

Product Selection Guide

	SM502	SM718	SM750	SM768
Bus Interface	32-bit Host / PCI	16/32-bit Host or/ PCI	PCIe x1	USB3 / PCIe x2
Memory Sizes Available	8 MB SDR Int.	16MB SDR Int.	16MB DDR Int.	256MB DDR3 Int.
2D/3D	2D	2D	2D	2D
VGA BIOS	No	Yes	Yes	Yes
DAC Frequency	240Mhz	300Mhz x2	300Mhz x2	340Mhz
Digital panel Interface	8/12/18/24 STN/TFT	12/18/24/36 TFT	12/18/24/36 TFT	HDMI 1.4 18/24/36 TFT
Max. Resolution	1280x1024 (4:3) 1366x768 (16:9)	1920x1200	1920x1200	2560x1600
Integrated LVDS	No	No	No	Yes, 2-channel
Dual Display	Yes	Yes	Yes	Yes
Display Layer	7	7	7	8
I/O Peripherals	USB host, AC97, I2S, UART, SSP, Dual 8-bit / Single 16-bit ZV Port, etc.	Dual 8-bit / Single 16-bit ZV Port	Dual 8-bit / Single 16-bit ZV Port	USB2 Host / Hub, UART, SSP, SPI Single 16-bit ZV Port
Package / Size	297BGA, 19x19mm	320BGA, 19x19mm	265BGA, 17x17mm	300BGA, 17x17mm
Typical Power	<250mW	<1W	<1W	<1.5W
I-Temp	Yes	Yes	Yes	planning

Key Words

Key Words	Definitions
Multiple Display Support Under Major OSs	Multi displays (dual independent channels) available at the same time include CRT1+CRT2, LCD1+LCD2, CRT+LCD applications
Integrated Video Memory	Memory on module reduces power and footprint for smaller form factors
Major OS Support	Windows 7/8, XP, CE7, Linux, Android, DDK for RTOS support
Life Cycle	Typical 5-7 years

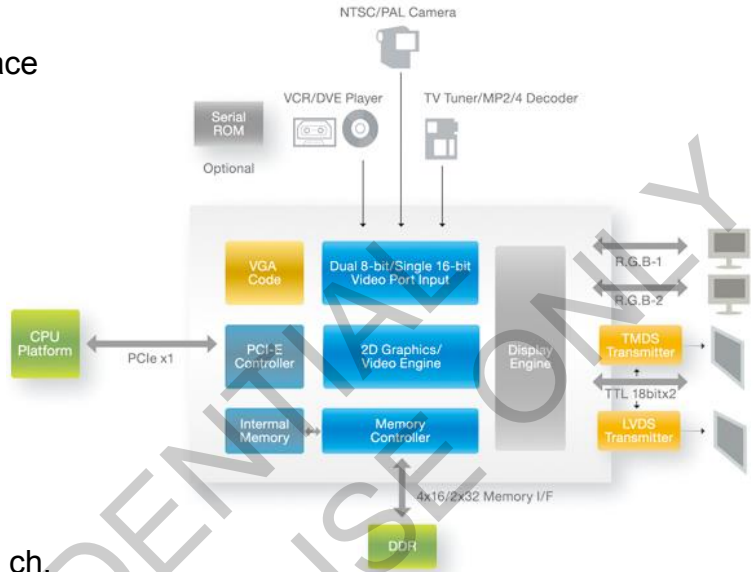
**Why use SMI GPU?**

- Best of class display performance
- Low power consumption
- Integrated memory to save board space
- Comprehensive driver support
- Easy implementation
- Longevity support (5~7 years)

**Specifications**

- Host Interface: PCIe x1
- 16Mb Integrated Video Memory
- Graphic Engine: 2D 128-bit ROP3
- YUV-to-RGB conversion
- Video Overlay & Capture
- Dual Display: CRT1+CRT2, LCD1+LCD2, LCD1+CRT2
- Resolution: 1920 x 1200 (max) single ch. dual channel display up to 1920 x 1080

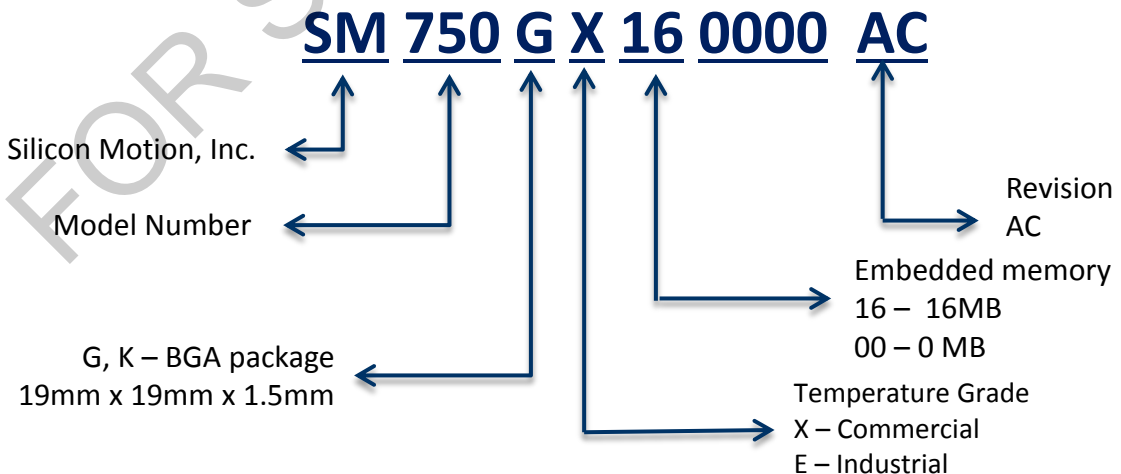
**SM750 Block Diagram**



**Market Segments and Applications**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>▪ Factory Automation (HMI)</li> <li>▪ Thin Client</li> <li>▪ Server</li> <li>▪ IPC / POS / MFP / DVR</li> <li>▪ Medical Device (Patient Monitoring)</li> </ul> | <ul style="list-style-type: none"> <li>▪ Handheld / Portable Device</li> <li>▪ Military / Avionic Applications</li> <li>▪ Test Instrument</li> <li>▪ Digital Signage</li> <li>▪ All Other Embedded Graphics Applications</li> </ul> |
|---|---|

**P/N Decoder**



## FAQ

Frequently Asked Questions	Answers
What Windows drivers are available?	Windows 7/8, WinXP, Windows Server 2008R2 / 2010 / 2012, Windows CE6, Compact7, Multipoint Server
What Linux driver packages are available?	Ubuntu, Red Hat, SuSE, Fedora
What RTOS driver packages are available?	WindRiver VxWorks, QNX Neutrino, and others through our extensive Driver Development Kit (DDK) support
Are Extended Temperature Products available?	Yes, our GPU products are designed and tested to support both standard and extended temperature operation.
Do Silicon Motion GPUs support video overlay?	Yes, both YUV and RGB video overlay window support

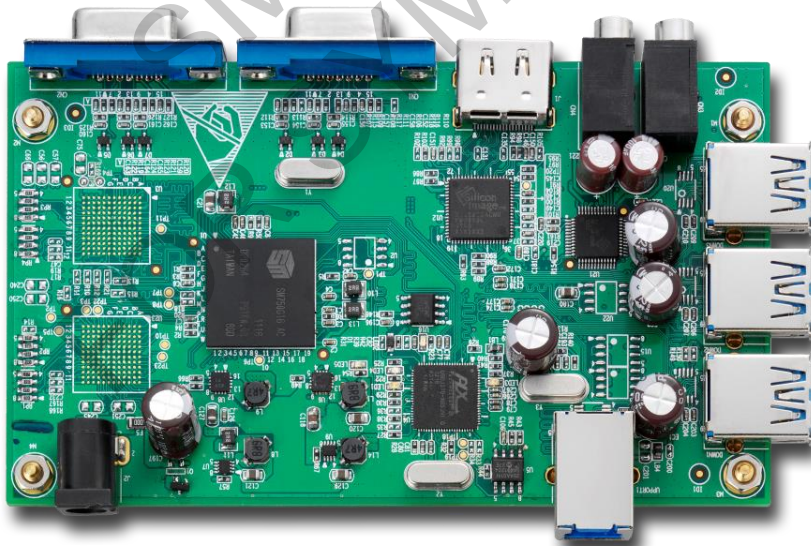
## Design Kit

### LynxUSB+ SM750 USB3.0 Zero Client

LynxUSB+ is a USB3.0 zero client reference design kit solution, designed for a client connecting to a host server computer through the USB3.0 interface. Featuring Silicon Motion SM750 GPU, dual analog RGB and digital HDMI/DVI display outputs are provided for enhanced display options. With greater flexibility and security, LynxUSB+ offers USB ports for various user I/O peripheral supports including keyboard, mouse, audio, and other devices.

#### Applications

- Zero Clients
- Gaming
- Dock Stations
- Other Embedded Graphics Applications



#### Development Kit:

- LynxUSB+ board
- USB 3.0 Cable
- Power Adapter
- Design CD