SBC35-C398S

Single Core ARM® 3.5" Format SBC with IO60 Expansion

Features

- Freescale® i.MX 6S Industrial Processor @ 800MHz Single Core ARM Cortex™-A9 CPU
- 1GB 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™
- Two USB 2.0 Ports
- One RS-232/422/485 Serial Port up to 1Mbps
- 24 Lines GPIO tolerant up to 30VDC
- HDMI Audio
- SD and MicroSD Sockets
- IO60 Expansion
- Powered by PoE or 10-50VDC Input
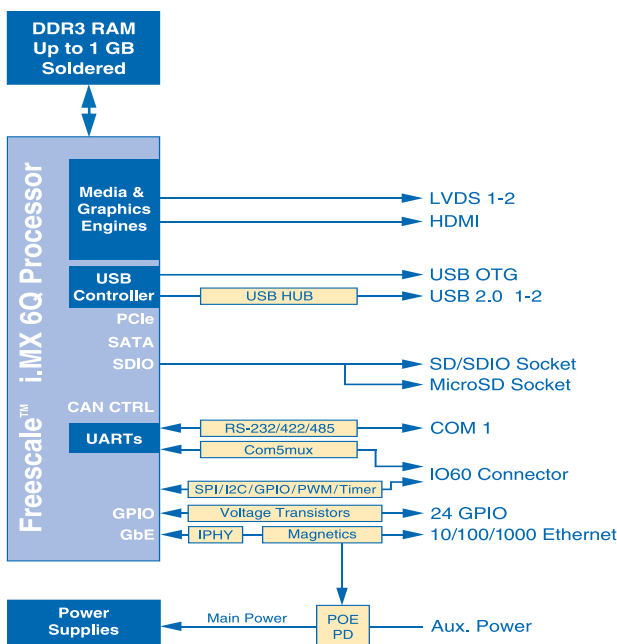- Fanless -40° to +85°C Operation
- Runs Linux and Android™

Product Description

WinSystems' SBC35-C398S Single Core single board computer combines high performance multimedia graphics with a rich mix of industrial I/O. The Freescale i.MX 6S 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 Quad and Dual Core products introduces the IO60 expansion connector which allows 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.

SBC35-C398S-1-0 Block Diagram

SBC35-C398S: Single Core ARM 3.5 Inch SBC

Technical Specifications

Product Number		SBC35-C398Q-2-0	SBC35-C398DL-2-0	SBC35-C398S-1-0
Processor		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**
Memory		2GB 64bit DDR3	2GB 64bit DDR3	**1GB 32bit DDR3**
	Embedded SRAM	256KB	128KB	**128KB**
Hardware Display Accelerators		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 BitBlt	BitBlt	**BitBlt**
	Vector Graphics Core	OpenVG 1.1	-	**-**
Video Interfaces		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	-	**-**
MIPI		Display Port + Camera Input	-	**-**
Camera Interface		CMOS 8 bit	CMOS 8 bit	**-**
Ethernet		1Gbps	1Gbps	**1Gbps**
		Wake on LAN (WOL)	Wake on LAN (WOL)	**Wake on LAN (WOL)**
		IEEE-1588	IEEE-1588	**IEEE-1588**
Serial	RS-232/422/485	2x up to 1Mbps	1x up to 1Mbps	**1x up to 1Mbps**
	RS-422/485	3x up to 5Mbps	-	**-**
CAN Ports		Two	Two	**-**
USB Ports with Over-Current Protection		6x USB 2.0 + On-The-Go	6x USB 2.0 + On-The-Go	**2x USB 2.0 + On-The-Go**
Audio Interfaces		HDMI + Line In/Out, Mic, Head	HDMI + Line In/Out, Mic, Head	**HDMI**
General Purpose I/O		24 Lines Tolerant to 30V	24 Lines Tolerant to 30V	**24 Lines Tolerant to 30V**
Mass Storage		CFast + SD/SDIO + MicroSD	SD/SDIO + MicroSD	**SD/SDIO + MicroSD**
Expansion Bus Connectors				
	Mini-PCIe	One Half-size	One Half-size	**-**
	IO60	I2C, SPI, TTL & PWM	I2C, SPI, TTL & PWM	**I2C, SPI, TTL & PWM**
Operating Temperature		-40° to +85°C	-40° to +85°C	**-40° to +85°C**
Timers		Three	Three	**Three**
Real Time Clock		Secure RTC	Secure RTC	**Secure RTC**
Battery		Optional External	Optional External	**Optional External**
Watchdog Timer		Programmable + TrustZone	Programmable + TrustZone	**Programmable + TrustZone**
Electrical	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**
Mechanical				
	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"**
Product Number		SBC35-C398Q-2-0	SBC35-C398DL-2-0	SBC35-C398S-1-0

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.