JTAG emulator
PALMiCE3 ARM (JTAG200)

PALMiCE3 ARM is a JTAG emulator that supports a range of ARM cores including ARM7/9/11 and Cortex. It supports USB2.0 (High-speed) as the host interface. Yet, the Vbus, which requires no power supply, is also supported in PALMiCE3 as the feature was well received in PALMiCE2. PALMiCE3 has a palm-sized, light and compact body, providing excellent portability to support you with debugging. To the target system, it is to be connected with 20-pin MIL connector cable. Also, in support of CoreSight technology, PALMiCE3 ARM allows SWD (Serial Wire Debug) interface connection by 2 signal lines. Furthermore, it supports SWV (Serial Wire Viewer) by 1 signal line. Besides being capable of variable and exception information referencing without break during execution, with time stamp feature, it can measure relative time between informations, which will allow further improvement in debugging efficiency. As for the debugger, it surely incorporates CSIDE, which provides a user-friendly debugging environment. CSIDE supports not only high-level language debugging of a range of C languages but also fully prepared for the debugging of a range of RTOSs with optional debug libraries.

- ■ **Supports CoreSight technology (SWD, SWV)**
- ■ **Supports on-chip/external flash memory debugging**
- ■ **Undo Trace into feature**
- ■ **Requires no power supply with VBus support**
- ■ **A palm-sized, compact body**
- ■ **Allows break by external signals (Optional)**

- ■ **Supports multi-core debugging**
- ■ **CPU break feature**
- ■ **Supports Sleep mode**
- ■ **Supports USB2.0(High-speed), allowing high-speed processing**
- ■ **Wide range target voltage support (1.0V - 5.5V) and voltage measurement feature**
- ■ **Supports debugging of a range of RTOSs (Optional)**

Main specifications

Supported CPU cores		ARM7Core(ARM7TDMI, ARM7TDMI-S, ARM720T, ARM7TDMI(Rev4), ARM720T(Rev4)) ARM9Core（ARM920T, ARM946E-S, ARM966E-S, ARM922T, ARM925T, ARM926EJ-S） ARM11Core(ARM1136J(F)-S,ARM1156T2(F)-S,ARM1176JZ(F)-S,ARM11 MPCore) CortexCore（Cortex-A8,Cortex-A9,Cortex-A9 MPCore,Cortex-M3） FA526[*1],FA626TE[*1]
Target interface	Voltage	1.0V~5.5V[*3] (Automatically follows target)
	Current consumption	50µA or lower
	Voltage measurement	Measures by sampling and shows the results. Accuracy: 50mV and precision showing 2 decimal places.
	Connector	20-pin MIL connector, 20cm cable
JTAG clock		Can be set freely within a range between 1KHz and 40MHz.　Supports automatic adaptation with RTCK.
Operating mode		ARM/Thumb/Thumb2/ThumbEE mode support, Sleep mode support (Only when RTCK is used.)
Register, memory operation	ARM7/9/11	Supports referencing/editing of register and memory and downloading to memory during break.
	Cortex-A8/A9/M3	Supports referencing/editing of register and memory and downloading to memory during break. For A8/A9, PALMiCE3 ARM supports referencing/editing of physical memory from I/O operation dialog box during execution. For M3, PALMiCE3 ARM supports referencing/editing of memory during execution.
Flash memory support		In addition to downloading, it also supports software break settings and ordinary memory rewriting feature. Also, new device can be added easily with definition file format.
Software break feature		Supports up to 256 points with instruction replacement method.
CPU break feature	ARM7/9	2points. Note that 1 point only can be specified when software breakpoints are set (Only ARM926EJ-S accepts 2 points).
	ARM11	8 points (Address matching break: 6 points; Data matching break: 2 points)
	Cortex-M3	10 points (Address matching break: 6 points; Data access break: 4 points)
	Cortex-A8/A9	8 points (Address matching break: 6 points; Data matching break: 2 points)
	FA526/FA626TE	2points. Note that 1 point only can be specified when software breakpoints are set (Only FA626TE accepts 2 points).
Execution time measurement		Measures execution time of the user program　(64-bit counter, measurement unit=1mS)
SWV feature (Cortex-M3)		Real-time data watch: 4 points
		CPU cycle measurement(Instruction cycle, PC, exception cycle, etc.)
		Execution time measurement between the specified access addresses
		Simple profiler feature that shows by-function execution rate.
		Easy Printf debugging (Allows easy output of string from the user program to the debugger.)
		Exception information transition viewing functionality
		Relative time measurement between SWV information outputs (Allows measurement of gap between Printf executions, etc.)
Multi-core debugging		Allows control of up to 8 daisy chained ARM7/9/11 CPUs at maximum. Supports synchronized execution and synchronized break.
Debugger included as standard		CSIDE for PALMiCE3 ARM-E
Support System		Yes

*1 : Requires the optional software.
*2 : Applicable to hardware revisions 0-A onward. In the case of hardware revision 0-0, it supports 1.0V - 3.6V.

Main specifications

<table>
<tr><td rowspan="9">General specifications</td><td colspan="2">Power specification</td><td colspan="5">DC+5V 250mA (Vbus support for USB)</td></tr>
<tr><td colspan="2">Outside dimensions</td><td colspan="5">95mm(W) ×70mm (D) ×21mm (H)</td></tr>
<tr><td colspan="2">Host I/F</td><td colspan="5">USB mini-B connector</td></tr>
<tr><td colspan="2" rowspan="2">Supported host computer</td><td colspan="5">DOS/V compatibles equipped with USB2.0 interface</td></tr>
<tr><td colspan="5">(Windows 2000 (Service Pack 4 onward) / Windows XP (Service Pack 1 onward) / Windows Vista / Windows 7)</td></tr>
<tr><td rowspan="4">Recommended operating environment</td><td>CPU</td><td colspan="5">Core2Duo equivalent or higher</td></tr>
<tr><td>Installed memory</td><td colspan="5">2048MBytes or larger</td></tr>
<tr><td>Hard disk</td><td colspan="5">Requires free space of 150MBytes or more</td></tr>
<tr><td>Supported USB</td><td colspan="5">USB2.0</td></tr>
<tr><td colspan="3">Product composition contents</td><td colspan="5">PALMiCE3 JTAG200 model main unit set / 2m USB cable / dedicated debugger (CD-ROM)</td></tr>
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Supported languages, supported RTOSs, and Supported Linux

Supported CPUs		ARM7/9 FA526/FA626TE	ARM11 (MPCore)	Cortex-A8	Cortex-M3	Cortex-A9 (MPCore)
Supported C compiler	ARM Compiler for Computex	○	---	---	○	---
	ARM ADS/MDK/RVCT	○	○	○	○	○
	CCS	○	---	○	○	---
	GNU C	○	○	○	○	○
	GreenHills C	○	---	---	---	---
	EW	○	○	○	○	○
Supported RTOSs (Optional)	μC3	○	---	---	○	---
	NORTi	○	---	---	---	---
	TOPPERS	○	---	---	○	---
	TOPPERS/FMP	---	○	---	---	○
	T-Kernel	○	---	---	---	---
	T-Kernel/SE	○	---	---	---	---
	OSE	○	---	---	---	---
Supported embedded Linux (Optional)	MontaVista Linux	○	○	○	---	---

For details on respective versions, please contact us.
--- : The support by PALMiCE3 ARM has not been verified.

Optional software

Product name	Contents
uITRON-DBGLIB-ARM/P3-E *1	Debug library specifically for uITRON. It allows to display Status Window, Task Trace Window, etc.
TOPPERS-DBGLIB-ARM/P3-E *1	Debug library specifically for TOPPERS. It allows to display Status Window, Task Trace Window, etc.
TOPPERS/FMP-DBGLIB-ARM/P3-E *1	Debug library specifically for TOPPERS/FMP. It allows to display Status Window, Task Trace Window, etc.
OSE-DBGLIB-ARM/P3-E *1	Debug library specifically for OSE. It allows to display Status Window, Task Trace Window, etc.
Linux-APDLIB-ARM/P3-E *1	Debug library specifically for Linux. It supports debugging of loadable module and application.
T-Kernel-DBGLIB-ARM/P3-E *1	Debug library specifically for T-Kernel. It allows to display Status Window, Task Trace Window, etc.
T-Kernel/SE-DBGLIB-ARM/P3-E *1	Debug library specifically for T-Kernel/Standard Extension. It supports debugging of load module and application.
ETBLIB-ARM/P3-E	ETB-enabled library for ARM9, ARM11, and Cortex series cores.
OMAP35x-CPULIB-ARM/P3-E	Library for Texas Instruments-made OMAP3503. It allows CPU debugging.
FARADAY-CPULIB-ARM/P3-E	Library for Faraday Technology-made FA526 and FA626TE core debugging.

*1: For details on supported RTOSs and supported Linux, please contact us.

Optional hardware

Product name	Contents
ADP 20P-14P	Adapter for conversion from 20-pin connector into 14-pin connector
ADP JTAG20-ETM-E	Adapter for conversion from 20-pin connector into 38-pin connector
ADP ARM-TI-E	Adapter for conversion from 20-pin connector into TI-customized 14-pin connector
SWJ-PRB-MIL20-20HP-E	Probe with SWJ-DP *1 by CoreSight. It allows connection to 20-pin (half-pitch 1.27mm) connector on the target.
SWJ-PRB-MIL20-10HP-E	Probe with SWJ-DP *1 by CoreSight. It allows connection to 10-pin (half-pitch 1.27mm) connector on the target.
PALMiCE interlocking cable-E	Cable for synchronization of Go/Break of the CPU by multiple PALMiCE3 units.
PALMiCE2H HSS-EXT interlocking cable-E	Cable for synchronization of Go/Break of the CPU by PALMiCE3 and PALMiCE2H (JTAG201).
EXTPRB1	Cable for CPU break by input of external signal of your choice.

*1: Serial Wire JTAG Debug Port

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<Send inquiries to: >

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