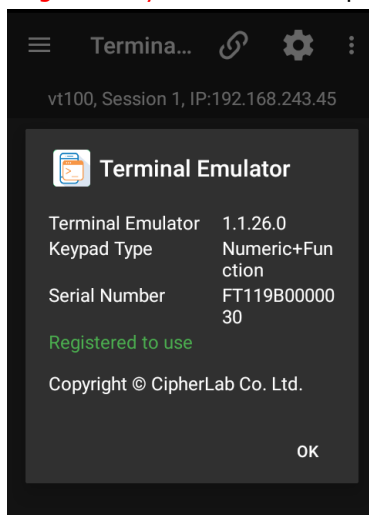
2.4.6. ABOUT

About is a menu item to deliver developer information and version of Terminal Emulator.

To view the said information:

- 1) Tap **More** ⓘ | **About**.
On the **About** screen, the version numbers of Terminal Emulator, Keypad Type, Serial Number and Registration Status are listed.
- 2) Tap **OK** to close it.

As shown in the pictures, **Registered to use** is displayed in green in the registered version, while **Not Registered yet to use** is displayed in red in the unregistered version.

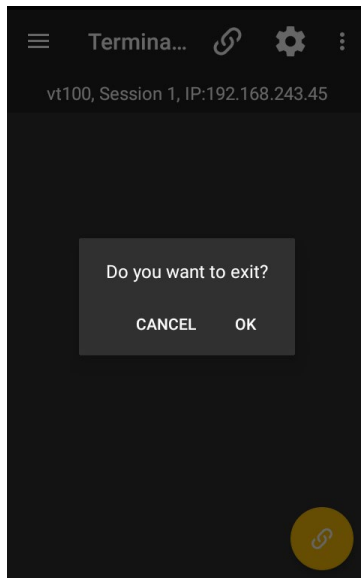


2.4.7. EXIT

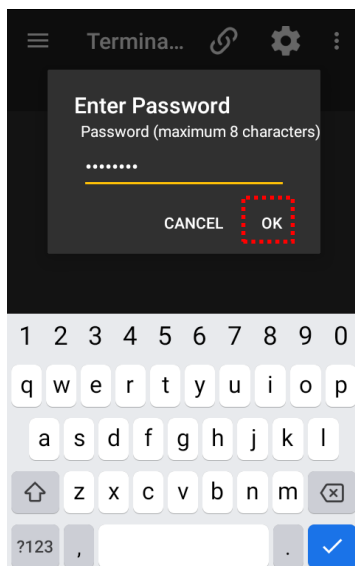
Exit is a menu item to close Terminal Emulator.

To close Terminal Emulator:

- 1) A warning dialog appears confirming whether to exit Terminal Emulator. Tap on **"OK"** to exit, or tap **"Cancel"** to abort.



- 2) If a password is set up for exiting the application in [Access Control](#), a password inquiry page will open showing a blank field to enter the password. Tap **"OK"** after you have entered the password to exit the application.

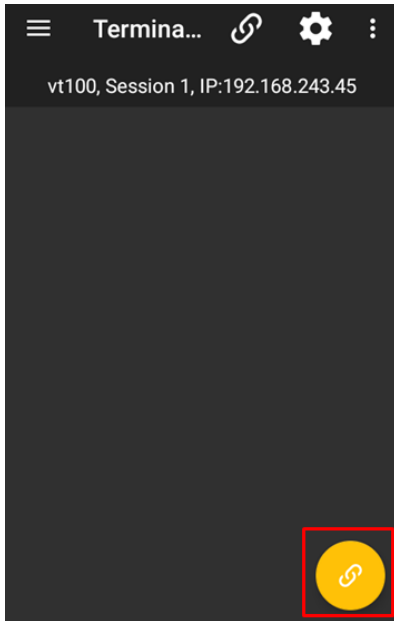


2.5. CONNECTION

Tap the Connection Button, which is available only when no telnet session is active, to start a telnet session.



Or tap the Connection Button displayed on the terminal screen to start a telnet session.



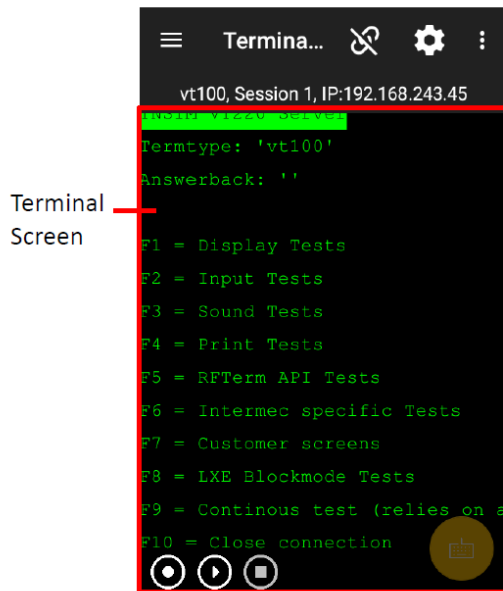
After a telnet session is made, the Connection Button changes its status and the current session information displays beneath the toolbar. Users can tap to the Disconnect Button to end the telnet session.



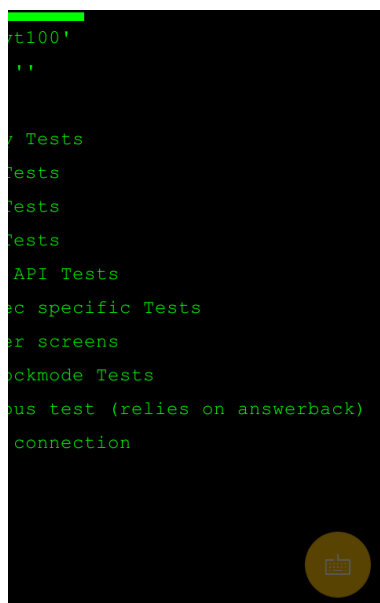
2.6. TERMINAL SCREEN

This is the area to display the text-based information streamed from host service. Users work on this screen to collect data and submit it to the host service.

Users can drag to move the screen to the desired portion to view. Screen dragging can be disabled at **Session List** | **Emulator Settings** | **Screen** | **Screen Panning**.





Double tap anywhere on the terminal screen area to activate/deactivate full screen mode.



2.7. USING ON-SCREEN KEYBOARD

Users can show/hide the on-screen keyboard by following ways:

Show On-screen Keyboard	Hide On-screen Keyboard
Check the Session List Emulator Settings Screen Auto Popup SIP On Connection checkbox.	Uncheck the Session List Emulator Settings Screen Auto Popup SIP On Connection checkbox.
Tap the SIP icon  to show the on-screen keyboard.	Tap the SIP icon  to hide the on-screen keyboard.

3 USAGE AND DATA COLLECTION




This chapter provides a brief introduction on how to initiate a telnet session for data collection and how to end a telnet session.



IN THIS CHAPTER

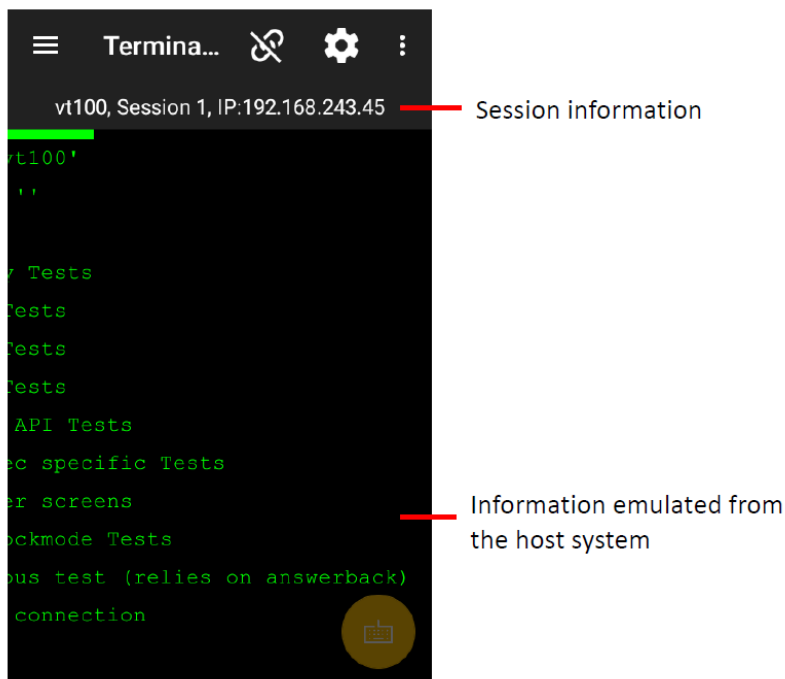
3.1 Start a Telnet Session	29
3.2 Collect Data	30
3.3 End a Telnet Session	30

3.1. START A TELNET SESSION

To start a telnet session:

- 1) Launch Terminal Emulator as described in [Launch Terminal Emulator](#).
- 2) Tap  icon in the toolbar to select emulator type and complete the host profile.
- 3) After setting up the host profile, tap  icon to return to the main menu.
- 4) Tap  icon in the toolbar to connect to the assigned host.

Once the connection is established, the  icon turns into , and in the meantime, the session information is displayed below the Toolbar, and the the information emulated from the host system is shown on the [Terminal Screen](#).



3.2. COLLECT DATA

Once the application is connected to the host service and the information is displayed on the Terminal Screen, you can proceed to collect data:


Simply aim the scanning window at the printed barcode to read.

OR

Tap (slightly contact) the scanning window with the RFID tag to read.

- 1) Press either of the two side triggers; the data will be automatically entered.
- 2) Submit the data, and it will be sent to the host service.

3.3. END A TELNET SESSION

To end a telnet session, tap  icon in the toolbar. Terminal Emulator is then disconnected from the host service.

4 SETTINGS

This chapter guides you through the entire range of settings, including session settings and other feature settings to optimize field applications. Additionally, the chapter covers the handling of the configuration file, which is critical in reproducing Terminal Emulator settings.

IN THIS CHAPTER


4.1 Session	32
4.2 Host Session	48
4.3 Screen Orientation	49




4.1. SESSION

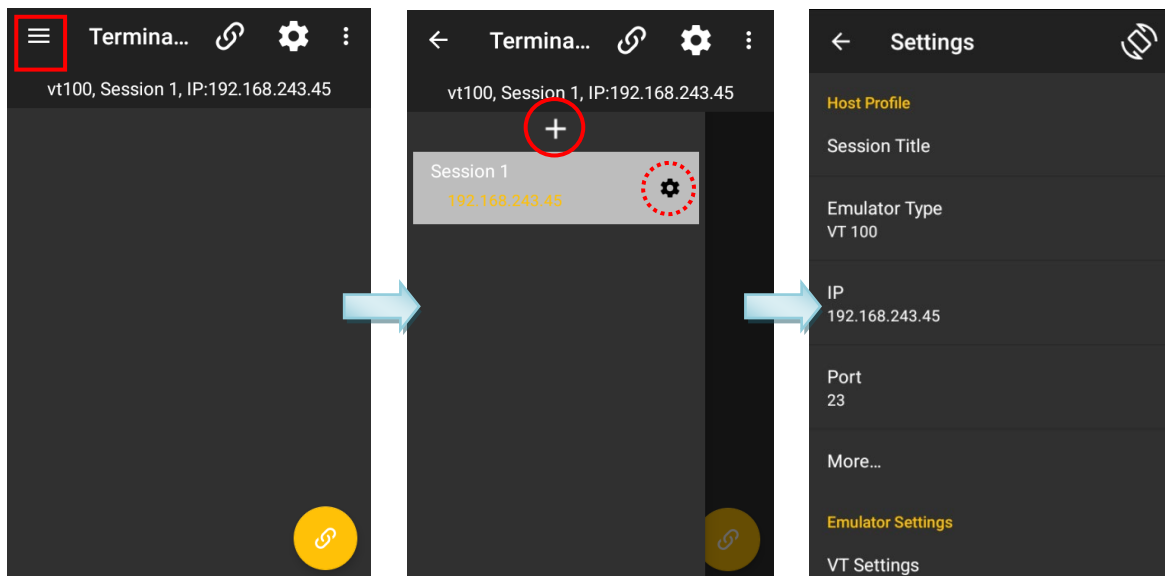
Configure session settings to tune the telnet communication, data collection and application preferences. This section mainly depicts further details of **Host Profile** and **Emulator Settings**.

4.1.1. SETTINGS

To access the **Host Profile** submenu:

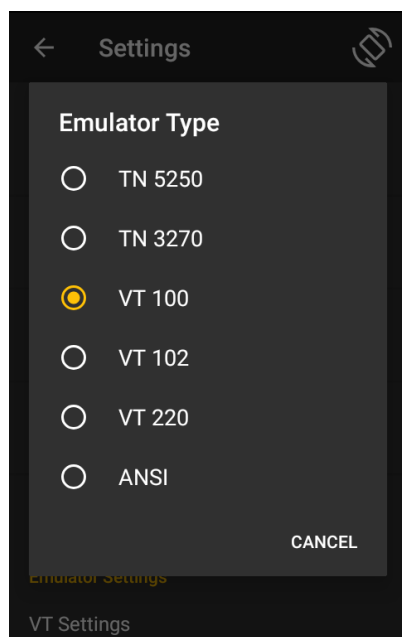
- 1) Launch Terminal Emulator as described in [Launch Terminal Emulator](#).
- 2) Tap  on the toolbar to open the **Session** screen.

The **Session List**  and **Session Settings**  are mainly designed to configure telnet sessions. Tap  icon in the toolbar and then tap the plus sign icon to add new sessions or tap the setting icon to configure an existing session.



VT OR TN SETTINGS

Tap Emulator Type to bring up the Host Type selection menu. Select one of the radio buttons to determine a host type including TN 5250, TN 3270, VT 100, VT 102, VT 220, and ANSI.



Whether VT or TN is selected, the settings include the following connection profile options:

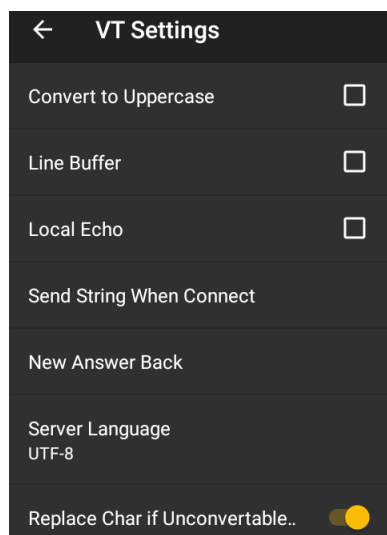
Item	Description	Default									
Host Profile	<p>Set the type of the host to connect. Options are:</p> <ul style="list-style-type: none"> ▶ VT ▶ TN <p>Following settings are inside the group box of Host.</p> <table border="1"> <thead> <tr> <th>Item</th><th>Description</th><th>Default</th></tr> </thead> <tbody> <tr> <td>IP</td><td>Assign the IP address or host name of the host to connect.</td><td>192.168.1.100</td></tr> <tr> <td>Port</td><td>Assign the port to connect to the host.</td><td>23 (telnet port)</td></tr> </tbody> </table>	Item	Description	Default	IP	Assign the IP address or host name of the host to connect.	192.168.1.100	Port	Assign the port to connect to the host.	23 (telnet port)	VT
Item	Description	Default									
IP	Assign the IP address or host name of the host to connect.	192.168.1.100									
Port	Assign the port to connect to the host.	23 (telnet port)									
Auto Connect	Enable Terminal Emulator to auto-connect to the assigned host upon its launch.	Deselected (Disabled)									

Auto Login	<p>Enable Terminal Emulator to auto-login to the host service to access; or the service asks for user name and password each time Terminal Emulator attempts to access.</p> <ul style="list-style-type: none"> For VT Emulator, this feature requires Terminal Emulator to set the login name prompt and password prompt exactly as the host service displays. <p>Following settings are inside the group box:</p> <table border="1"> <thead> <tr> <th>Item</th><th>Description</th><th>Default</th></tr> </thead> <tbody> <tr> <td>Login Name</td><td>Assign the user name to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. </td><td>Guest</td></tr> <tr> <td>Login Password</td><td>Assign the password to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. </td><td>--</td></tr> <tr> <td>Command</td><td>Assign the command to send to the host service at the command prompt. <ul style="list-style-type: none"> Needed when Auto Login is applied. </td><td>--</td></tr> <tr> <td>Login Name Prompt</td><td>Define the text exactly displayed by the host service to prompt for user name. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. </td><td>Login:</td></tr> <tr> <td>Login Password Prompt</td><td>Define the text exactly displayed by the host service to prompt for password. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. </td><td>Password:</td></tr> <tr> <td>Command Prompt</td><td>Define the text exactly displayed by the host service to prompt for command after logging in. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. </td><td>--</td></tr> <tr> <td>Term Login</td><td>Assign the key to switch over Login Name and Login Password when Auto Login is enabled. Options are: <ul style="list-style-type: none"> Tab Enter </td><td>Tab</td></tr> </tbody> </table>	Item	Description	Default	Login Name	Assign the user name to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	Guest	Login Password	Assign the password to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	--	Command	Assign the command to send to the host service at the command prompt. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	--	Login Name Prompt	Define the text exactly displayed by the host service to prompt for user name. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	Login:	Login Password Prompt	Define the text exactly displayed by the host service to prompt for password. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	Password:	Command Prompt	Define the text exactly displayed by the host service to prompt for command after logging in. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	--	Term Login	Assign the key to switch over Login Name and Login Password when Auto Login is enabled. Options are: <ul style="list-style-type: none"> Tab Enter 	Tab	Deselected (Disabled)
Item	Description	Default																								
Login Name	Assign the user name to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	Guest																								
Login Password	Assign the password to auto-login to the host service to access. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	--																								
Command	Assign the command to send to the host service at the command prompt. <ul style="list-style-type: none"> Needed when Auto Login is applied. 	--																								
Login Name Prompt	Define the text exactly displayed by the host service to prompt for user name. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	Login:																								
Login Password Prompt	Define the text exactly displayed by the host service to prompt for password. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	Password:																								
Command Prompt	Define the text exactly displayed by the host service to prompt for command after logging in. <ul style="list-style-type: none"> This setting is mandatory for VT Emulator to Auto Login. 	--																								
Term Login	Assign the key to switch over Login Name and Login Password when Auto Login is enabled. Options are: <ul style="list-style-type: none"> Tab Enter 	Tab																								
Generate Log	<p>Save the data-streaming record to the mobile computer's storage at: Android 9 and prior: \CL_Settings\TerminalEmulation. Later versions: \Android\data\sw.programme.te\files.</p> <ul style="list-style-type: none"> The log file comes with .log extension. 	Deselected (Disabled)																								

4.1.2. EMULATOR SETTINGS

Tap VT Settings or TN Settings to bring up the submenu. The items between VT and TN settings may differ depending on the host type.

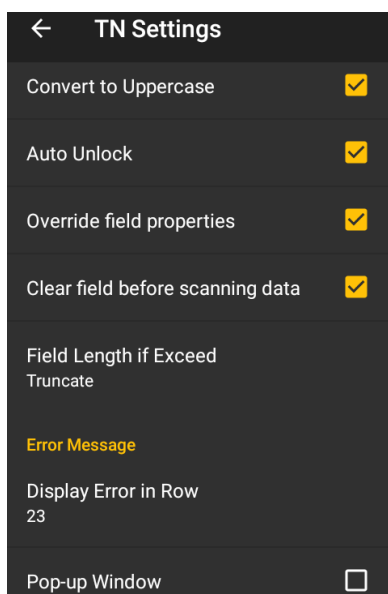
VT SETTINGS



Setting	Description	Default										
Convert to Uppercase	Capitalize all the letters of input data.	Deselected (Disabled)										
Line Buffer	Show typed text and commands locally on Terminal Emulator, and transmits them to host service only after Enter key is hit to confirm the input. ▶ By default and by characteristic of VT Emulator, Terminal Emulator sends entered text to host service character by character without hitting Enter key.	Deselected (Disabled)										
Local Echo	Show typed text locally on Terminal Emulator just as it is being transmitted to host service. ▶ Typed commands will not be shown locally.	Deselected (Disabled)										
Send string when connect	Define the command that Terminal Emulator sends to host service upon connection. Tap the text field to open a screen for entering the desired command.	--										
New Answer Back	Specify a string to be sent to the host when receiving an ENQ from the host. Users can include the variables as follows for device identification: <table><tr><th>Variables</th><th>Description</th></tr><tr><td>%m%n%o%p%q%r</td><td>depict six octets of the MAC address</td></tr><tr><td>%a%b%c%d</td><td>depict four octets of the IP address</td></tr><tr><td>%s</td><td>depict the TE session number</td></tr><tr><td>%t</td><td>depict the Terminal ID (vt100,vt102, vt220 and ansi)</td></tr></table>	Variables	Description	%m%n%o%p%q%r	depict six octets of the MAC address	%a%b%c%d	depict four octets of the IP address	%s	depict the TE session number	%t	depict the Terminal ID (vt100,vt102, vt220 and ansi)	
Variables	Description											
%m%n%o%p%q%r	depict six octets of the MAC address											
%a%b%c%d	depict four octets of the IP address											
%s	depict the TE session number											
%t	depict the Terminal ID (vt100,vt102, vt220 and ansi)											

	For example: Users specify the "%m%n%o%p%q%r-%a.%b.%c.%d-%s-%t" string. The mobile device will send "0017231BABF9-192.168.241.65-1-vt220" (0017231BABF9 representing MAC address, 192.168.241.65 representing IP address, 1 representing the TE session number, and vt220 representing the terminal ID) to VT Server when receiving ENQ from the host.	
Server Language	Assign the character code for displaying the characters received from the server.	US-ASCII
Replace Char if Unconvertable	When "UTF-8" is assigned in Server Language, this control bar is available. Swipe it from left to right and tap to assign a replacement character.	Deselected (Disabled)
	If the characters received from the server are unconvertable, a replacement will be displayed on the terminal. Options are: ▶ (Blank), X, %, &, ≠, -, _	(Blank)

TN SETTINGS




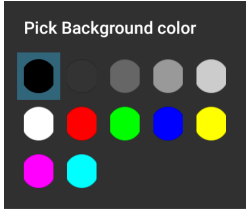
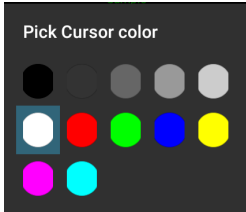
Setting	Description	Default
Server Language	Assign the character code for displaying the characters received from the server.	IBM-037, IBM Latin-1 EBCDIC
WorkStation ID	Specify a string less than 10 characters to be sent to the host when receiving an ENQ from the host. Users can include the variables as follows for device identification:	
	Variables	Description
	%m%n%o%p%q%r	depict six octets of the MAC address
	%a%b%c%d	depict four octets of the IP address
	%s	depict the TE session number
	%t	depict the Terminal ID (TN Emulators)
		--

Convert to Uppercase	Capitalize all the letters of input data.	Deselected (Disabled)									
Auto Unlock	Enable the mobile computer not to be locked or give out an alarm sound when pressing any keys.	Deselected (Disabled)									
Override field properties	Check it to send the contents of all fields to the host service when pressing field exit keys or entering the last character in the last required field.	Deselected (Disabled)									
Clear field before scanning data	Check it to clear the field before inputting the scanned data.	Deselected (Disabled)									
Field Length if Exceed	Define how to handle the data when it exceeds 5250's specified field length. Options are: ▶ Reject, Truncate, Split to next field.	Truncate									
Error Message	Adjust the location and form of an error message for display on the terminal.										
	<table> <tr> <th>Setting</th><th>Description</th><th>Default</th></tr> <tr> <td>Display Error in ROW</td><td>Select the location (row number) to display an error message if an error occurs.</td><td>23</td></tr> <tr> <td>Pop-up Window</td><td>Show the error message in the form of a pop-up window.</td><td>Deselected (Disabled)</td></tr> </table>	Setting	Description	Default	Display Error in ROW	Select the location (row number) to display an error message if an error occurs.	23	Pop-up Window	Show the error message in the form of a pop-up window.	Deselected (Disabled)	
Setting	Description	Default									
Display Error in ROW	Select the location (row number) to display an error message if an error occurs.	23									
Pop-up Window	Show the error message in the form of a pop-up window.	Deselected (Disabled)									

SCREEN

Featured settings on **Screen** are as follows:

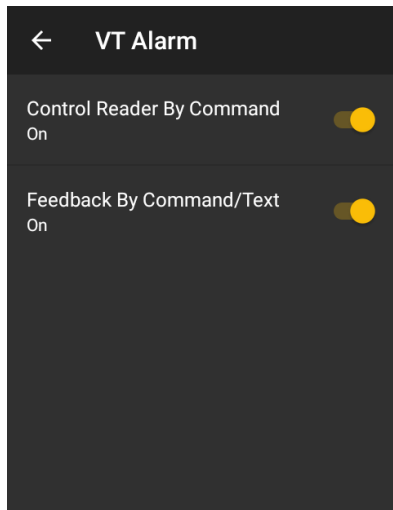
Setting	Description	Default
Show Connecting Host IP	Display connecting host IP right beneath the toolbar.	Selected (Enabled)
Screen Panning	Check it to enable/disable viewing the desired portion of the screen by swiping the display.	Selected (Enabled)
Floating Action Button	Check it to enable/disable showing the floating action button for the on-screen keyboard.	Selected (Enabled)
Activate Macro	Check it to enable pop-up Macro toolbar on the screen once the session is connected.	Deselected (Disabled)
Auto Popup SIP On Connection	Check it to enable/disable the pop-up SIP to automatically display on connection.	Deselected (Disabled)
Haptic Feedback On Keypress	Check it to enable/disable vibration when pressing the keys on the virtual keyboard.	Selected (Enabled)
Popup On Keypress	Check it to enable/disable key icons popping up when pressing the keys on the virtual keyboard.	Deselected (Disabled)
Keyboard Layout	Choose the keyboard layout between Type 1 and Type 2.	Type1
Cursor Type	Change the cursor type between three different modes: ▶ Default (half block cursor) ▶ Underline (underline cursor) ▶ Block (full block cursor)	Default

Auto Tracking	<p>Auto-position Terminal Screen to bring cursor into view. Swipe the control bar from left to right to enable this function and tap to select:</p> <ul style="list-style-type: none"> ▶ Visible (The cursor constantly shows at the upper-right of the screen.) ▶ Center (The cursor constantly shows in the center of the screen.) ▶ Locked Location (The screen is locked to the position set by column and row.) 	Visible
Locked Location	<p>When Auto Tracking is set to Locked Location, users can tap this item to specify the accurate coordinates. The screen is locked to the position set by column and row (Col: 0~79; Row: 0~23).</p>	Disabled
Font	<p>Assign the font to show characters in Terminal Screen. Options are:</p> <ul style="list-style-type: none"> ▶ Courier New ▶ Lucida Console ▶ Excalibur Monospace ▶ NetTerm ANSI ▶ NetTerm OEM 	Courier New
Font Size	Assign the size to show characters in Terminal Screen.	16
Line Spacing	Assign the line spacing to show characters in Terminal Screen.	3
Color Settings	<p>Tap this item to customize the font color, background color, and cursor color in the Terminal Screen according to user preferences.</p> <p>Tap the Font Color area to determine font color.</p>  <p>Tap the Background Color area to determine font color.</p>  <p>Tap the Cursor Color area to determine cursor color.</p> 	Sample

Override Server Color	Check this item to display the customized font, background, and cursor colors in Terminal Screen, instead of the colors assigned by the server.	Deselected (Disabled)
Full Screen		
Auto Full Screen On Connection	Check it to enable full screen mode automatically when connecting to the server. <ul style="list-style-type: none">▶ With Terminal Screen maximized, both the Android status bar and the application's toolbar are covered up.	Deselected (Disabled)
Show Status Bar	Check it to enable the Status Bar in full screen mode.	Deselected (Disabled)

ALARM

VT ALARM



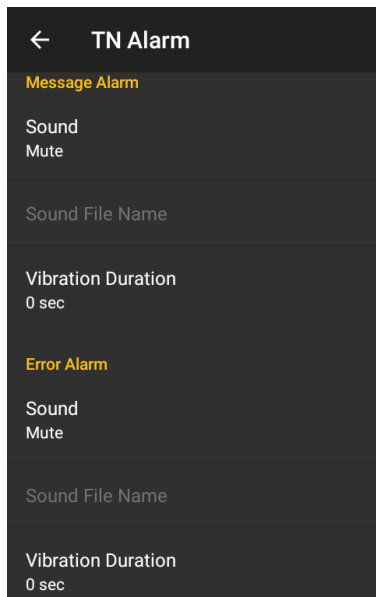
Featured settings on **Alarm** are as follows:

Setting	Description												
Control Reader By Command	Enable the host service to send commands in order to turn on/off the reader module. Deselected by default.												
	<ul style="list-style-type: none">▶ Enable Command: Assign a command (escape sequence) for turning on the reader module.▶ Disable Command: Assign a command (escape sequence) for turning off the reader module.												
	You can also refer to Beeper/Vibrator settings in ReaderConfig¹ to make the mobile computer sound or vibrate each time the reader module is enabled/disabled by the given command.												
	<table><tr><th>Setting</th><th>Description</th><th>Default</th></tr><tr><td>Sound</td><td>Tap to select a sound from the pop-up list or tap the User Defined radio button to locate a wav file.</td><td>Mute</td></tr><tr><td>Sound File Name</td><td>When User Defined is selected in the Sound setting, tap it to locate a wav file to play each time the reader module is enabled/disabled by the given command.</td><td>--</td></tr><tr><td>Vibration Duration</td><td>Select the amount of time to vibrate each time the reader module is enabled/disabled by the given command.</td><td>0 sec</td></tr></table>	Setting	Description	Default	Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to locate a wav file.	Mute	Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file to play each time the reader module is enabled/disabled by the given command.	--	Vibration Duration	Select the amount of time to vibrate each time the reader module is enabled/disabled by the given command.	0 sec
	Setting	Description	Default										
Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to locate a wav file.	Mute											
Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file to play each time the reader module is enabled/disabled by the given command.	--											
Vibration Duration	Select the amount of time to vibrate each time the reader module is enabled/disabled by the given command.	0 sec											

Note: ReaderConfig is an application developed by CipherLab to manage the barcode reader integrated on the mobile computer.

Feedback By Command/Text	<p>Enable the host service to respond to Terminal Emulator by sending a command (escape sequence) for good or erroneous inputs. Deselected by default.</p> <p>▶ Good Feedback: Assign the command (escape sequence) for input success. When Terminal Emulator receives the command, the mobile computer will play the specified beeper sound or vibrate for the specified amount of time.</p> <table><tr><th>Setting</th><th>Description</th><th>Default</th></tr><tr><td>Feedback Type</td><td>Select By Command or By Text.</td><td>By Command</td></tr><tr><td>Command</td><td>Enter the sequence of interest.</td><td>--</td></tr><tr><td>Sound</td><td>Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.</td><td>Mute</td></tr><tr><td>Sound File Name</td><td>When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.</td><td>--</td></tr><tr><td>Vibration Duration</td><td>Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).</td><td>0 sec</td></tr></table> <p>▶ Error Feedback: Assign the command (escape sequence) for input failure. When Terminal Emulator receives the command, the mobile computer will play the specified beeper sound or vibrate for the specified amount of time.</p> <table><tr><th>Setting</th><th>Description</th><th>Default</th></tr><tr><td>Feedback Type</td><td>Select By Command or By Text.</td><td>By Command</td></tr><tr><td>Command</td><td>Enter the sequence of interest.</td><td>--</td></tr><tr><td>Sound</td><td>Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.</td><td>Mute</td></tr><tr><td>Sound File Name</td><td>When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.</td><td>--</td></tr><tr><td>Vibration Duration</td><td>Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).</td><td>0 sec</td></tr></table>	Setting	Description	Default	Feedback Type	Select By Command or By Text.	By Command	Command	Enter the sequence of interest.	--	Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute	Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec	Setting	Description	Default	Feedback Type	Select By Command or By Text.	By Command	Command	Enter the sequence of interest.	--	Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute	Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec
Setting	Description	Default																																			
Feedback Type	Select By Command or By Text.	By Command																																			
Command	Enter the sequence of interest.	--																																			
Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute																																			
Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--																																			
Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec																																			
Setting	Description	Default																																			
Feedback Type	Select By Command or By Text.	By Command																																			
Command	Enter the sequence of interest.	--																																			
Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute																																			
Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--																																			
Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec																																			

TN ALARM



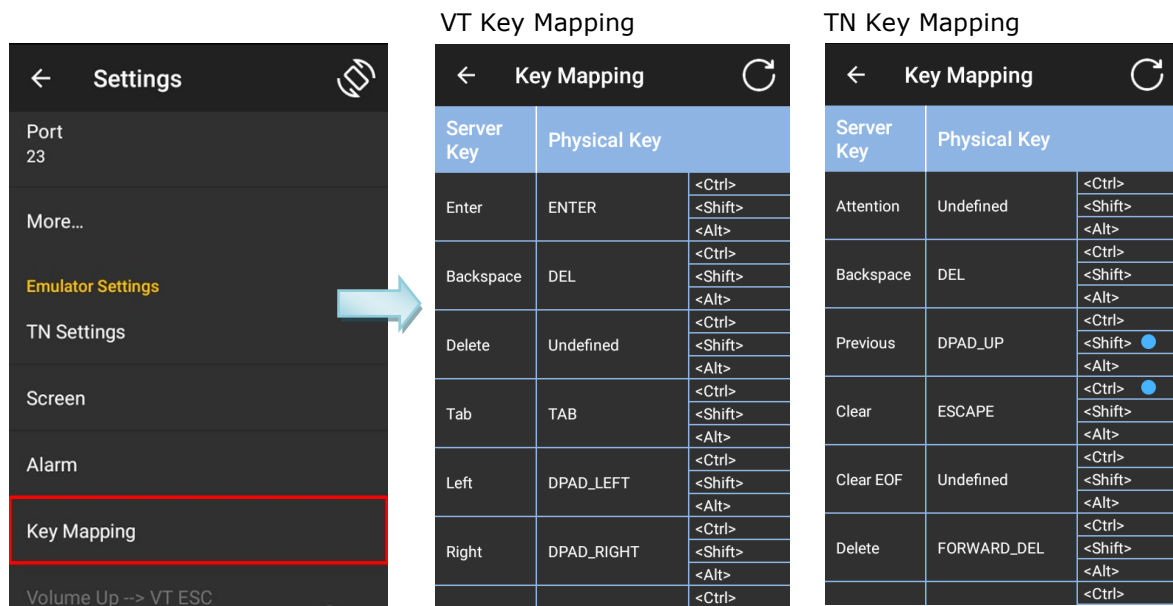
Featured settings on **Alarm** are as follows:

Setting	Description		
Message Alarm	Sets the mobile computer to sound or vibrate when data is transmitted to the host.		
	Setting	Description	Default
	Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute
	Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--
Error Alarm	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec
	Sets the mobile computer to sound or vibrate when an error occurs during data input. Errors include incorrect data format, incorrect input field etc. (but not login error).		
	Setting	Description	Default
	Sound	Tap to select a sound from the pop-up list or tap the User Defined radio button to select a wav file.	Mute
	Sound File Name	When User Defined is selected in the Sound setting, tap it to locate a wav file from the device.	--
	Vibration Duration	Select the amount of time to vibrate. Configure vibration duration between 0 and 5 sec (in increments of 0.5 sec).	0 sec

KEY MAPPING (ONLY FOR DEVICES EQUIPPED WITH PHYSICAL KEYBOARD)

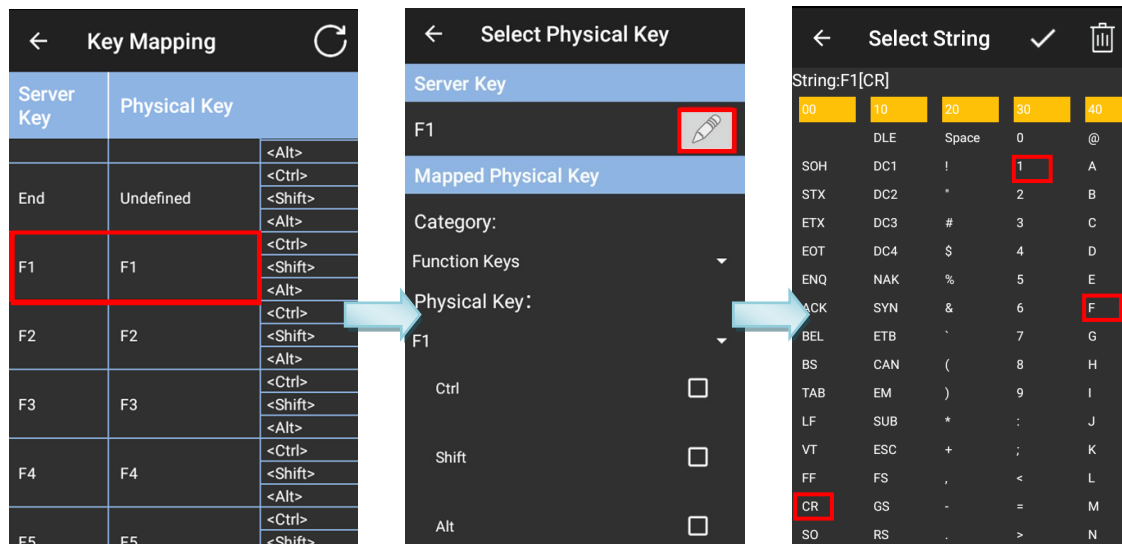
Terminal Emulator supports **Key Mapping**, enabling users to define a physical key (or combined keys) of the mobile device mapping to a specific function performed on the server.

Key Mapping settings differ between VT and TN Emulators.




To redefine a physical key mapping to a specific function performed on the server:

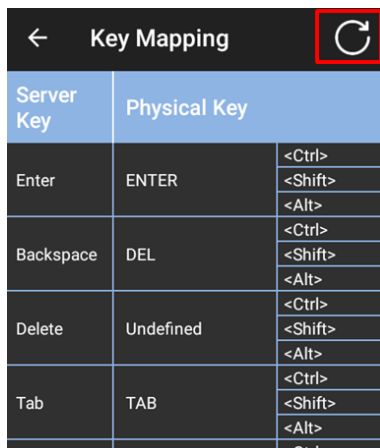
- 1) Tap the key item you want to redefine.
- 2) Tap the pencil icon under "**Server Key**" to specify the new server string mapped to the key item.



- 3) Tap on icon in the upper-right corner to complete the mapping.

Now, whenever you press the redefined physical key, the specified string will be sent to the server.

To reset Server Keys and Physical Keys, go back to the Key Mapping setting page and tap on  icon.

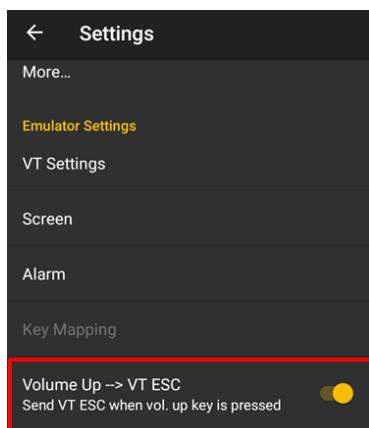


Feature settings on **Key Mapping** are as follows:

Setting	Description								
Server Key	The function performed on the server.								
Physical Key	Configure the selected Server Key. <table> <tr> <th>Setting</th><th>Description</th></tr> <tr> <td>Category</td><td>Lists the categories of Physical Keys. Options are: <ul style="list-style-type: none"> ▶ Alphabets ▶ Numbers ▶ Punctuations ▶ Function Keys ▶ Navigation Keys ▶ Editing Keys </td></tr> <tr> <td>Physical Key</td><td>Serve the function of the Server Key.</td></tr> <tr> <td>Ctrl/ Shift/ Alt</td><td>Function with the physical key if selected.</td></tr> </table>	Setting	Description	Category	Lists the categories of Physical Keys. Options are: <ul style="list-style-type: none"> ▶ Alphabets ▶ Numbers ▶ Punctuations ▶ Function Keys ▶ Navigation Keys ▶ Editing Keys 	Physical Key	Serve the function of the Server Key.	Ctrl/ Shift/ Alt	Function with the physical key if selected.
Setting	Description								
Category	Lists the categories of Physical Keys. Options are: <ul style="list-style-type: none"> ▶ Alphabets ▶ Numbers ▶ Punctuations ▶ Function Keys ▶ Navigation Keys ▶ Editing Keys 								
Physical Key	Serve the function of the Server Key.								
Ctrl/ Shift/ Alt	Function with the physical key if selected.								
Clear Key	Make the selected Physical Key Undefined.								
Trap	Assign the command of a Server Key to a Physical Key by directly pressing the latter one on the mobile computer.								
Reset	Return to default Physical Keys.								

VOLUME UP → VT ESC (ONLY FOR DEVICES WITHOUT PHYSICAL KEYBOARD)

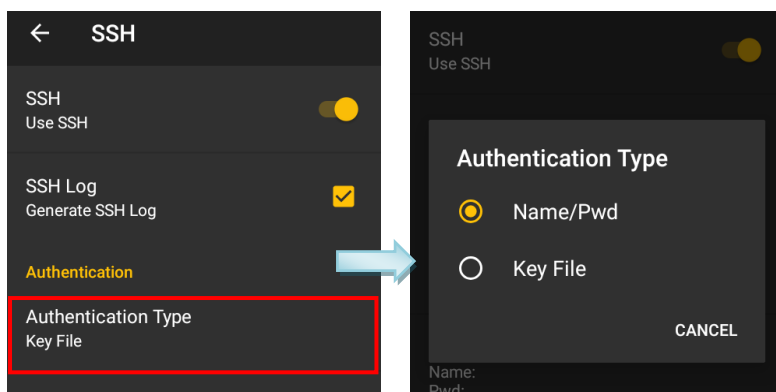
When this function is enabled and a connection to the VT server is established, pressing the volume up button will send "ESC" to the VT server. This function is only available for VT Emulator.



SSH (VT ONLY)

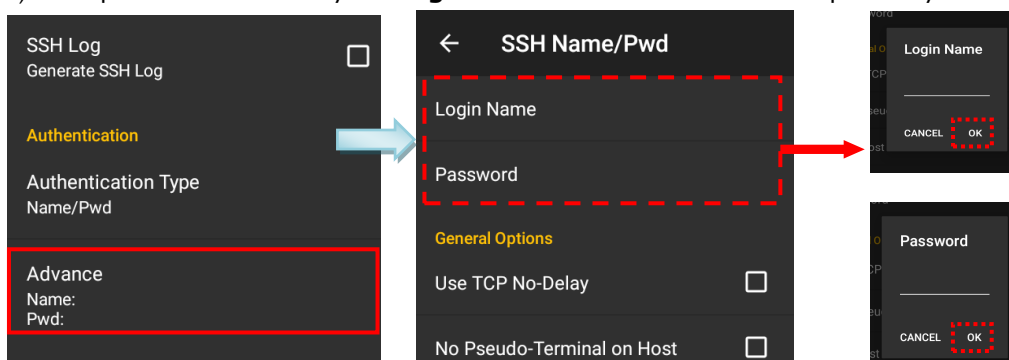
The secured connection protocol Secure Socket Shell (SSH) is available for VT Emulator. As it provides strong authentication and secures encrypted data communications, it suits the needs of a solution which requires high security level of data transmission.

To access the remote server, tap "**Authentication Type**" to select between "**Name/Pwd**" and "**Key File**":



To access the server with **Name/Pwd**:

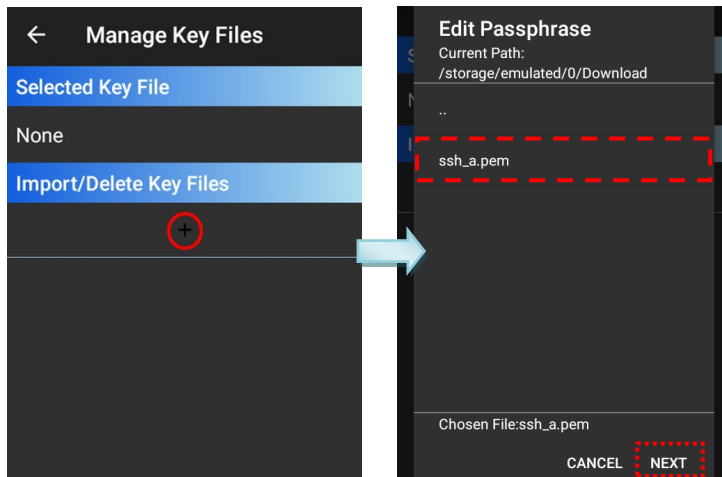
- 1) Tap "**Authentication Type**" to choose the item "**Name/Pwd**".
- 2) Tap "**Advance**" to key in "**Login Name**" and "**Password**" respectively and tap "**OK**".



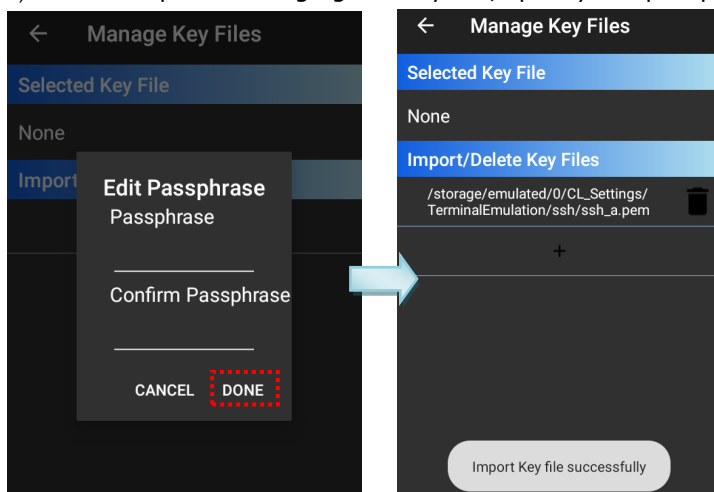
OR

You can load a profile key:

- 1) Transfer a key file (*.pem or *.ppk) to your mobile computer.
- 2) Tap "**Authentication Type**" to choose the item "**Key File**".
- 3) Under **Authentication**, tap "**Advance**", and then tap "**Key File**".
- 4) Tap the **plus sign** to find the file with correct path and tap on "**Next**".



- 5) To complete managing the key file, specify the passphrase and tap on "**Done**".




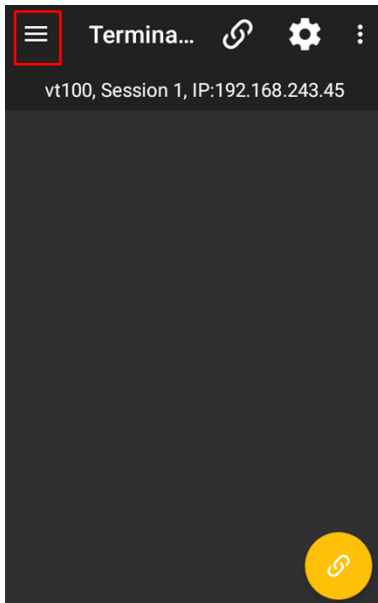
The other settings are depicted as follows:


General Options	
Use TCP No-Delay	Enable this option to enhance the performance of small-amount data transmission between Server and client Device. However, this function might result in excessive traffic of short packets.
No Pseudo-Terminal on Host	The "pseudo-terminal mode" is fundamental for VT (UNIX) host system to build up Emulator sessions between client Devices. Disable it if necessary.
No Host Shell	Enable this option to have TE not run shell or command after connecting to the remote host server. This option is applicable only when:

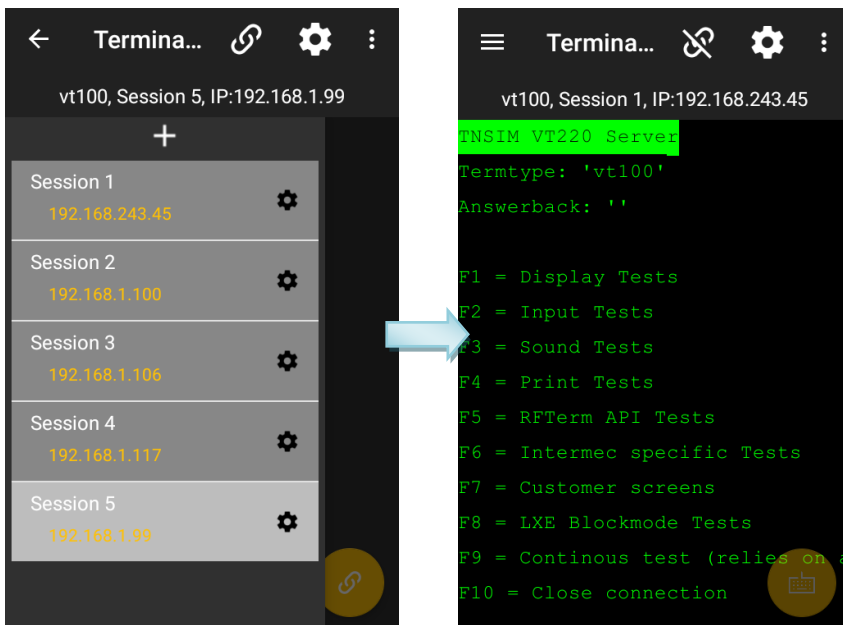
	<div>1. SSH connection is used for port forwarding, and your user account on the server is not allowed to run a shell.</div> <div>2. SSH protocol version 2 is supported on host server.</div>
Re-Key Every 60 Minutes	In RFC 4253 (the SSH Transport Layer Protocol), the Re-Key method ensures the key is exchanged only upon per gigabyte of transmitted data or per hour of connection time, whichever occurs sooner. Enable these options to trigger TE to exchange a new key with the server every 60 minutes or following a total data flow of 1 Gigabyte in either direction.
Re-Key Every 1G of Traffic	
Server	
Environment	Specify environment variables to be set on the SSH server.
Commands	Represent a special command or subsystem to invoke on the SSH server in lieu of an interactive shell. This is typically used for non-interactive host sessions. For most users this will be blank.
TTY	This setting can be used to add TTY Modes to be sent to the SSH server.
Proxy	
Type	<div>Proxy allows you to configure CL TE to use various types of proxy servers in order to make network connections.</div> <div>The settings affect the primary network connection from your CL TE SSH session, but also any extra connections made as a result of SSH port forwarding.</div> <div>Tap to configure what type of proxy you want CL TE to use for its network connections. The choices are:</div> <div><div>- None: no proxy is used.</div><div>- SOCKS 4 or SOCKS 5: proxy through a SOCKS server.</div><div>- HTTP: proxy through a web server supporting the HTTP CONNECT command.</div></div> <div>The default setting is None.</div>
Host	Tap to specify the DNS name or IP address of the proxy server. The default is blank.
Port	Tap to specify the port on which the proxy server is listening. Set this to match the port on the proxy server for connections.
User	If your proxy server requires authentication, enter the username. The default is blank.
Password	If your proxy server requires authentication, enter the password. The default is blank.

4.2. HOST SESSION



On activated devices, you may create up to five host connections, named terminal emulator "sessions". Each of these sessions can be connected to the same or different host services at the same time. Open **Session List**  to show the **Sessions** list.



Only one session can be displayed in the Emulator screen. To switch the screen to another session, open **Session List**  and select the session of interest (marked as Session 1 to Session 5).



4.3. SCREEN ORIENTATION

To set screen orientation, tap  icon in the toolbar. Then tap  icon in the upper-right corner to bring up the dialog.

When the dialog shows up, tap the icon in the center of the dialogue box to switch among **Keep Portrait**, **Keep Landscape 90°** and **Keep Landscape 270°**. Then tap "APPLY" to complete the setting.

