



Designed by DLOGIC

Evaluation Start-up Guide

DESCRIPTION:

7" Display Module

MODEL:

DL-DM700

PART NUMBER:

DL-DM700-ESG

VERSION:

1.1

Revision Status

Revision	Date	Part Number	Description
1.0	2011-09	DL-DM700-ESG	Display Module 700 Evaluation Start-up Guide
1.1	2012-07	DL-DM700-ESG	DL-DM700i version.

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1. Introduction

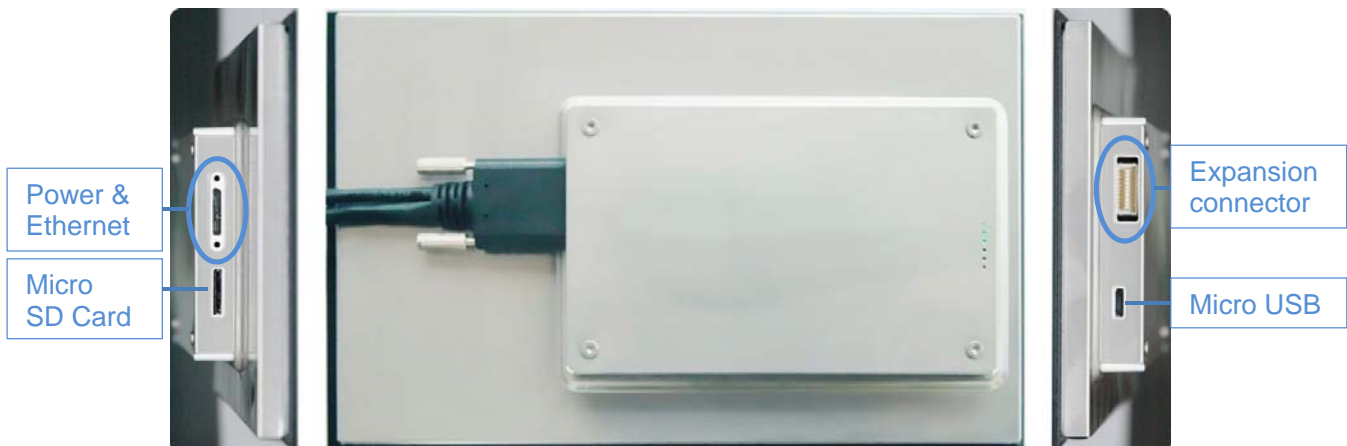
The smart display module DL-DM700 Evaluation Unit is can be used to evaluate suitability for use and integration in 3rd party products. It can also be used as a starting point for product design & implementation of solutions with color display and touch technology requirements. The evaluation unit provides a ready to go production grade hardware and software solution suitable for integration in existing or new product designs and initial software application development. The evaluation unit may be used “as is” to build products only adding application software, or a custom version may be developed in partnership with LOGIC TECHNOLOGIES LTD. The smart display hardware and software is optimized for quick adaptation and customization to new product requirements, and LOGIC TECHNOLOGIES LTD & **DLOGIC** supports customers with a dedicated specialist engineering team for this purpose. Typical customizations include mechanical integration, electrical interfaces, software drivers, support utilities and applications.

2. Get Started

2.1. In the box

	Smart display module comprising: <ul style="list-style-type: none"> - LCD TFT display, electronics & projected capacitive touch panel - Connectors / Interfaces: <ul style="list-style-type: none"> -- Power & Ethernet connector [USB3 Type A] -- Micro SDCard slot -- USB connector [Micro USB Type B] -- Expansion connector with RS232, CAN, I2C, SPI, GPIOs, PWMs
	Pre-installed software <ul style="list-style-type: none"> - Linux based board support package including interface drivers - QT libraries for graphical user interface / application development - Communication clients & servers for application development: ftp, ssh, http - Package management software for system software and application deployment
	Power & cables: <ul style="list-style-type: none"> - Power supply - Power & Ethernet cable

2.2. Set-up



Connect the combined Power & Ethernet cable as illustrated.



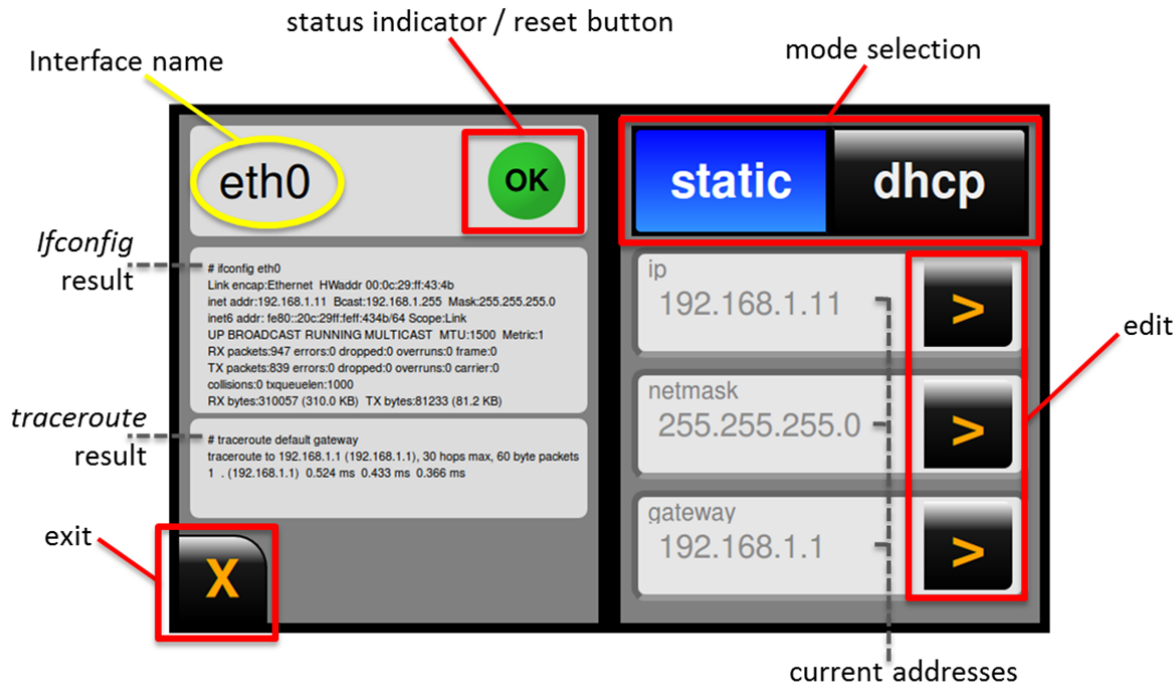
After power-up the application launcher appears on the display. Pushing the buttons will launch the associated applications.

To configure the module for use on a local network use the network configuration tool. Connecting to a local network will enable SSH based terminal and file transfer clients to be used to access the module operating and file system.

The demos are simple sample applications giving a look and feel for the display and capacitive touch technologies of the display module.

2.3. Network configuration

The network configuration tool enables local network address configuration (IP version 4 addressing) and provides current interface status information.



Network configuration:

- Change to dynamic addressing mode: Push the DHCP button and apply the change in the subsequent dialog. This will cause the network interface be reset and the assigned dynamic addresses will be shown.
- Static addressing mode: Addresses can be configured pressing any of the EDIT buttons. The keypad allows for configuration of IP address, network mask and default gateway.
- Interface reset. Pushing the status indicator button allows user reset of the interface.
- The status information shows the response from the *ifconfig* command for the interface, and the result of a *traceroute* command to the designated gateway.

Troubleshooting:

Should it not be possible to get network access after configuring appropriate mode and addressing information checking the Ethernet cable connection and/or power off and on the module may resolve the problem.

It is also possible to connect a console terminal via the expansion connector RS232 interface. Contact DLOGIC support for more information if needed (see e-mail address in Section 2.6).

2.4. Connecting a host computer

After configuring and establishing a network connection the module may be accessed using standard SSH client tools. Such tools are available as standard in Unix based systems, while freeware tools are available running on Windows.

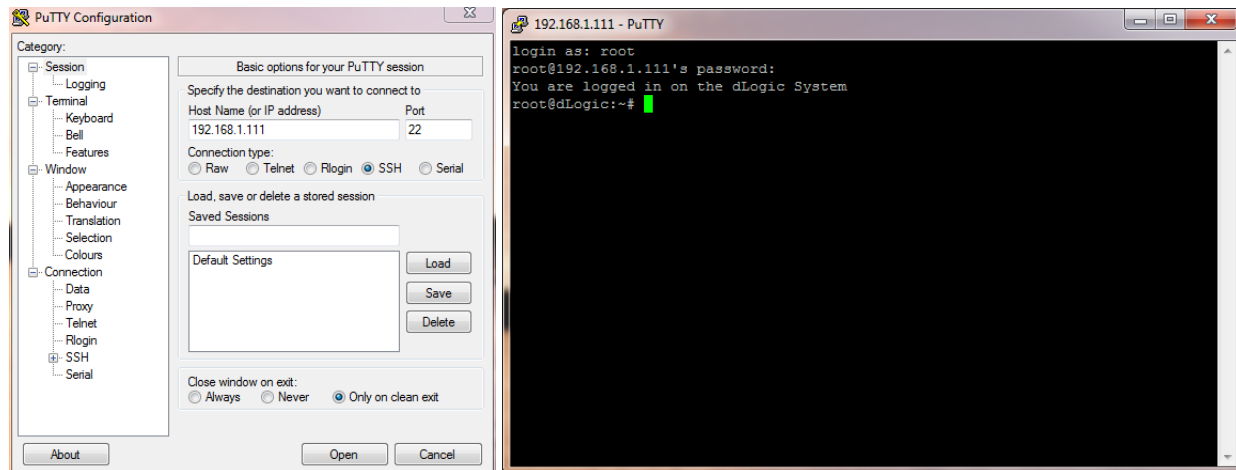
The root account may be used to connect to the device:

User name: root
Password: root

Connecting a terminal window

In Unix based systems use a standard terminal window and the ssh command to connect.

Many SSH clients are available for Windows. The example shows connecting with the PuTTY client (free download from www.putty.org).

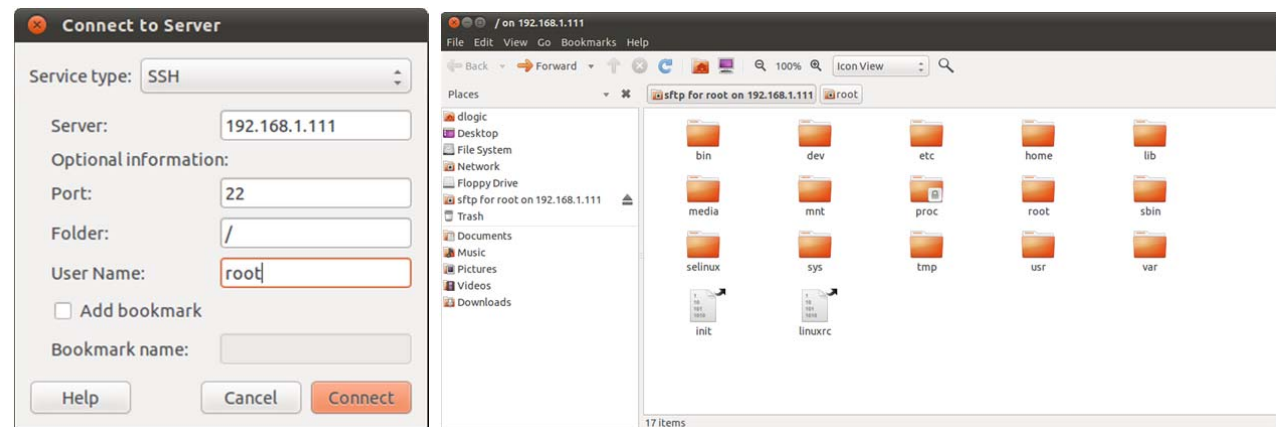


Connecting a file explorer

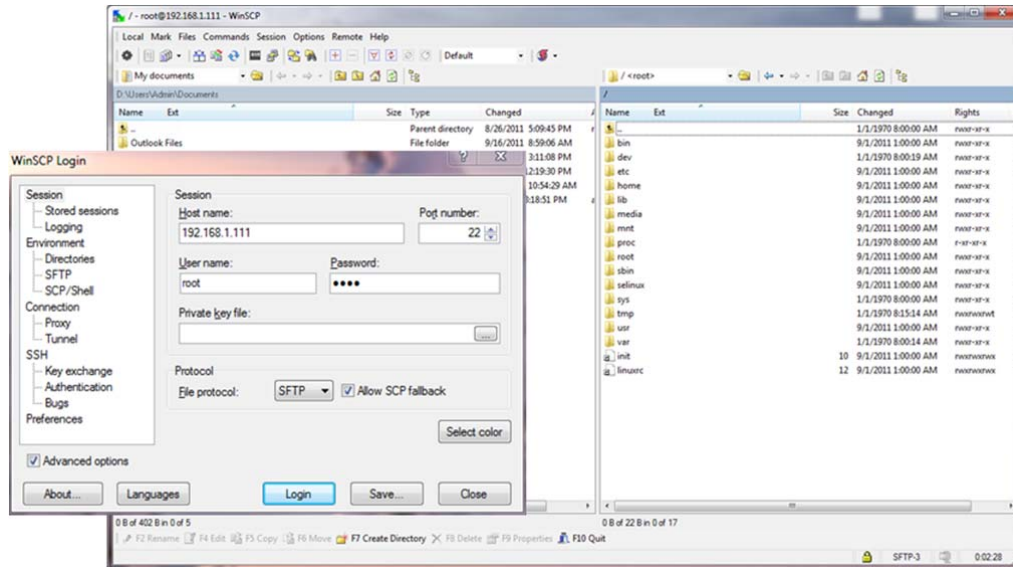
File explorers provide drag-and-drop file transfer between the host machine and device.

Connecting with Ubuntu file explorer:

- From the main menu bar select Places -> Connect to Server ...
- Choose Service type SSH and enter address & user information



WinSCP is a free SCP client for Windows (available from www.winscp.net).



2.5. Adding application software

The Linux root file system is mounted read only when booting, so in order to make changes in the file system it must be remounted:

```
# mount / -o remount,rw
```

It can also be useful to use an nfs mount for development, for example:

```
# mount -t nfs -o soft,nolock 192.168.1.110:/home/nfs/ /mnt
```

The QT graphics libraries are pre-installed on the evaluation unit in `/usr/local/lib/qt`

The demo applications are installed in `/usr/local/demo*` including environment scripts enabling QT and touch input.

2.6. Developing applications

For application software development and cross compiling DLOGIC provides a ready configured virtual Ubuntu host machine with compiler tool-chain and QT development environment pre-installed. This virtual host is available for evaluation unit users on request. Send an e-mail to tryit@dlogic.com including the MAC address of the evaluation unit in the subject. Access information for our download server will then be sent by return e-mail.