DLOGIC

Smart Display Module® 7-inch

Model: DL-DM700x

- Appliances
- Control & monitoring systems
- Laboratory equipment
- Measurement instruments
- Medical equipment
- Networking equipment
- Vending machines

The most comprehensive all-in-one touch display solution on the market

Our Smart Display Modules (SDMs) offer an all-in-one compact solid touch display computer solution ready for use in your application. The SDMs are designed for rapid implementation into industrial equipment, appliances, vending machines, monitoring equipment or other applications.

The SDM builds a color display, projected capacitive touch screen and embedded computer into a single component wrapped in a robust stainless steel housing ready for integration in your product. SDMs come with many standard interfaces and are configured with Linux ready for loading and running your applications. SDMs provide a cost effective and fast track to equip your product with state of the art touch based user interfaces and enhanced embedded computing power.
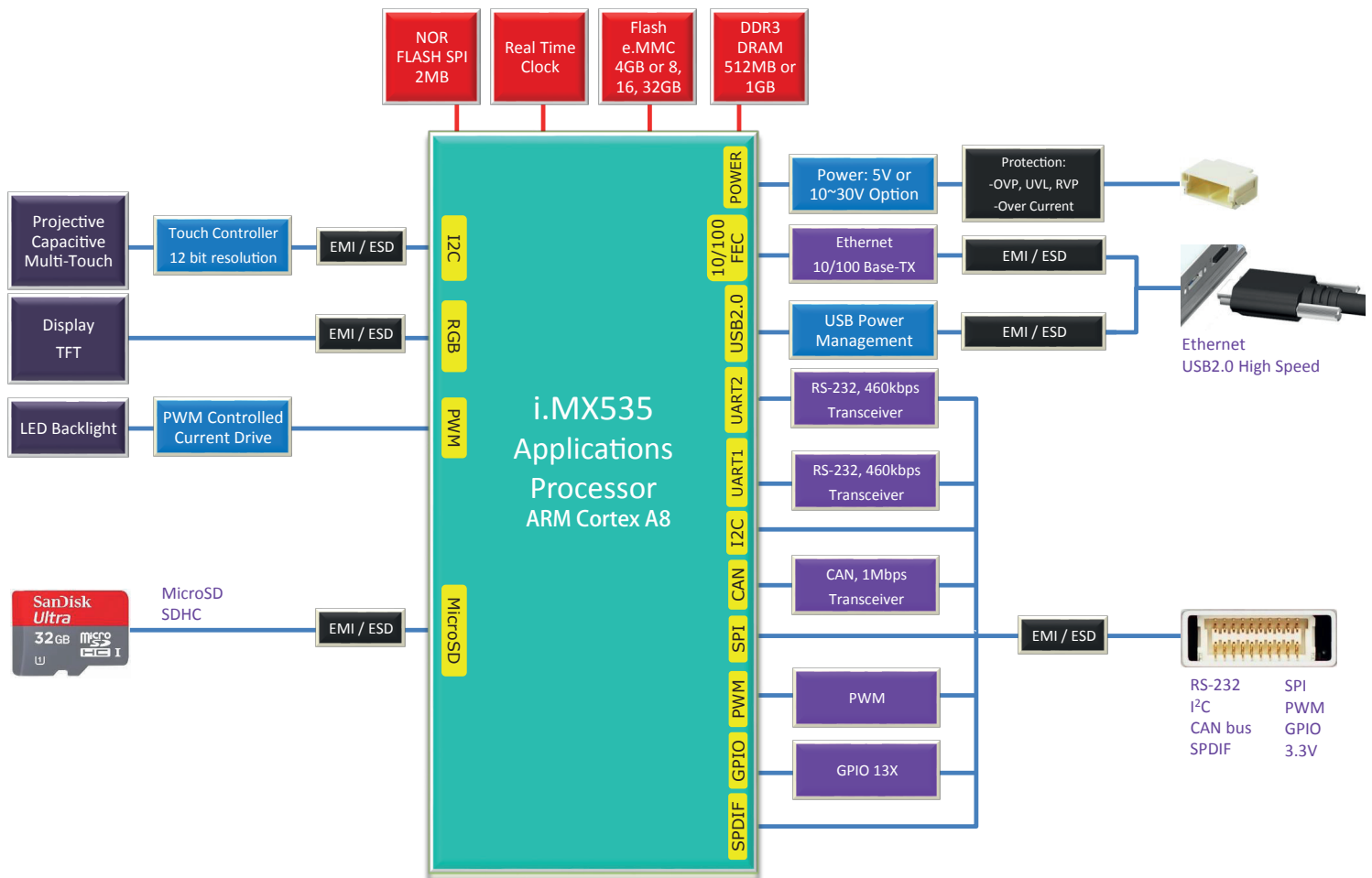
- Industrial strength, reliable, production ready hardware.
- Fast time to market, easy integration and low development risk.
- Guaranteed 10 years supply.

Key Features

- Display Module with touch screen, color display and ARM-based computer ready for integration in custom applications.
- Slim metal housing
- Projected capacitive multi-touch or resistive single-touch screen.
- TFT LCD display with LED backlight in different sizes, viewing modes & resolutions.
- A range of high reliability standard interfaces.
- Software Board Support Package included, ready for application development.
- Standard and tailored mechanical mounting and integration solutions.
- Simple addition of custom interface extensions.
- Optional optically bonded 4mm safety glass solutions available.
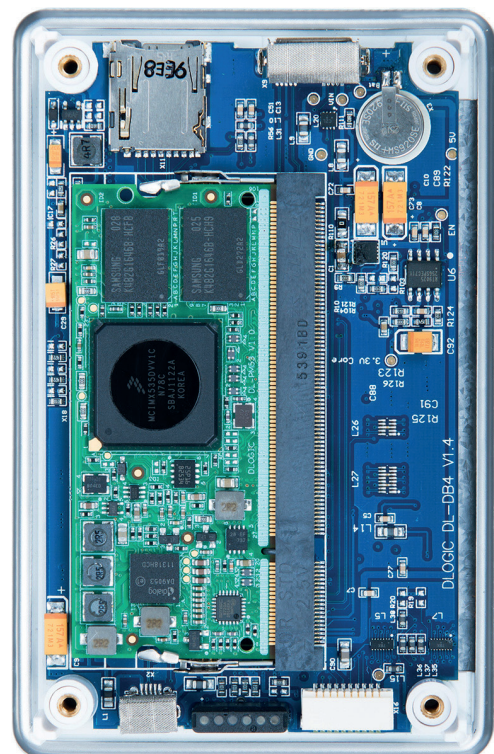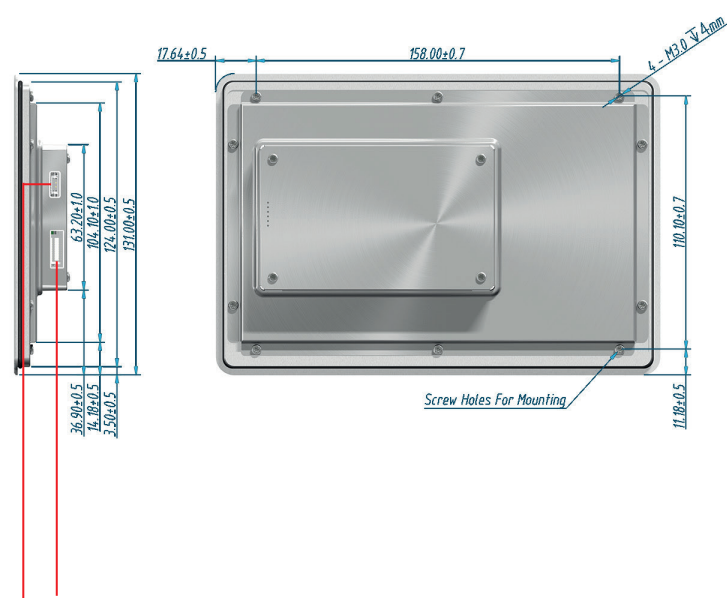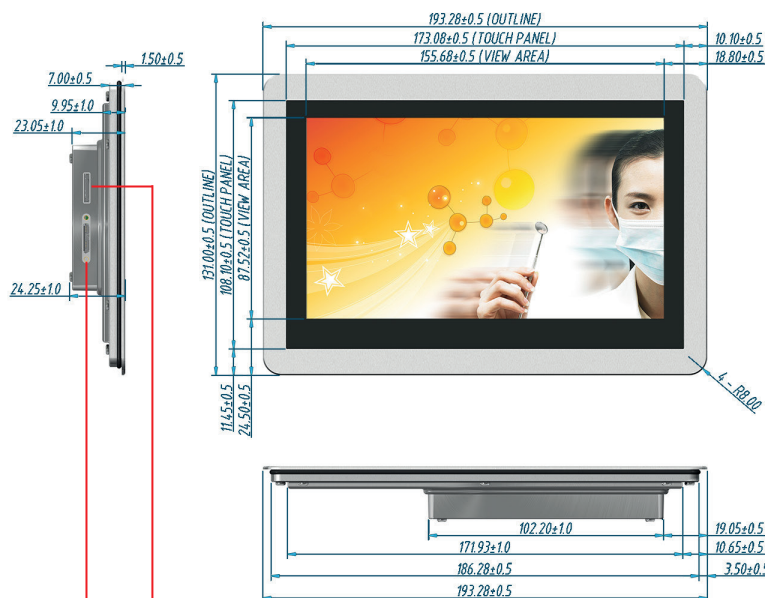- Supported by a highly skilled engineering team.

Block Diagram

- NOR FLASH SPI 2MB
- Real Time Clock
- Flash e.MMC 4GB or 8, 16, 32GB
- DDR3 DRAM 512MB or 1GB

i.MX535 Applications Processor ARM Cortex A8

Left side interfaces:
- I2C — Touch Controller 12 bit resolution — EMI / ESD — Projective Capacitive Multi-Touch
- RGB — EMI / ESD — Display TFT
- PWM — PWM Controlled Current Drive — LED Backlight
- MicroSD — EMI / ESD — MicroSD SDHC (SanDisk Ultra 32GB microSDHC I)

Right side interfaces:
- POWER — Power: 5V or 10~30V Option — Protection: -OVP, UVL, RVP -Over Current
- 10/100 FEC — Ethernet 10/100 Base-TX — EMI / ESD — Ethernet
- USB2.0 — USB Power Management — EMI / ESD — USB2.0 High Speed
- UART2 — RS-232, 460kbps Transceiver
- UART1 — RS-232, 460kbps Transceiver
- I2C
- CAN — CAN, 1Mbps Transceiver
- SPI — EMI / ESD — RS-232, I²C, CAN bus, SPDIF, SPI, PWM, GPIO, 3.3V
- PWM — PWM
- GPIO — GPIO 13X
- SPDIF

DL-DM700x

- Stainless steel protective housing
- 7" TFT LCD 800x480 with LED backlight
  - Landscape or portrait orientation
  - LED backlight intensity 550 cd/m2
- Projected Capacitive multi-touch screen
- Freescale ARM Cortex A8 i.MX535 @ 1GHz
- 1GB DDR3
- 8GB e.MMC Flash [Option:16, 32GB]
- Battery backed real time clock
- Standard interfaces:
  Ethernet, USBs, RS-232, I2C, SPI, CAN,
  PWMs, GPIOs, MicroSD
- Linux based board support package (BSP) with
  drivers and embedded file system
- Ready for application development including
  development tools & demo appliactions source code
- Based on application requirements
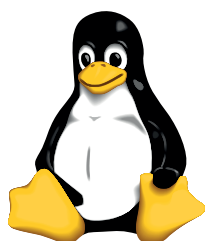- Optically bonded 4mm safety glass option

Micro SDHC

Screwlocked connector
Ethermet/USB

Secure locking connector
RS-232/I2C/CAN/SPI/PWM/GPIOs/3.3V

Secure locking connector 5V or 10~30V

Display Size	
Size	7 inch
Type	LCD TFT
Mode	Transmissive or Transflective
Resolution	800 x 480 pixels
Backlight	550 cd/m2
Colors	24-bit RGB
Orientation	Landscape or Portrait
Touch Screen	
Type	Projected Capacitive
Touch	Multitouch
CPU	
Type	Freescale ARM Cortex A8 i.MX535
Clock/Frequency	1 GHz
Memory	
SDRAM	1GB DDR3
FLASH	8GB e.MMC Flash [Option:16, 32GB]
SPI NOR FLASH	2 MB
Features	
Real Time Clock	Battery backed Real Time Clock
Interfaces	
Network	1x 10/100 MBit/s Ethernet
Asynchronous Serial Interfaces	2x RS232
Synchronous Serial Interface	1x I2C (400 kbit/s) [Configurable] 1x SPI (60 MBit/s) [Configurable]
USB	1x USB 2.0 Hi-Speed OTG
CAN	1x CAN 2.0B (1Mbps) [Configurable]
PWM	1x PWM, 12-bit, 125kHz [Configurable]
GPIOs	Up to 13x GPIOs [Configurable]
SDCard	1x Micro-SDHC Interface up to 32GB
Software	
Linux	Linux emDebian based
Android	WinCE 6 [Option]
Mechanical	
Housing material	Stainless steel
Mounting	[Aluminium Frame Option]
Cover Glass	1.1mm Chemically Strengthened Glass [Option 4mm Safety Glass UL751]
Power	
Supply & Consumption	5V, 1.2A, 6W 10 ~ 30 VDC [Option]
Environmental Conditions	
Storage Temp	-30 ~ +80ºC
Operating Temp	-20 ~ +70°C
Relative Humidity	95 % (non condensating)
Device Dimensions	
Height x Width x Depth	196 x 131 x 24.25 mm
Weight (g)	500g

Energy
Efficient Solutions
by Freescale

freescale™
semiconductor

Need a custom solution?

DL-DM700x with Aluminium Mounting Frame

The Smart Display Module hardware and software is optimized for quick adaptation and customization to specific product requirements. When a standard SDM will not do our engineering team is at your service to provide customized SDM solutions tailored for your application's needs. When engineering is completed we manufacture and assemble your SDM version to the developed custom specifications. Typical customizations include special mechanical integration adaptations and mounting solutions, display alterations (type, size, resolution, backlight intensity, viewing angle), additional external interfaces, software board support enhancements (drivers, protocols, libraries) and software application development including graphical user interface design.

To support your selection, adaptation and integration of an SDM in your solutions we provide a range of support services including:

- **SDM selection**
  We provide an evaluation kit including the DM-700x SDM with demo applications and development tools.

- **SDM customization**
  We provide specialist engineering resources to adapt / customize the SDM to satisfy your application requirements.
  Our development services include mechanical and electronics engineering, and software systems and applications development.

- **SDM manufacturing & support**
  We provide cost efficient high quality manufacturing services and support during your entire product lifecycle. Our factory is specialized in industrial and robotics product manufacturing and is certified for ISO9001, QS9000, ISO14000, ISO14001, OHSAS18000, UL, TUV and TS1694901/2.

Order Information

Part No.	Description
100948	DEVELOPMENT KIT DISPLAY MODULE DL-DM700x ALU FRAME TFT 7.0" CAP TOUCH
100870	DISPLAY MODULE DL-DM700x, ALU FRAME, 7.0" CAP TOUCH
100871	DISPLAY MODULE DL-DM700x, ALU FRAME, 7.0" CAP TOUCH, 4mm SAFETY GLASS UL751

4mm Safety Glass UL751

For further information:

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