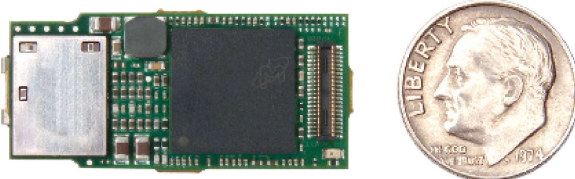# DM3730 / AM3703 Torpedo™ + Wireless SOM

Wilink™ 7.0 wireless solution on a single board that is less than one square inch

Combine a powerful applications processor with PC-like speeds and a wireless chipset with 802.11a/b/g/n, Bluetooth 4.0/BLE, and GPS support; toss in Android™ and Linux™ BSPs developed using processes compliant with the ISO 13485 medical system standard; and the outcome is an innovative off-the-shelf solution that reduces your development time and risk.

The award-winning Torpedo + Wireless System on Module (SOM) is an ultra-compact form factor built around the Texas Instruments (TI) DaVinci™ DM3730 processor or Sitara™ AM3703 parocessor and WiLink™ 7.0 wireless solution. Confining these two systems to a single board isolates the complex design, manufacturing, and wireless certifications from the rest of your product.

The DM3730/AM3703 Torpedo + Wireless SOM occupies less than one square inch, but boasts PC-like speeds up to 1 GHz with long battery life. Partnered with such high performance is a startlingly low power consumption in suspend state. This balance of speed and power is accomplished through our vast system design experience; understanding the most detailed workings of each component and their interaction with one another creates a product that operates at optimal efficiency.

The WL1283 wireless chipset provides access to all the wireless protocols required in today's connected world. 802.11a/b/g/n, Bluetooth, and GPS signals are natively integrated with this SOM and with Beacon EmbeddedWorks BSPs.

DM3730 / AM3703 Torpedo™ + Wireless SOM
Enlarged to show detail

By using the same connectors as Beacon EmbeddedWorks' existing OMAP35x and DM3730/AM3703 Torpedo SOMs, the DM3730/AM3703 Torpedo + Wireless SOM extends the roadmaps of existing products and provides an upgrade path from today's products to future technologies.

The ultra-compact DM3730/AM3703 Torpedo + Wireless SOM is an ideal off-the-shelf solution for applications in markets where wireless connectivity is required and space is a premium. From point-of-care medical products to handheld communication devices, the DM3730/AM3703 Torpedo + Wireless SOM allows for the powerful versatility and compact designs needed in today's market-changing products.

DM3730 / AM3703 Torpedo™ + Wireless SOM

HIGHLIGHTS

- Product-ready System on Module with a TI DM3730 or AM3703 ARM® Cortex™-A8 processor running up to 1 GHz
- Android™ & Linux™ Board Support Packages (BSPs)
- Wireless connectivity: 802.11a/b/g/n, Bluetooth 4.0/BLE, & GPS
- FCC & IC modular certified
- Industrial, commercial, & extended temp configurations
- Ultra-compact form factor (15 x 33 x 3.8 mm installed)
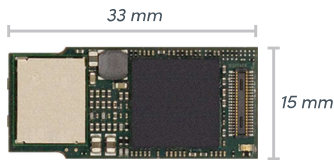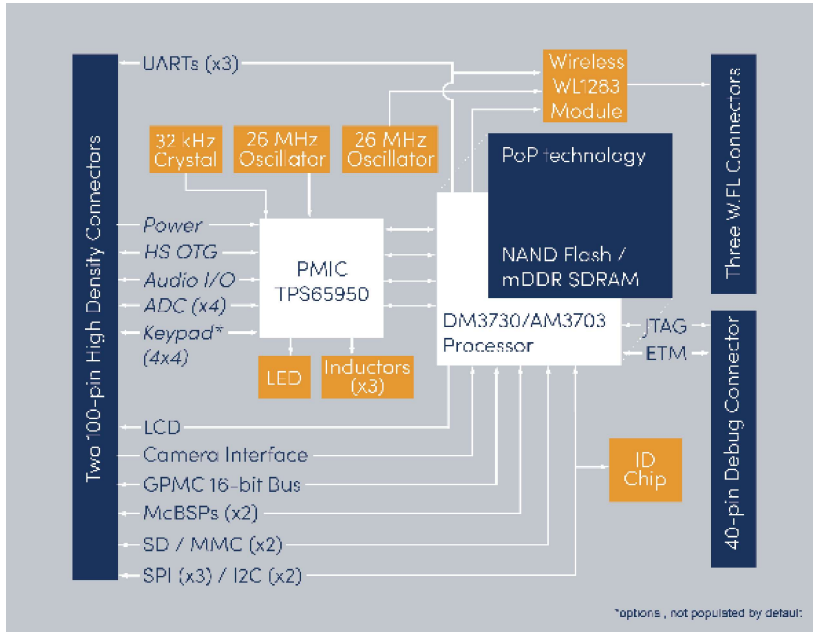- Same connectors as DM3730 / AM3703 Torpedo SOM
- Long product lifecycle
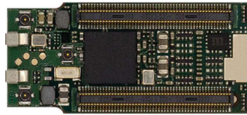
Zoom™ DM3730 Torpedo Development Kit

FEATURES

- Application baseboard
- DM3730 Torpedo SOM DM3730 Torpedo + Wireless SOM
- 4.3" WQVGA LCD with 4-wire touchscreen
- Wattson™ power measurement application
- Necessary accessories to immediately get

DM3730 / AM3703 Torpedo™ + Wireless SOM Block Diagram

Top View ▶ Actual Size

Bottom View ▶ Actual Size

DM3730 / AM3703 Torpedo™ + Wireless SOM Ordering Information

MODEL NUMBER[1]	SPEED (MHZ)	SDRAM (MB)	NAND FLASH (MB)	TEMP. (°C)
SOMAM3703-32-1780AKIR	800	256	512	–40°–85°[2]
SOMDM3730-32-2780AKCR	1000	256	512	0°–70°[3]

NOTES:
1. Custom configurations are available by special order. Please contact Beacon EmbeddedWorks Sales for details.
2. Junction temperature of the DM3730/AM3703 processor must stay below 105°C.
3. Junction temperature of the DM3730/AM3703 processor must stay below 90°C.

Zoom™ DM3730 Torpedo Development Kit Ordering Information

MODEL NUMBER	SOM CONFIGURATION	SUGGESTED RESALE
SDK-DM3730-30-256512R	SOMDM3730-31-2780AKCR SOMDM3730-20-2780AGCR	$997

PRODUCT FEATURES

Processor
- TI DaVinci™ DM3730 or Sitara™ AM3703 ARM® Cortex™-A8 core running up to 1 GHz
- TMS320C64x DSP core running up to 800 MHz (DM3730 only)
- POWER SGX™ graphics accelerator (DM3730 only)

Memory
- Mobile DDR / NAND flash (PoP technology) 256 MB / 512 MB

Wireless Connectivity
- WL1283 wireless module featuring 802.11a/b/g/n, Bluetooth 4.0/BLE, & GPS

Display
- Programmable color LCD controller supports up to 24 bpp TFT interface
- Hardware supports XGA 1024x768 at 24-bit color

Camera
- Parallel camera interface

Audio
- I2S compliant audio codec (16-bit stereo DAC, 13-bit ADC)

User Interface
- Optional 4x4 keypad interface

PC Card Expansion
- Multiple SD/MMC card support

USB
- One USB 2.0 high-speed On-the-Go interface

Serial I/O
- UARTs, SPI, I2C, McBSPs

GPIO
- Programmable I/O depending on peripheral requirements
- General purpose memory controller (GPMC) interface

Debug
- 40-pin debug connector on top side of SOM
- JTAG & ETM support

Software
- LogicLoader™ (bootloader/monitor)
- Android BSP
- Linux™ BSP
- Wattson™ power measurement application

Mechanical
- 15 mm wide x 33 mm long x 3.8 mm high

FCC & IC Modular Certified

RoHS Compliant