

# Sophia Systems

## EJ-Debug JTAG Emulator

**Supported Microsoft Platforms:** Windows CE

**Supported Processors:** Marvell XScale PXA, ARM 7/9/11, Freescale i.MX, Fujitsu FRV, NEC VR, Renesas SH series and H8/H8S, Tensilica Xtensa, TI OMAP, Toshiba MeP.

EJ-Debug is an enhanced JTAG emulator designed to make the most of the advanced features of Sophia System's Watchpoint Debug Environment. Watchpoint is the evolutionary result of over 30 years of embedded systems development, so you get unparalleled JTAG target data access and testing capabilities.

Data is formatted for maximum information delivery. From labeling and showing bit status in special function registers to C level array modification, every window is packed with features to save time and simplify the debugging task.

Standard features include easy to make user scripts that execute from a button on the EJ-Debug pod. Just press the button to go to a known good start-up, return to a "sane" condition, or test and program FLASH. When debugging is done, scripts give the EJ-Debug a second life on the production line or in field maintenance.

Thumb® state code debugging is supported, and the EJ-Debug JTAG can also support ETM and ETB code execution trace.

Watchpoint® can plug to popular 3rd party IDE's including: Microsoft® WinCE5 and CE6, (Platform Builder), Intel® C++ Software Development Tool Suite Professional, TI® Code Composer Studio, and more. Thus linking the IDE and Watchpoint session provides enhanced synchronized

- OS bootloader or interrupt control debugging
- Source code view synchs to binary hardware status
- Capabilities such as memory test or trace that are not available in the IDE alone.

### FEATURES & BENEFITS

- ◆ Pocket sized, and USB bus powered so it goes anywhere
- ◆ High speed and accurate FLASH programming
- ◆ ETM and ETB Trace support
- ◆ Powerful and easy to use hardware integrated scripting
- ◆ Enhanced target control

### TECHNICAL SPECS

- ◆ Industry standard JTAG interface configurations
- ◆ Source code down to bit level debug display
- ◆ Unlimited software breakpoints
- ◆ Step source code calls, lines, or assembly



- ◆ View/Modify Memory in multiple formats in multiple windows
- ◆ Modify assembly code
- ◆ View & Modify Variables and Registers
- ◆ Reverse assembly display
- ◆ Mixed mode code display
- ◆ Watch window
- ◆ Local variable window
- ◆ FLASH – Test, Read, Write, Fill Clear - Hundreds supported- Supports Gcc, Intel C, Linux, embedded Windows, TI CC, and more

### DEVICE FOCUS

Professional embedded systems developers.

### VERTICAL MARKETS

Aerospace, Building/Home Automation, Consumer Electronics, Defense/Government, Education, Financial Services, Industrial Control/Automation, Internet Appliances, Manufacturing/Warehousing, Medical, Network Infrastructure, Office Automation, Retail, Telecom

### AVAILABILITY

Next day express delivery, FOB San Mateo Calif.

CONTACT INFORMATION	
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## Sandgate 3 - Marvell PXA320 Advanced Engineering Reference Kit

**Supported Microsoft Platforms:** Windows CE5 – CE6, Linux

**Supported Processors:** Marvell / Intel PXA320

Jump start your PXA320 project with the Sandgate 3 engineering reference. This is a full featured engineering platform with user accessible busses, test points, and I/O. That means faster and easier integration with prototype hardware. Application debugging kits can range from a basic PXA320 projects to WLAN enabled systems that include advanced Watchpoint enhanced JTAG debugging that can be C++ or WinCE session aware with additional software plug-ins.

You get more because of Sophia Systems' 30 years of quality and engineering expertise. It is ready to go out of the box, and that means that application development can move ahead while your prototype is being prepared. The Sandgate 3 comes with the full BOM, schematics, and lots of C source code. Board support packages are available for WinCE5, CE6, and Linux, and updates are made available regularly.

The Sandgate 3 comes with or without the optional WLAN module. It always includes IrDA, 15 programmable user buttons, USB 2.0 client, USB 1.1 host & client ports, 10/110 Base -T Ethernet port, SD/SDIO and CF slots. Audio CODEC, Microphone in, Headset and Stereo Line in and out, Left and Right Speaker jacks are provided. There are also Camera and Bluetooth interface headers, an IDE storage connector, and a touch screen LCD display.

Development ports include a CPLD, Compact FLASH, LCD connectors. Additionally, S-Video and Composite Video out connections, JTAG debug - FLASH programming ports, 9-pin RS232-C bootloader port and 120-pin PXA320 buss expansion connector.

Sophia Systems offers a suite Sandgate development platforms for PXA270, and a low voltage VoIP PXA310. All of our development products reflect an engineering team more than 30 years in the making. We have done it all and your project will benefit from that experience.

### FEATURES & BENEFITS

- ◆ Board Support Packages for WinCE 5.0 & 6.0 (source)
- ◆ PDF Schematics and full BOM Parts Lists included
- ◆ Includes a dependable & fast FLASH programmer
- ◆ Complete Solution Set developer kits are available that Include our Advanced JTAG ICE with Watchpoint Debug and WinCE or C++ session aware plug-in.



### TECHNICAL SPECS

- ◆ Marvell PXA320 CPU, 64 Megabyte NAND, 128 M-Byte SDRAM, IrDA I/O, RS-232-C I/O, USB 2.0 client, USB Host/Client, SD/SDIO slot, CF slot, IDE/USB host controller, 10/100 Base-T Ethernet port, WLAN 802.11 a/b/g option, 15 programmable keys, 640 x 480 LCD Touch panel display, Composite/S-video in/out connector, Power Management IC, Audio CODEC, Stereo headset jack, Stereo Audio I/O Jack, Microphone connector, Left & Right Speaker connectors, Camera I/F Header, Bluetooth I/F Header, 120-Pin Bus Expansion Connector, JTAG FLASH programming/debug port.

### DEVICE FOCUS

Professional embedded systems developers.

### VERTICAL MARKETS

Aerospace, Building/Home Automation, Consumer Electronics, Defense/Government, Education, Financial Services, Industrial Control/Automation, Internet Appliances, Manufacturing/Warehousing, Medical, Network Infrastructure, Office Automation, Retail, Telco

### AVAILABILITY

Next day express delivery, FOB San Mateo Calif.

### CONTACT INFORMATION



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# Sophia Systems

## Sandgate 3-P - Marvell PXA310 Advanced Engineering Reference Kit

**Supported Microsoft Platforms:** Windows CE

**Other:** Linux

**Supported Processors:** Marvell / Intel PXA310

Accelerate your PXA310 project with the Sandgate 3-P engineering reference. This is a full featured engineering platform with user accessible busses, test points, and I/O and external hardware interface for faster and easier integration with prototype hardware. You get more because of Sophia Systems' 30 years of quality and engineering expertise. It is ready to go out of the box, and that means that application development can move ahead while your prototype is being prepared.

Application debugging kits can range from a basic PXA310 projects to advanced Watchpoint enhanced JTAG debugging that can be C++ or WinCE session aware with additional software plug-ins.

The Sandgate 3-P comes with the full BOM, schematics, and lots of C source code. Board support packages are available for WinCE6 and Linux, and updates are made available regularly.

The Sandgate 3-P includes 624MHz PXA310, 256MB NAND, 128MB DDR SDRAM, 2.2" QVGA LCD, USB OTG Client, micro SD/SDIO slot, IrDA, Audio CODEC, Sound Gen, Microphone, Stereo speakers, Headset jack, Wilcom SIM slot, both Murata 802.11b/g WiFi & Bluetooth modules, 23 Key pad, Camera, 3 Axis Accelerometer, Magnetic field sensor, vibrator, and expansion board interface. The included Expansion Board hosts a 20 Pin JTAG port, Ethernet RJ-45 port, RS-232 bootloader serial connector, CPLD Writer port, Analog VGA out, and expansion connector.

### FEATURES & BENEFITS

- ◆ PDF Schematics and full BOM Parts Lists included
- ◆ Board Support Packages for Linux, WinCE6
- ◆ User accessible hardware layout
- ◆ Complete Solution Set developer kits are available
- ◆ World wide support

### TECHNICAL SPECS

- ◆ PXA310 VF-BGA 416-Ball, 642MHz MCP
- ◆ NAND 256MB - DDR SDRAM 128MB
- ◆ Detachable Handset
- ◆ Power Management
- ◆ User Expansion Port



### DEVICE FOCUS

Professional embedded systems developers.

### VERTICAL MARKETS

Aerospace, Consumer Electronics, Defense/Government, Industrial Control/Automation, Internet Appliances, Office Automation, Telecommunications

### AVAILABILITY

Two weeks on receipt of order

### CONTACT INFORMATION

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