



Swift Module DM

A low-power
multimedia-capable
production-ready
system-on-module
based on TI DM3730
and AM3703



SwiftModule-DM is a tiny production-ready module which is supplied with comprehensive production-quality Board Support Packages (BSPs) for Windows CE 6.0, Windows Embedded Compact 7, Linux and Android and a small baseboard for development and low-volume use.

This means that when you base your product on SwiftModule the most time-consuming and expensive part of the hardware design is already done for you, as is the equally costly porting of the operating system to the hardware, enabling you to get to market in a matter of weeks.

All that is required to finish your product is a custom baseboard, based on the schematics that we supply, including the interfaces that your product requires. Plug in the module, configure and install the BSP, load your application and you're done.

Based on an ARM Cortex-A8 powered Da Vinci DM3730 (or Sitara AM3703) running at up to 1GHz, with HD-capable video acceleration and OpenGL ES 2.0 graphics engine, the handheld-ready SwiftModule-DM is one of the most powerful ARM-based devices available today, yet it permits power consumption of under 1W in most applications. Thanks to our thoroughly developed and tested BSPs, the full power of Windows CE 6.0, Compact 7, Angstrom Linux, or



Actual size

Android 2.3 is available and ready to be used by your application.

And because at Direct Insight we understand all about platform-based design, having brought dozens of products to market via this route, we can provide the support you need to complete the process without too many hold-ups. And as a Microsoft Windows Embedded Gold Partner and Authorised Training Provider you can be sure that if this is your first Windows Embedded project, we have the skills you need to help you along.

Special Features

SwiftModule-DM incorporates a number of special features to answer the needs of the system-on-module user. A user-defined splash-screen makes it easy to brand your product without delving into the platform configuration. Low-power suspend mode supports handheld operation. Reference circuits for vital elements such as battery charging are available.

On-module Ethernet, wi-fi, bluetooth audio and touch reduce the baseboard requirement in most cases to little more than connectors,



while the Flash File System makes the unused area of the large standard NAND device available for data storage, in addition to supported removable storage, including USB stick and SD cards.

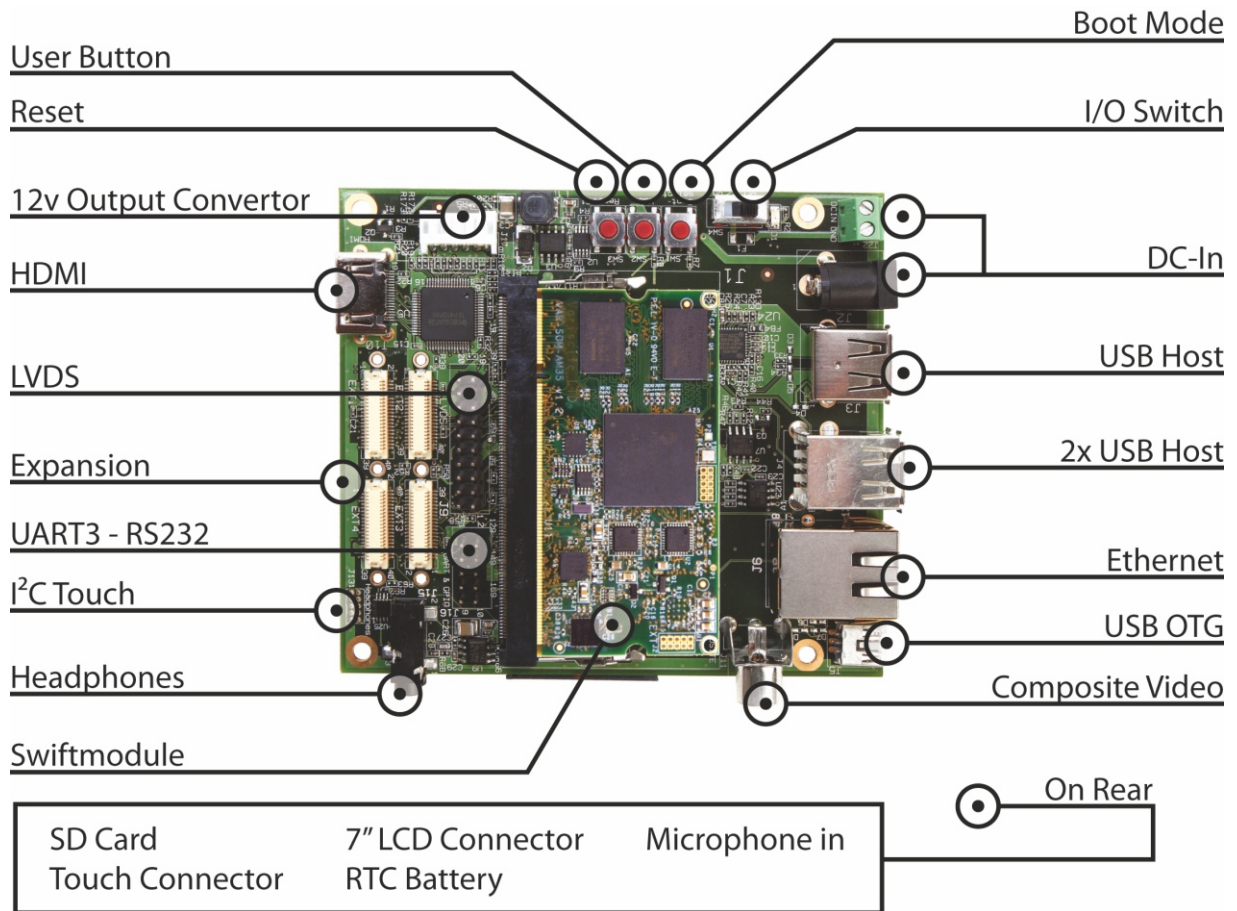
Technical Details:

SwiftModule-DM is a SODIMM200 format module measuring just

68mm x 35mm and is built around a TI DM3730 family microcontroller, providing a wide range of on-chip multimedia resources and interfaces. We add up to 512MB of fast DDR2 RAM, and up to 512MB of NAND Flash as well as power management, Ethernet, audio, touch and Wi-Fi+Bluetooth* to complete the system-on-module.

Built-in interfaces include USB OTG and Host, UARTs, SD/MMC, I2S, SPI, audio, touch, SSP and HD-capable display controller. Multimedia capabilities are enhanced by a PowerVR OpenGL ES 2.0 graphics engine (DM3730 only) and a C64x DSP video subsystem capable of MPEG-4 decode at HD (1280x 720) resolution (DM3730 only).

**SwiftLite-DM Development System
(touch screen removed)**



Features and interfaces of SwiftModule-DM and SwiftLite

Development System

As well as providing an out-of-the-box development environment running the chosen OS, the SwiftLite-DM provides a range of connectors and additional interfaces which will form the basis of your production baseboard design. Full baseboard schematics are supplied.

A large 800x480 touch screen, directly connected to the OMAP's on-chip display controller means that the development setup closely emulates the final product, and LVDS and HDMI support allow a remotely connected display to be easily effected.

An optional extension board adds additional RS-232, RS-485 ports, and 4x 30-pin headers, plus JTAG port.

Single Board Computer

The development baseboard can also be supplied in quantity, and for orders of over 100 units can be selectively depopulated, to provide a fast-to-market SBC solution.

Resource	SwiftModule-DM	Details
Microcontroller	DM3730 / AM3703	AM3715, DM3725 available
CPU	ARM Cortex-A8	
Processor max clk (MHz)	800 / 1000	
SDRAM (MB)	64 / 128 / 256 / 512	
NAND Flash (MB)	256 / 512	
Coprocessor	HD Video, OpenGL ES	C64x video accelerator
Floating Point	y	via ARM Cortex-A8 Neon
UART (RS-232)	3 (2**)	2 RS-232 on baseboard
Ethernet 10/100	y	
I2C Interface	2	
LCD Controller	2048 x 2048	HDTV compatible
Supplied LCD	800 x 480	resistive touch, capacitive*
SSP (sync. serial incl. I2S)	1	
IrDA (Infra-red)	1	
SD Card / SDIO	2	SDHC supported
1-Wire / HDQ	1	
USB Host	1	
USB OTG	1	
SPI	1	
PWM Controller	4	
Keypad	6x6	
JTAG	y	on optional ext. board
Audio	y	
Touch screen	y	4-wire resistive, cap. via I2C
RTC	1	cell on baseboard
802.11b/g WiFi	y*	on-module option
Bluetooth	y*	on-module option
HDMI	y**	
LVDS	y**	
Temp range	0-70C/-25+85C/-40+85C	
Dimensions	68mm x 35mm	SwiftLite 9cm x 10cm
Windows CE 6.0	y	
Windows Embedded Compact 7	y	
Android	y	2.3
Linux	y	Angstrom distribution
*optional **baseboard Some combinations of interfaces restricted by pin-sharing		

www.swiftmodule.com

Swift **Module**
DM

