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Agilent Technologies

# HP 64794A/B/C/D Selectable Trace Depth Emulation Bus Analyzer

**Powerful tracing and triggering, plus a deep trace buffer, makes debugging easier**

## Technical Data

### Description

The HP 64794A/B/C/D Emulation Bus Analyzers offer user selectable trace buffer depths of 8K, 16K, 64K, or 256K so that you can capture the amount of data needed to fit your application. These analyzers have the triggering, sequencing, and qualification features necessary to provide real-time, transparent measurements common in embedded systems. Additionally, you can precisely position your measurement deep within complex embedded code and then capture in real-time, large quantities of data around the specified event.

The extensive analysis features, combined with the emulator's dual bus architecture, allow measurement and display without breaking processor execution or inserting wait states. You can also interactively view measurement data without breaking processor execution or stopping the measurement.

Label:	Address	Opcode or Status w/ Source Lines	time count
+262130	timorexec+0000C8	FFFC	568 nS
+262131	timorexec+0000CA	3428	528 nS
+262132	timorexec+0000CC	0004	1.92 uS
+262133	timorexec+0000CE	8242	548 nS
+262134	timorexec+0000D0	FFFF	1.88 uS
+262135	timorexec+0000D2	3082	548 nS
+262136	timorexec+0000D4	8248	568 nS
+262137	timorexec+0000D6	8208	528 nS
+262138	timorexec+0000D8	6788	568 nS
+262139	timorexec+0000DA	8842	568 nS

### Features

- Selectable trace depth gives you the flexibility to choose the configuration for your application.
- Measurements include address, data, and status buses plus time and state count for compatible HP 16- and 32-bit emulators.
- Eight full width hardware resources can be combined in sequential trace specifications using "find A followed by B..." constructs up to 8 levels deep.
- 32-bit range comparators can be combined with any of the 8 hardware resources at any level to specify exclusive areas for triggering or data capture.
- Precise time tagging of events helps locate discrepancies in execution times. State and time counts are supported over the entire memory depth.
- Prestore state can show an event occurring sometime before each stored event. You can observe which of several different functions is accessing a variable and corrupting it.
- Receives and drives trigger signals to/from other HP 64700 series emulators/analyzers, logic analyzers or oscilloscopes.

## Specifications

### Compatibility

The HP 64794 series emulation bus analyzers are compatible with HP 64700 series emulators for the following processors:

**Motorola:** 68000, 68EC000, 68HC000, 68HC001 (HP 64744A);  
68020/EC020 (HP 64748B); 68030/EC030 (HP 64747B);  
68040/EC040/LC040 (HP 64783A); 68302 (HP 64746G/J);  
68331/332 (HP 64749G/H/J); 68340 (HP 64751A)

**Intel:** 8086/C86 (HP 64762G/H); 8088/C88 (HP 64763G); 80186/188,  
80C186/C188, 80C186EA/C188EA, 80C186XL/C188XL (HP 64767A);  
80C186EB/C188EB (HP 64767B)

### Characteristics

**Trace depth:**

HP 64794A	8K
HP 64794B	16K
HP 64794C	64K
HP 64794D	256K

**Channels:** 128 including 80 to monitor address, data, and status plus 48 for time/state count analysis and display.

**Time tag:** Resolution: 20 ns  
Maximum time count: 22.9 minutes at full resolution

**State count:** Maximum count at full resolution:  $68 \times 10^6$

**Sequence terms:** 8

**Maximum occurrence count:** 65535

**Prestore states:** 1

**Range recognizers:** 1

**Pattern recognition:** 8 patterns over 80 channels (address, data, and status).

## Ordering Information

### Selectable trace depth emulation bus analyzer

Model	Description
64794A	with 8K trace memory
64794B	with 16K trace memory
64794C	with 64K trace memory
64794D	with 256K trace memory

### High speed memory modules

*The 8k deep emulation bus analyzer may be configured to the desired trace depth with additional memory modules*

Model	Description
64172A	256K Byte high speed memory module for 64K trace buffer
64172B	1M Byte high speed memory module for 256K trace buffer
64172C	64K Byte high speed memory module for 16K trace buffer

*These memory modules plug into existing connectors on the analyzer board. Four modules are required for 80 channels of address, data, and status as well as 48 channels for time/state count analysis and display.*

**For more information, call your local HP sales office listed in your telephone directory or an HP regional office listed below for the location of your nearest sales office.**

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