

### Features

- Freescale® i.MX 6DL Industrial Processor @ 800MHz  
Dual ARM Cortex™-A9 CPU
- 2GB of Soldered DDR3 RAM
- High-Performance Video and Graphics
  - HD1080p, 3D, and 2D HW Accelerators
- Multiple Video Interfaces
  - HDMI 1.4 and Two Channel LVDS
- Gigabit Ethernet with IEEE-1588™
- Six USB 2.0 Ports and One USB On-The-Go Port
- Two CAN Ports
- One RS-232/422/485 Serial Port up to 1Mbps
- 24 Lines GPIO tolerant up to 30VDC
- HDMI and Stereo Audio
- SD and MicroSD Sockets
- Mini-PCIe and IO60 Expansion
- Powered by PoE or 10-50VDC Input
- Fanless -40° to +85°C Operation
- Runs Linux and Android™

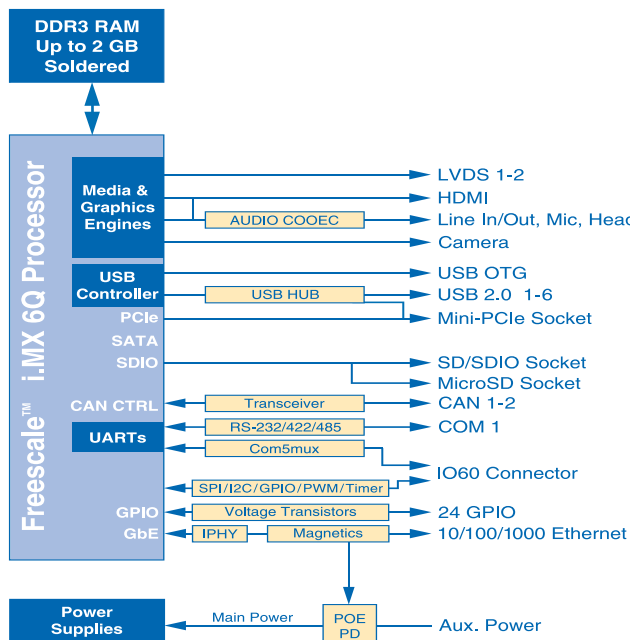


### Product Description

WinSystems' SBC35-C398DL dual core single board computer combines high performance multimedia graphics with a rich mix of industrial I/O. The Freescale i.MX 6DL processor's integrated power management provides excellent efficiency and allows operation from -40° to +85°C without active cooling. It is designed for demanding applications in security, transportation, medical, and digital signage.

The low power, high-performance of ARM cores coupled with readily available software tools make them an excellent choice for embedded systems. Leveraging Freescale's proven track record in long term product support with the operating system and application development driven by consumer ARM devices, the SBC35-C398 is ideal for off-the-shelf industrial designs.

The SBC35-C398 series also introduces the IO60 expansion connector to allow for additional functionality. The IO60 specification supports I2C, SPI, TTL-UART, and PWM signals allowing stackable expansion through off-the-shelf or application specific designed modules. When coupled with the Mini-PCIe socket, the SBC35-C398 is one of the most expandable ARM designs currently on the market.



SBC35-C398DL-2-0 Block Diagram

## SBC35-C398DL: Dual Core ARM 3.5 Inch SBC

Technical Specifications			
Product Number	SBC35-C398Q-2-0	SBC35-C398DL-2-0	SBC35-C398S-1-0
<b>Processor</b>	Freescale i.MX 6Q	Freescale i.MX 6DL	Freescale i.MX 6S
Cores	4x ARM Cortex A9	2x ARM Cortex A9	ARM Cortex A9
Frequency	800MHz	800MHz	800MHz
Cache	32KB/32KB L1, 1MB L2	32KB/32KB L1, 512KB L2	32KB/32KB L1, 512KB L2
<b>Memory</b>	2GB 64bit DDR3	2GB 64bit DDR3	1GB 32bit DDR3
Embedded SRAM	256KB	128KB	128KB
<b>Hardware Display Accelerators</b>	NEON Media Processor Engine	NEON Media Processor Engine	NEON Media Processor Engine
3D Graphics Core	Open GL ES 3.0, Open CL	Open GL ES 3.0	Open GL ES 3.0
2D Graphics Core	Dual BitBlit	BitBlit	BitBlit
Vector Graphics Core	OpenVG 1.1	-	-
<b>Video Interfaces</b>	Up to Four Active Displays	Up to Two Active Displays	Up to Two Active Displays
HDMI 1.4 Type A	HD1080p60	HD1080p30	HD1080p30
LVDS Interface	2x (2048x1536) or 2x (1280x720)	2x (1366x768)	2x (1366x768)
MIPI/DSI	Capture + Display	-	-
<b>MIPI</b>	Display Port + Camera Input	-	-
<b>Camera Interface</b>	CMOS 8 bit	CMOS 8 bit	-
<b>Ethernet</b>	1Gbps	1Gbps	1Gbps
	Wake on LAN (WOL)	Wake on LAN (WOL)	Wake on LAN (WOL)
	IEEE-1588	IEEE-1588	IEEE-1588
<b>Serial</b>			
RS-232/422/485	2x up to 1Mbps	1x up to 1Mbps	1x up to 1Mbps
RS-422/485	3x up to 5Mbps	-	-
<b>CAN Ports</b>	Two	Two	-
<b>USB Ports with Over-Current Protection</b>	6x USB 2.0 + On-The-Go	6x USB 2.0 + On-The-Go	2x USB 2.0 + On-The-Go
<b>Audio Interfaces</b>	HDMI + Line In/Out, Mic, Head	HDMI + Line In/Out, Mic, Head	HDMI
<b>General Purpose I/O</b>	24 Lines Tolerant to 30V	24 Lines Tolerant to 30V	24 Lines Tolerant to 30V
<b>Mass Storage</b>	CFast + SD/SDIO + MicroSD	SD/SDIO + MicroSD	SD/SDIO + MicroSD
<b>Expansion Bus Connectors</b>			
Mini-PCIe	One Half-size	One Half-size	-
IO60	I2C, SPI, TTL & PWM	I2C, SPI, TTL & PWM	I2C, SPI, TTL & PWM
<b>Operating Temperature</b>	-40° to +85°C	-40° to +85°C	-40° to +85°C
<b>Timers</b>	Three	Three	Three
<b>Real Time Clock</b>	Secure RTC	Secure RTC	Secure RTC
<b>Battery</b>	Optional External	Optional External	Optional External
<b>Watchdog Timer</b>	Programmable + TrustZone	Programmable + TrustZone	Programmable + TrustZone
<b>Electrical</b>			
PoE PD	IEEE802.3at (Up to 25W)	IEEE802.3at (Up to 25W)	IEEE802.3at (Up to 25W)
Aux. Input	10 - 50VDC	10 - 50VDC	10 - 50VDC
<b>Mechanical</b>			
Dimensions	4 x 5.75 in (102 x 146 mm)	4 x 5.75 in (102 x 146 mm)	4 x 5.75 in (102 x 146 mm)
Weight	5.0 oz (142.2 gm)	4.8 oz (136.1 gm)	4.2 oz (113.4 gm)
PC Board Thickness	0.078"	0.078"	0.078"
<b>Product Number</b>	<b>SBC35-C398Q-2-0</b>	<b>SBC35-C398DL-2-0</b>	<b>SBC35-C398S-1-0</b>

### Custom Configurations

If your application need a special configuration, please contact our Applications Engineers to discuss your requirements. We look forward to working with you.

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### Ordering Information

Visit our website, [www.WinSystems.com](http://www.WinSystems.com), or contact us by email, [Info@WinSystems.com](mailto:Info@WinSystems.com), or call 1-817-274-7553 for complete ordering information.

