electronics



## **G400-S Module Specifications**

The G400-S Module is a surface-mount System on Module (SoM) that runs the .NET Micro Framework software platform, the most compact version of Microsoft .NET framework. The value of the G400-S Module is not only in the hardware capabilities such as the ARM 926EJ-S core processor, memory and peripherals, but also is in the integration between the hardware and the embedded software. This provides high level features such as a FAT file system, TCP/IP stack, Graphics and Threading to the developer through .NET APIs. Furthermore, the embedded software includes GHI Electronics' extensions to the core .NET Micro Framework. Extensions support important features such as WiFi, USB Host, SQLite, PPP, and In-Field Update. All are provided royalty-free with the G400-S System on Module.

## **Benefits**

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Faster time to Market Flawless Concurrent Engineering	<ul> <li>Faster and easier programming</li> <li>Microsoft Visual Studio software development platform</li> <li>Run-time software debugging, through USB or UART</li> </ul>	
Cost Effective	<ul> <li>Simple integration with SMT hardware package</li> <li>Competitive volume pricing</li> <li>The same .NET developer for Desktop and embedded devices</li> </ul>	
Dependable Quality Reliable Features	<ul> <li>Software core robustness</li> <li>Continuous software package maintenance</li> <li>High-quality production in Michigan, USA</li> </ul>	
Customer Satisfaction We Listen, We Help	<ul> <li>Superior technical support</li> <li>Value-added features through our libraries</li> <li>A to Z design and production services with optimized costs</li> </ul>	

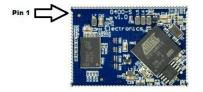
## **Key Features**

Atmel AT91SAM9X35 400MHz MPU 128 MBytes DDR SDRAM 4 Mbytes of Serial Flash Embedded LCD Controller USB Host/Device with drivers 4-bit SD card interface Plenty of essential peripherals such as GPIO, SPI, UART, I2C, I2S,CAN, ADC, DAC and PWM. High level features such as file system, networking (Ethernet, WiFi), SQLite database, and Graphics. Low profile SODIMM Supports Visual C# and Visual Basic programming languages

## Applications

- Graphical Human Machine Interface
- Data Logger
- Hand held testers
- Internet of things applications
- Networked alarm systems
- Automation applications
- Controllers, Robotics

Specifications			
Package	SODIMM 200 PINS		
Dimensions Length x Height x Thickness	48.25mm x 33.05mm x 4.6 mm		
Processor	400MHz 32-bit ARM 926EJ-S Core		
Serial FLASH	4 MBytes		
DDR2 SDRAM	128 MBytes		
Color TFT Display Controller	Available, Multilayer		
Graphics (font/controls)	Complete		
Image Decoder	BMP, GIF, JPG		
Native Networking Support	Ethernet/WiFi/PPP with SSL		
Programmable IOs	89		
PWM	4		
Analog Input	12		
UART (COM)	6		
SPI	2		
CAN	2		
12C	Available		
One-wire	Supported on all IOs		
USB Host	HID, Mass Storage, CDC, Webcam, Raw		
USB Client	HID, Mass Storage, CDC, Raw		
4bit SDHC/SD/MMC	Supported		
Real Time Clock	Available		
Piracy Protection	Available		
In-Field Update	Available		
Operating Temperature	-40° to +85°		
Lead Free RoHS Compliant	Yes		
	Yes		
Load native C/assembly	Runtime Loadable Procedures		
Power Consumption	98 mA		
Sleep/Hibernate	See on-line specifications		



LDR0	LDR1	Boot Access
Х	HIGH	Firmware (user code)
HIGH	LOW	TinyBooter
LOW	LOW	SAM-BA <sup>N2</sup>