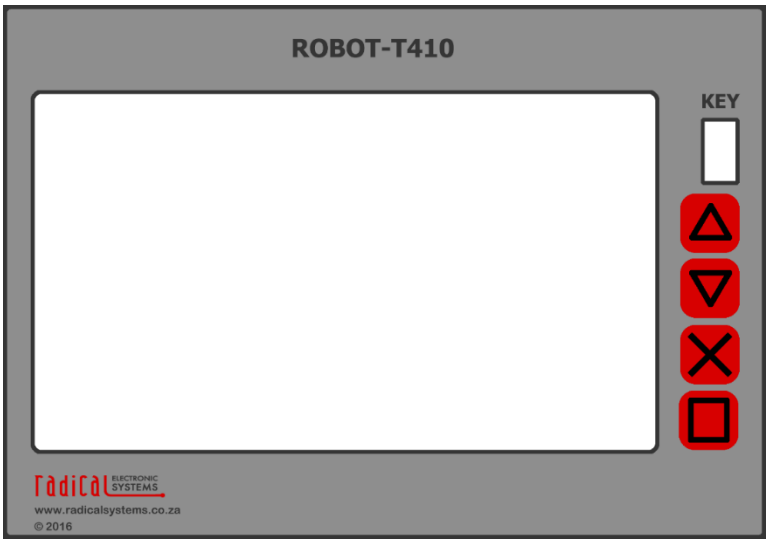
Robot-T410

How-To Manual



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BusyBox

http: //www.radicalsystems.co.za
emailto:info@radicalsystems.co.za
tel: +27 21 982 4929
cel: +27 76 224 2224
Unit M1, Okavngo Junction
Kenwill Drive
Brackenfell Industria
7560

1 Introduction

The How-to manual cover the setup of additional features or updated functionality that is different to the standard release of the Robot-T410 operating system.

Upgrades for release is RadOS 1.0.3.

Release 1.1.0 includes all these features.

2 Online Support and Additional Files

This document will refer to online support for the Robot-T410.

Please see:

http://radicalsystems.co.za/index.php/support/25-robot-t410-files

For all downloadable files used in this manual.

3 Check your OS Release and Kernel Version

3.1 To check your OS release

```
$>cat /etc/issue
$>RadOS 1.0.3 \n \l
```

This shows you are **RadOS 1.0.3**

3.2 To check your kernel version

```
$>uname -r
$>3.18.0-linux4sam_5.0-alpha5-00012-g6dacf98-dirty
```

The output shows that you are running kernel version **3.18.0**

4 X11VNC Server as Service

Applies To:	RadOS 1.0.3

The Robot-T410 operating system has a built-in VNC server. By default, the server does not start automatically and it will also close down after the first connection. Follow the following steps to install X11VNC server as a service.

1. Download X11VNC files from support page
2. Use SSH SCP to copy the file to the Robot and extract. This is a replica of the Robots file system layout.
3. Move each file to its relevant location.
    a. /usr/bin/x11vnc -> /usr/bin/x11vnc
    b. /etc/init.d/x11vncd -> /etc/init.d/x11vncd
4. The daemon needs to be setup to automatically load when it boots. Run the following command to setup all the startup links.
    a. $>update-rc.d /etc/init.d/x11vncd defaults 99
5. Reboot and test

4.1 Resources

The following software can be used to connect to the X11VNC server.

Microsoft Windows	Real VNC	https://www.realvnc.com
Linux	Remmina Desktop	https://www.remmina.org

5 On Screen Keyboard

Applies To:	RadOS 1.0.3

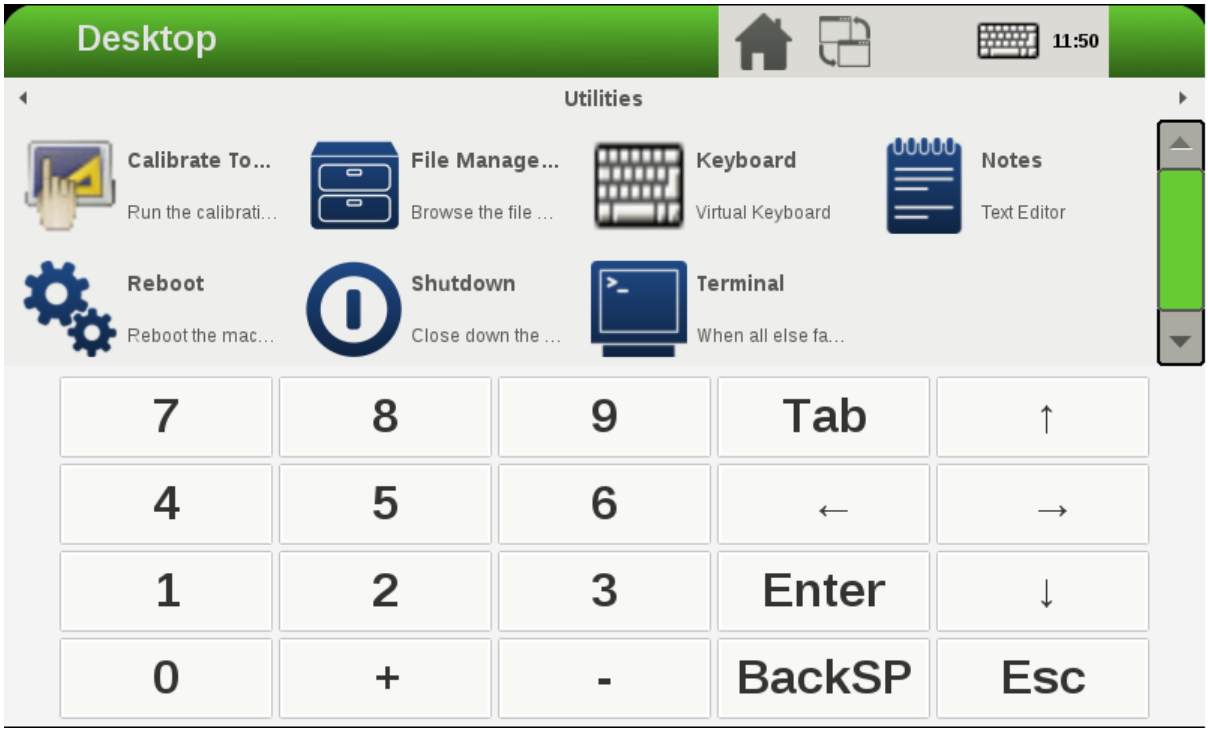
The standard on screen keyboard has a fixed height. In some instances, it is required to adapt the keyboard height, for example when a keypad is implemented and the button need to be bigger than normal.

A new layout attribute is introduced as follows:

```
<!--Set layout to maximum of 60% of screen height -->
<layout id="default keyboard" height="60">
</layout>
```

The height is specified as a percentage of the full screen. The above example set the popup screen to 60% of the original height.

See the image below of a height of 50:



If the height attribute is omitted, the height will default to 1/3 of the screen height.

5.1 Installation

Follow the steps below to install the new keyboard functionality.

1. Download the keyboard package from the support page
2. Copy to the Robot and extract the files. The structure is a replica of the Robot's file system.
    a. Copy /usr/bin/matchbox-keyboard
    b. Merge setting ofr /etc/profile.d/default.sh. In particular, check the MB_KBD_CONFIG exported variable to see which keyboard layout will be used.
    c. Use /home/root/keyboard/keyboard-numpad.xml as an example or starting point for your own layout. Make sure to add the height attribute to the layout tag
3. Reboot and test

6 Built-in Wifi

To activate Wifi add or uncomment the following to the /etc/network/interfaces file

```
auto wlan0
        wireless_mode manged
        wireless_essid any
```

```
        wpa-driver wext
        wpa-conf /etc/wpa_supplicant.conf
```

The Access Point SSID and password is contained in the /etc/wpa_supplicant.conf file.

Either edit the file or autogenerate it as follows:

```
$>wpa_passphrase [MYSSID] [passphrase] > /etc/wpa_supplicant.conf
```

Which will look like follows:

```
ctrl_interface=/run/wpa_supplicant
ctrl_interface_group=0
update_config=1

network={
        ssid="MYSSID"
        #psk=”passphrase”
        psk=59e0d07fa4c7741797a4e394f38a5c321e3bed51d54ad5fcbd3f84bc7415d73d
}
```

7 Support

Please contact us via email or telephone if you require support.

8 Contact Information

Please use the following to contact us.

Website	http://www.radicalsystems.co.za
Email	info@radicalsystems.co.za

Tel	+27 21 982 4929 (pbx landline) +27 76 224 2224 (pbx cellphone)
Address	Unit M1, Okavango Junction Brackenfell Industria Cape Town 7560