

TMPR4955 • TMPR4956 • TMPR4927 • TMPR4923 • R4901

- Scalable from JTAG/JTAG+eJTAG to full ICE
- 32/64 bit MPU Support
- Up to 200MHz Bus Speed
- Powerful Measurement Capabilities
- High Speed Emulation Memory to 64 MB
- USB/100-BT Host interface
- Sophisticated C/C++ Source Debugger

YDC introduces the brand-new advicePLUS, offering a highly integrated architecture, scalable from basic the JTAG/JTAG+eJTAG tool up to the full featured emulator. advicePLUS fits your every development need at a very affordable starting price.

By utilizing the External Bus Trace unit in addition to eJTAG, advicePLUS allows processor activity to be seen and analyzed in much greater detail, with YDC's easy-to-use yet powerful debugger, microVIEW-PLUS.

Base System Features

- Main System Unit Provides system control and Host interface.
- Optional:
 - High Performance Measurement Unit.
 - External Bus Coverage Unit (32/64 MB)
 - Emulation Memory Unit (4/8/16/32/64 MB)

MPU Specific Unit

Any combination of JTAG unit, eJTAG unit, External Bus Trace Unit and Full Emulation Unit.

- Optional:
 - Sub Board Block Unit for derivative processor support (Full Emulation Unit)
 - High Performance Coverage Unit.

- External Bus Trace Unit
- External Input unit.
- Event Output Unit
- eJTAG Trace Unit.



Key Features & Specifications

- Supports JTAG, eJTAG, External BUS Trace and full featured emulation.
- Features new **microVIEW-PLUS** with full support for various C, C++ and ASM combinations.
- **RTOS Awareness:** Major RTOSs are also supported with 16 powerful event points and extra-deep system call trace 4M samples.
- **Compilers:** Supports GreenHills, GNU and other major C/C++ compilers
- Up to 32 bit and 64 bit microprocessor support
- 200 MHz External BUS/eJTAG support
- 32K Deep trace with 20 ns time-stamping
- Data Logging: 7M samples at 3 usec resolution
- Measurement:
 - Coverage: 32/64 MB space
 - Performance: up to 4 day period Profiler
- Emulation Memory: 8,16,32 or 64 MB.
- Breakpoints: 1024 points with counter
- Events: 16 points with counter
- State Machine: up to 16 states
- Host Interface: 100 BASE-T,USB
- RAM Monitor: 32 points with 0.5 sec resolution

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TX49/H2

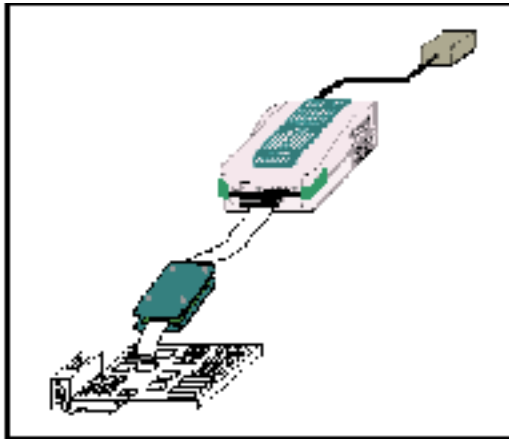
■ Specifications

Target Processor	TMPR4955/TMPR4956/TMPR4927/TMPR4923/R4901
Operation Voltage	Internal: 2.5V±5% External: 3.3V±5%
Maximum Clock	fmax = 200MHz
Memory Space	Released for User System
Interrupts	Released for User System
Target System I/F	JTAG – External JTAG Connector External -- 120 pin Bus Interface Connector
Emulation Memory	4M/8M/16MB Via Interface Connector
Hardware Breakpoint	1 Point (Event Break with On-chip Debug Resource) Forced Break Single Stepping
Software Breakpoints	1024 Points (1 Countable) Using Instruction Swapping
Trace	PC Trace External Bus Trace 32K Samples
Event	Event Standard (EJTAG) 3 Points (Address: 16/Address Range:8/Data Range:8) Trigger: 2 Points Trigger Condition: Address Match/Unmatch/Range/Out of Range Data Access (R/W/RW) Event Break: 2 Points External Bus Trace 15 Points (Max.) (6 Points are available for data specification) Trigger: 15 Points (Max.) Trigger Condition: Address Match/Unmatch/Range/Out of Range Don't care Data Access (R/W/RW)
Profiler	TBD
Compilers Supported	GHS TX49 ELF/DWARF2 (CV1502), MIPSIII C Compiler DIAB-SDS MIPS(TX49) ELF/DWALF2 (CV876) RedHat GNUpro TX49 ELF/DWALF2 (CV712)
Flash Memory Programming	Planned
Supported Host OS	Microsoft Windows 98, Me, XP, NT4.0, 2000 (Windows95 is not supported)
Emulation Memory Access Time	80 ns
Emulation Bus Width	8/16/32bit
Memory Attribute	ROM/RAM

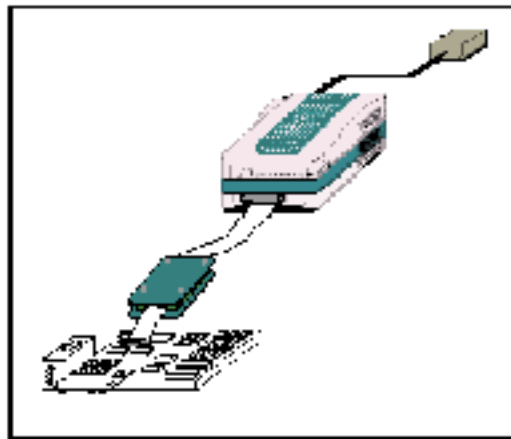
■ System Configuration

YT600-STD	Main Unit, Communication Module, AC Adapter POD Probe Module JTAG Probe
YT600-JPT	E-JTAG Trace
YT600-EM004 EM008 EM016	4MB ROM Emulation + EM Adapter for TX49 + Cable 8MB ROM Emulation + EM Adapter for TX49 + Cable 16MB ROM Emulation + EM Adapter for TX49 + Cable
YT600-EXB	External Bus Trace + Sys AD Bus Capture Probe

1. JTAG System (Without PC Trace)



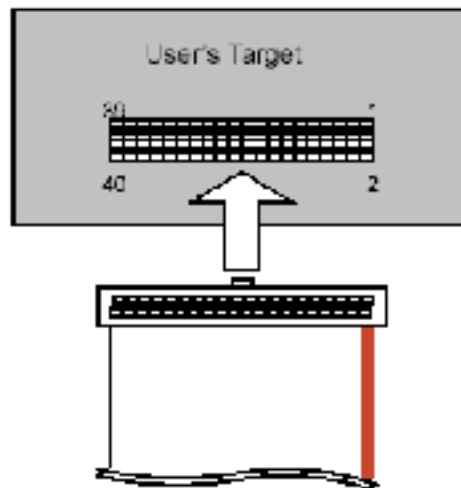
2. E-JTAG System (With PC Trace)



Target Connection

JTAG Probe	Package	40 Pin (20 X 2 / 1.27mm)
	Socket	SAMTEC's FTSH-120-01-L-D-EJ-K (Through Hole) or FTSH-120-01-L-DV-EJ-K (Surface Socket Mount)

Top View: JTAG Connector on the User Target

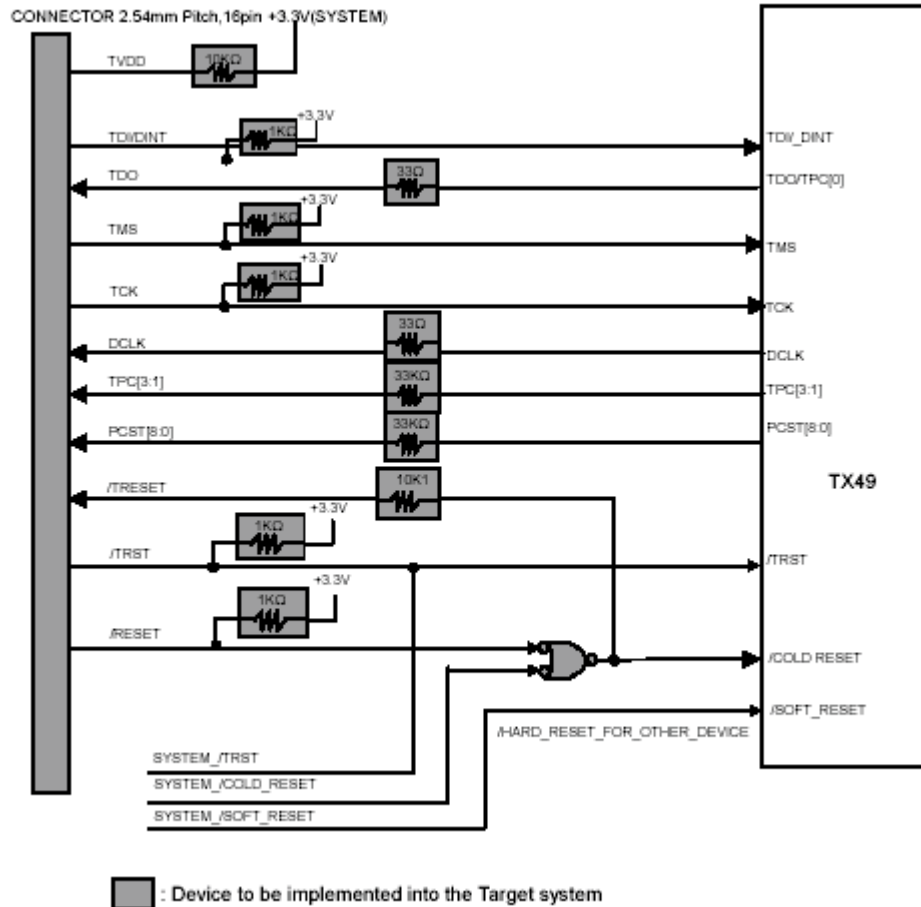


■ **JTAG Probe Pin Assignment**

PIN	Signal	Target Input/Output	Target Termination
1	/TRST	INPUT	1K Pull-up resistor
2	TVDD	OUTPUT	10K Series resistor
3	TDI/DINT	INPUT	1K Pull-up resistor
4	GND		
5	TDO	OUTPUT	33 Series resistor
6	GND		
7	TMS	INPUT	1K Pull-up resistor
8	GND		
9	TCK	INPUT	1K Pull-up resistor
10 --	GND		
11	DEBUG-BOOT INPUT	1K Pull-up resistor	
12	/TRESET	OUTPUT	10K Series resistor
13	/RESET	INPUT	1K Pull-up resistor
14 --	GND		
15	PCST0	OUTPUT	33 Series resistor
16 --	GND		
17	PCST1	OUTPUT	33 Series resistor
18 --	GND		
19	PCST2	OUTPUT	33 Series resistor
20 --	GND		
21	PCST3	OUTPUT	33 Series resistor
22 --	GND		
23	PCST4	OUTPUT	33 Series resistor
24 --	GND		
25	DCLK	OUTPUT	33 Series resistor
26 --	GND		
27	PCST5	OUTPUT	33 Series resistor
28 --	GND		
29	PCST6	OUTPUT	33 Series resistor
30 --	GND		
31	PCST7	OUTPUT	33 Series resistor
32 --	GND		
33	PCST8	OUTPUT	33 Series resistor
34 --	GND		
35	TPC1	OUTPUT	33 Series resistor
36 --	GND		
37	TPC2	OUTPUT	33 Series resistor
38 --	GND		
39	TPC3	OUTPUT	33 Series resistor
40 --	GND		

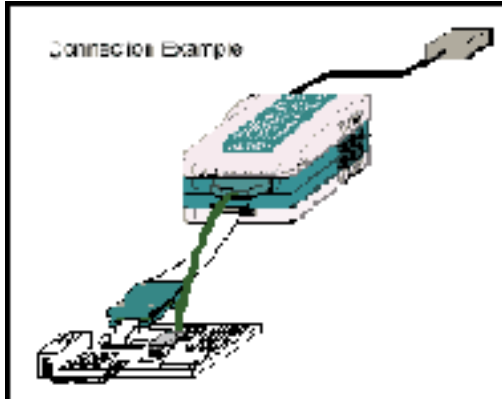
Input/Output direction as viewed from the target

■ JTAG Probe Interface Circuit



- TVDD(2 Pin) and _TRESET(12 Pin) must be treated as above shown.
- _TRST(1 Pin) Buffer type should be open-collector.
- _RESET(13 Pin) Buffer type should be standard buffer output.
- OR-LOGIC between RESET(ICE) and SYSTEM_/COLD_RESET is required.

3. ROM Emulation Unit (Optional)



Rom Emulator Cable	Connector	JAE WR-120SB-VF-1 (Plug)
	Socket	JAE WR-120PB-VF-1 (Receptor)

Pin Assignment

No.	Pin	No.	Pin	No.	Pin	No.	Pin
1	TVCC	31	A22	61	TVCC	91	GND
2	TVCC	32	A23	62	TVCC	92	GND
3	TVCC	33	A24	63	D12	93	/WRLH
4	TVCC	34	A25	64	D13	94	/WRHH
5	A2	35	A26	65	D14	95	/EMCS0_IN
6	A3	36	A27	66	D15	96	/EMCS1_IN
7	A4	37	A28	67	D16	97	Reserve
8	A5	38	A29	68	D17	98	Reserve
9	GND	39	GND	69	D18	99	/EMCS0_OUT
10	GND	40	GND	70	D19	100	/EMCS1_OUT
11	A6	41	A30	71	GND	101	GND
12	A7	42	A31	72	GND	102	GND
13	A8	43	A0	73	D20	103	Reserve
14	A9	44	A1	74	D21	104	Reserve
15	A10	45	D0	75	D22	105	Reserve
16	A11	46	D1	76	D23	106	Reserve
17	A12	47	D2	77	D24	107	Reserve
18	A13	48	D3	78	D25	108	Reserve
19	GND	49	GND	79	D26	109	Reserve
20	GND	50	GND	80	D27	110	Reserve
21	A14	51	D4	81	GND	111	GND
22	A15	52	D5	82	GND	112	GND
23	A16	53	D6	83	D28	113	Reserve
24	A17	54	D7	84	D29	114	Reserve
25	A18	55	D8	85	D30	115	Reserve
26	A19	56	D9	86	D31	116	Reserve
27	A20	57	D10	87	RD/WR	117	Reserve
28	A21	58	D11	88	/OE	118	Reserve
29	GND	59	TVCC	89	/WRLH	119	GND
30	GND	60	TVCC	90	/WRLH	120	GND

Reserved signal should be NC.
Not used signal should be NC.

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