

TLA Family Upgrade Guide

TLA600 and TLA700 Series



What's New for the TLA Family

▶ **NEW TLA7Axx Logic Analyzer Modules for the TLA700 Series** – Six new TLA700 Series logic analyzer modules that for the first time in a logic analyzer provide complete system visibility including simultaneous 8 GHz timing, up to 800 MHz state and 2 GHz analog, with up to 256 Mb memory depth per channel, all through a single low-capacitance, connectorless probing system. Widths of 34, 68, 102 and 136 channels are available.

- **8 GHz MagniVu™ Timing** acquisition on all channels with 16 Kb memory depth per channel. Additional capabilities include adjustable sample rate (125 ps to 1 ns), movable trigger position and a separate MagniVu trigger action that can be triggered independent of the main module trigger.
- **2 GHz Deep Timing** acquisition with up to 256 Mb memory depth on quarter-channels to capture elusive digital signal timing problems over long time spans. 1 GHz deep timing is available on half-channels and 500 MHz deep timing is provided on all channels.
- **120 to 800 MHz State** acquisition that enables tracing data flow and program execution of processors and buses. Three state acquisition speeds are available: 120 MHz (standard), 235 MHz (optional) and 450 MHz (optional) to fit a wide range of processor and bus applications. A comprehensive set of clocking capabilities provide the means to work with virtually any processor or bus including double-data rate support (120 MHz/240 Mb/s, 235 MHz/470 Mb/s and 450 MHz/900 Mb/s) as well as support for high-speed data rates

(625 MHz/1,250 Mb/s). Plus, advanced support is provided for source-synchronous buses to simplify setup and acquisition.

- **Fast, Easy, Yet Powerful Triggering** which features a trigger state machine that operates at a 2 ns rate with a rich set of trigger resources including 16 states, 16 words/4 range recognizers, two 51-bit counter/timers and 16 transition (edge) recognizers. A key benefit of the MagniVu acquisition technology is that it provides a 500 ps minimum glitch recognition and a 250 ps minimum setup/hold violation both with 125 ps adjustment resolution. Triggering enhancements include a decrement counter function, a Force Prefill function (used to ensure that memory is filled before looking for the trigger) and a Snapshot Recognizer (when a specified word is matched in Event A, a snapshot is taken of all input channels and triggers when a sample is found that matches the defined snapshot data in Event B). In the External 2x/4x modes, events up to the maximum data rate of 1.25 Gb/s can be used for triggering.
- **128 Kb to 64 Mb Memory Depth** enables triggering on the symptom of a problem and capturing the cause when widely separated in time. Memory depth configurations of 128 Kb, 512 Kb, 2 Mb, 8 Mb, 32 Mb and 64 Mb are available. All modules can trade channels for memory depth for up to 256 Mb memory depth on quarter-channels (using the 64 Mb module).

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- **2 GHz Analog Multiplexer** routes the analog signal of any 4 logic analyzer channels to either an internal TLA7Dx/Ex oscilloscope module or an external TDS oscilloscope avoiding the need to double-probe signals. Using iView, data from an external TDS oscilloscope can be correlated on the TLA display to quickly track down elusive digital signal quality problems.

- **Low-Capacitance, Full Differential, Connectorless, Active Probing System** combines analog and digital measurements through a single probe connection, providing immediate analog measurement access to all digital signals. Both high-density and general-purpose probes are available and feature an ultra-low 0.7 pF total probe input capacitance. Both single-ended and differential logic signals are supported:

- P6860 34 ch, high-density compression probe with support for single-ended/differential clocks and single-ended data.
- P6880 34 ch, high-density compression probe with support for single-ended/differential clocks and single-ended/differential data – no trade-off in channels.
- P6810 34 ch, general-purpose probe with support for single-ended/differential clocks and single-ended/differential data – no trade-off in channels.

The P6860/80 probes utilize a connectorless interface that uses a compression contact (Z-axis elastomer) which is mechanically reliable and minimizes impact on board layout and design. Adapters enable compatibility between the new P6860/80 probes and existing Mictor connectors. It also enables the new TLA7Axx logic analyzer module to be used with the Mictor probing interface designed into existing products – no need to redesign.

The P6810 general-purpose probe connects to a wide variety of probing accessories with either 2 mm or 0.100" pin spacing. A full complement of leadsets are standard, including two 1 channel leadsets for the clock/qualifier channels along with four each of a differential leadset and single-ended leadset. A full complement of 40 SMT KlipChips is also provided for quick connection to a variety of IC pins and connectors.

Each probe is a smart probe that once calibrated (either at the factory or by the user using the TLACAL2 fixture below) maintains their own individual calibration constants (deskew, input resistance and gain/offset) in the probe's internal NVRAM. When plugged into the NEW TLA7Axx logic analyzer module, the probe calibration constants are loaded and used to provide more accurate measurements giving the user confidence in their results.

- **5-Way Module Merging** increases the maximum channel count to 680 channels on a single timebase with no tradeoff in performance, thereby allowing the TLA7Axx to be used with the widest processors and buses.
- **Calibration Fixture (TLACAL2)** provides users with the tools to keep their NEW TLA7Axx logic analyzer module operating at maximum performance for the most accurate

measurements. The TLACAL2 calibration fixture provides performance verification and adjustment procedures including traceable calibration.

The TLA7Axx logic analyzer modules require Version 4.2 of the TLA Application Software.

- ▶ **NEW CD-RW Drive for TLA60x/61x/62x Instruments and TLA715/TLA721 Mainframes** – All new TLA60x/61x/62x and TLA715/721 mainframes now come standard with a CD-RW drive which allows you to backup and transport your large setup and data files. The CD-RW is an EIDE drive with 8x write, 8x rewrite and 32x read speeds and comes with Click'N Burn Pro CD recording software (www.clicknburn.com). The same CD-RW drive is also available for current TLA60x/61x/62x and TLA714/715/720/721 mainframes with TLA6UP and TLA7UP kits respectively. Requires Version 4.2 of the TLA Application Software.
- ▶ **10/100 Mb LAN Standard on All TLA715/TLA721 Mainframes** – All new TLA715/721 mainframes now come standard with a 10/100 Mb LAN Cardbus32/PCMCIA card.
- ▶ **iView (Integrated View) of Your TDS Data on Your TLA Display** – iView has now been enhanced to include support for the TDS3000/3000B, TDS5000, TDS6000, TDS7000, CSA7000, TDS600C and TDS700C/D Series of oscilloscopes. iView is used to correlate data from a wide range of TDS oscilloscopes to data on a TLA600/700 to quickly track down elusive digital signal integrity problems. Access the highest performance Tektronix oscilloscopes with capabilities of up to 6 GHz bandwidth, 20 GS/s sample rate and up to 32 Mb depth per channel to solve your toughest signal integrity problems. Available in Version 4.2 of the TLA Application Software.
- ▶ **EasyTrigger** – EasyTrigger has now been enhanced to include support for the TLA7Axx logic analyzer module and its new triggering capabilities. Examples include snapshot recognizer, demux 2x/4x, decrement counter, 16 transition (edge) recognizers and independent MagniVu trigger. Simplify trigger setups on your TLA600/700 logic analyzer by choosing one from among the many predefined trigger programs. Each one comes with a graphic depicting the signal conditions necessary for a trigger in addition to a textual description. You can view and even build upon the underlying trigger programming of each EasyTrigger by switching to the classic PowerTrigger programming view. Available in Version 4.2 of the TLA Application Software.
- ▶ **Version 4.2 TLA Application Software** – Newest version of TLA600/700 application software that has been enhanced to support the TLA7Axx logic analyzer modules and requires Windows 2000 Professional (Windows 2000 Service Pack 2 is now standard). Your existing TLA60x/61x/62x or TLA714/721 can easily be upgraded to Version 4.2 with the appropriate TLA6UP and TLA7UP Field Upgrade Kits. All existing TLA setup and data files are fully forward-compatible with Version 4.2 TLA application software, eliminating time spent recreating and debugging setups. Version 1.3 of the PatGen Application Software and PatGenVu are also included.

▶ Current TLA Mainframe Capabilities

The table below reflects the latest TLA mainframe capabilities:

Characteristic	TLA60x/61x/62x	TLA715	TLA721
CPU Type	Celeron	Pentium III	Pentium III
Chipset	i810	i815E	i815E
DRAM	256 MB Standard 512 MB Optional	256 MB Standard 512 MB Optional	512 MB Standard
Hard Disk	10 GB Fixed Standard 30 GB Fixed Optional	10 GB Replaceable Standard 30 GB Replaceable Optional	30 GB Replaceable Standard
Second Hard Disk Available	No	Yes – 30 GB Fixed Optional	Yes – 30 GB Fixed Optional
Internal Display Resolution	800x600 (TLA61X/62X only; TLA60X requires external display)	800x600	None – requires external display
External Display Resolution	1280x1024	1600x1200 with 2 outputs	1600x1200 with 2 outputs
CD-RW	Yes – Internal	Yes – Internal	Yes – Internal
PC Card Support	32-bit PC Card Two Type II/One Type III	32-bit PC Card Two Type II/One Type III	32-bit PC Card Two Type II/One Type III
USB Ports	One	Two	Two

Breakthrough Real-time Digital Systems Analysis

Digital design teams need real-time digital systems analysis tools to debug, verify and optimize their target system's operation. The TLA family of logic analyzers provide these teams with a wide range of real-time digital systems analysis tools to monitor, capture and analyze those elusive real-time problems that threaten product development schedules. By capturing and correlating the hardware and software operation, the design team can quickly identify the source of hardware and software problems.

The application needs of digital design teams vary considerably and the TLA logic analyzers address these varying needs by allowing you to tailor it to meet your specific application. As your needs change, however, you often need new measurement capability which can often be satisfied by simply upgrading your current TLA logic analyzer.

Protect Your Investment By Moving Forward with Tektronix

Tektronix is committed to continually introducing new mainframe capabilities, new instrument modules and software features for the TLA family of logic analyzers. Before we discuss the upgrades available for the TLA family, let's get an overview of the current TLA mainframe capabilities and the current TLA software versions.

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▶ TLA600 and TLA700 Series

▶ Current TLA Software Versions

The table below reflects the latest software version numbers for each of the TLA application software components:

TLA Software Component	TLA Application Software Release
TLA Application SW	4
TLA Application	4.2.098
TLA7Axx FW	4.2.81
TLA7N/P/Qx FW	4.1.4
TLA7L/Mx FW	3.2.1
TLA7D/Ex	3.1.1
TLA6xx FW	4.2.0
MF Diagnostics	4.2.098
Firmware Loader	4.2.098
TLAScript	4.2.098
TPI Client SW	4.2.098
TLAVu	4.2.098
PatGen App SW	1.3.032
PatGen FW	2.01
PPI Client SW	1.3.032
PatGenVu	1.3.032
Windows 2000 SP2	5.00.2195
Windows 2000 SP1	N/A
Windows 2000	N/A
Microsoft Windows 98	N/A
Microsoft Windows 95	N/A
QA+Win32	N/A
SnagIt	5.2
Logitech Mouseware	9.41.2
CheckIt Utilities	6.5.5
NI-488.2	1.0
NI-MAX	2.0.3.17
Click'N Burn Pro	2.01
TLA715/721 BIOS	1.00.02
TLA714/720 BIOS	2.03.11
TLA704/711 BIOS	N/A
TLA600 BIOS	P9-0009

Applications Support and Training

Tektronix has a wealth of resources that can help you maximize the utilization of your TLA logic analyzer. In the field, we have a team of applications engineers who you can talk with or have them visit your site to discuss your application, all at no charge. We also have a team of very experienced applications engineers in our Tektronix Technical Support Center that can be reached either by phone or e-mail:

- ▶ Inside US: 1-800-TEK-WIDE (1-800-835-9433, ext. 2400) (6AM-5PM PST)
- ▶ Outside US: (503) 627-2400 (6AM-5PM PST)
- ▶ E-mail: tm_app_supp@tek.com

▶ What Upgrades Are Available For My TLA60X/61X/62X/714/715/720/721 Logic Analyzer?

The TLA family of logic analyzers have a variety of upgrade paths to assist you in protecting your TLA investment. The chart below shows you the many ways that you can upgrade your current TLA and refers you to the appropriate section in the remainder of this TLA Upgrade Guide:

New Capability Desired	You Currently Own	Please Refer to Section
Add More DRAM & Larger HDD	TLA6xx/714/715/720/721	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Add New User Interface and Operating System SW Features	TLA6xx/714/715/720/721	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Add New iView External Oscilloscope Capability	TLA6xx/714/715/720/721	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Add New Measurement Modules to Existing TLA714/715/720/721 Mainframe	TLA714/715/720/721	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Add New Expansion Mainframe to Existing TLA714/715/720/721 Mainframe	TLA714/715/720/721	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Upgrade Controller for Existing TLA714 or TLA720 Mainframe	TLA714/720	TLA6UP and TLA7UP Mainframe Field Upgrade Kits
Upgrade Logic Analyzer State Speed and Memory Depth	TLA6xx, TLA7Lx/Mx, TLA7Nx/Px/Qx, TLA7Axx	TLA Family PowerFlex™ Upgrade Kits
Upgrade Pattern Generator Memory Depth	TLA7PG2	TLA Family PowerFlex™ Upgrade Kits
Add new TMSxxx Processor/Bus Support Package	Any TLA logic analyzer	TLA Family Processor/Bus Support Upgrade Kits
Upgrade TMSxxx or Non-TMSxxx Processor/Bus Support Package	Any TLA logic analyzer	TLA Family Processor/Bus Support Upgrade Kits
Utilize TLA Family Software Support Library	Any TLA logic analyzer	TLA Family Software Support User Library
Latest TLA Family Documentation	Any TLA logic analyzer	TLA Family Documentation
Trade-In TLA704/711/714/720 Mainframe for New TLA715/721 Mainframe	TLA704/711/714/720	TLA Family Mainframe Trade-In Program
Trade-In Any Classic Logic Analyzer for a New TLA Logic Analyzer	Any Tektronix or Non-Tektronix logic analyzer	Value Protection Plan

*1 Please refer to the section, "Current TLA Software Versions" for the version numbers of current production TLA software.

*2 Please refer to the section, "Current TLA Mainframe Capabilities" for the current production TLA mainframes.

TLA6UP and TLA7UP Mainframe Field Upgrade Kits

As Tektronix continues to improve the TLA600 logic analyzers and TLA700 Series mainframes, Tektronix will strive to ensure that there is a path for you to keep your mainframe current.

TLA60x/61x/62x Upgrades Available

If you own a TLA60x/61x/62x logic analyzer, you can upgrade the following capabilities using the TLA6UP Mainframe Field Upgrade Kit:

- ▶ Upgrade to larger DRAM with larger fixed hard disk
- ▶ Upgrade to the latest TLA application software and MS Windows operating system
- ▶ Upgrade to add external oscilloscope capability by adding the iView external oscilloscope interface

Please refer to the configuration and ordering information below for further details.

TLA714/715 and TLA720/721 Upgrades Available

If you own a TLA714/715 or TLA720/721 mainframe, you can upgrade the following capabilities using the TLA7UP Mainframe Field Upgrade Kit:

- ▶ Upgrade to larger DRAM with larger replaceable hard disk, additional replaceable hard disks, and a second internal fixed hard disk
- ▶ Upgrade a TLA714 or TLA720 to a new controller with max DRAM
- ▶ Upgrade to latest TLA Application Software and Windows Operating System
- ▶ Upgrade to add external oscilloscope capability by adding the iView external oscilloscope interface

Please refer to the configuration and ordering information for further details.

TLA704 and TLA711 Upgrades Available

If you own a TLA704 or TLA711 mainframe, please refer to the TLA Family Mainframe Trade-in Program.

TLA6UP and TLA7UP Mainframe Field Upgrade Kits

The TLA6UP kits and TLA7UP kits are customer-installable field upgrade kits for the TLA600 and TLA700 Series respectively, which provide valuable enhancements to your TLA logic analyzer:

▶ TLA600 Products Eligible for TLA6UP Upgrades

Configuration	Operating System	TLA Application Software
TLA6xx Standard or with Option 1J	Microsoft® Windows® 2000 Professional	Version 4.2
TLA6xx Standard or with Option 1J	Microsoft® Windows® 2000 Professional	Version 4.1
TLA6xx Standard or with Option 1J	Microsoft® Windows® 2000 Professional	Version 4.0
TLA6xx Standard or with Option 1J	Microsoft® Windows® 98 Second Edition	Version 3.2

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► TLA6UP and TLA7UP Mainframe Field Upgrade Kits

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Application Software Version	Please Order
Add More DRAM & Larger HDD Provides 512 MB DRAM and/or replace current hard disk with a larger, fixed, bootable MAX hard disk drive. Works with either Windows 98 Second Edition or Windows 2000 Professional	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.2	TLA6UP Option 10*1
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.1	TLA6UP Option 10*1 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.0	TLA6UP Option 10*1 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 98 Second Edition	Version 3.2	TLA6UP Option 10*1 TLA6UP Option 21
Add New SW Features Add new functionality (refer to "What's New" section) to existing TLA6xx logic analyzer by upgrading to Version 4.2 TLA Application Software. Version 4.2 requires Windows 2000 Professional Operating System	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.2	N/A
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.1	TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.0	TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 98 Second Edition	Version 3.2	TLA6UP Option 21
Add New iView External Oscilloscope Capability Add new iView capability to view data from your TDS oscilloscope correlated directly on your TLA600 logic analyzer display. <i>(For a list of currently supported TDS oscilloscopes, please visit our web site at www.tektronix.com/iView).</i> Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System. TLA600 mainframe memory requirements: 256 MB minimum, 512 MB preferred	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.2	TLA6UP Option 15
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.1	TLA6UP Option 15 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.0	TLA6UP Option 15 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 98 Second Edition	Version 3.2	TLA6UP Option 15 TLA6UP Option 21
Upgrade Logic Analyzer State Speed & Memory Depth Enhance your current TLA600 logic analyzer by increasing state speed or memory depth. Once installed on your TLA600, the PowerFlex Utility SW will inform you what PowerFlex upgrades are available. Complete instructions on how to obtain an option key are provided	Any TLA6xx	N/A	N/A	TLA6UP Option PF OR visit www.tektronix.com/la for PowerFlex SW
Add CD-RW Drive Add CD-RW Drive to backup or transfer user and data files	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.2	TLA6UP Option 20
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.1	TLA6UP Option 20 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 2000 Professional	Version 4.0	TLA6UP Option 20 TLA6UP Option 22
	TLA6xx Standard or with Option 1J	Microsoft Windows 98 Second Edition	Version 3.2	TLA6UP Option 20 TLA6UP Option 21

*1 For maximum performance and depending upon your current configuration, please order either TLA6UP Option 21 or 22 for the latest TLA Application Software and Windows operating system. Otherwise, after installing your new MAX hard disk, you will need to reload Version 4.x/Windows 2000 Pro or Version 3.2/Windows 98.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Application Software Version	Please Order
Add 18" Flat-panel Display Add 18" 1280x1024 flat-panel display	Any TLA6xx	N/A	N/A	119-6568-00 For wheeled transport case for 18" flat-panel display, order: 016-1895-00
Add 17" CRT Display Add 17" 1280x1024 CRT display	Any TLA6xx	N/A	N/A	119-6340-00 For wheeled transport case for 17" CRT display, order: 016-1653-00
Add 21" Flat-panel Display Add 21" 1600x1200 flat-panel display	Any TLA6xx	N/A	N/A	119-6569-00 For wheeled transport case for 21" flat-panel display, order: 016-1896-00
Add 21" CRT Display Add 21" 1600x1200 CRT display	Any TLA6xx	N/A	N/A	119-6460-00 For wheeled transport case for 21" CRT display, order: 016-1652-00
Add Cart Add your choice of either the K4000 or LACART instrument carts	Any TLA6xx	N/A	N/A	Choice of either K4000 or LACART
Add Rackmount Kit	Any TLA6xx	N/A	N/A	016-1790-00
Add Wheeled Transport Case for TLA6xx	Any TLA6xx	N/A	N/A	016-1522-00
Add Wheeled Transport Case for Flat-panel Displays	18" Flat-panel Display	N/A	N/A	016-1895-00
	21" Flat-panel Display	N/A	N/A	016-1896-00
Add Wheeled Transport Case for CRT Displays	17" CRT Display	N/A	N/A	016-1653-00
	21" CRT Display	N/A	N/A	016-1652-00

Notes:

Version 4.2 has been tested, can be installed and will be supported by Tektronix only on the Tektronix-supplied version of Windows 2000 Professional.

The TLA6UP is designed for "one TLA6UP per TLA600 mainframe." If upgrading multiple TLA600s, you must order one TLA6UP with the appropriate options for each TLA600 mainframe.

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▶ TLA6UP and TLA7UP Mainframe Field Upgrade Kits

▶ TLA700 Products Eligible for TLA7UP Upgrades

Configuration	Operating System	TLA Application Software
TLA715 Standard or with Option 1S TLA721 Standard	Microsoft Windows 2000 Professional	Version 4.2
TLA715 Standard or with Option 1S TLA721 Standard	Microsoft Windows 2000 Professional	Version 4.1
TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Microsoft Windows 2000 Professional	Version 4.2
TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Microsoft Windows 2000 Professional	Version 4.1
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 2000 Professional	Version 4.2
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 2000 Professional	Version 4.1
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 2000 Professional	Version 4.0
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 98 Second Edition	Version 3.2
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 98	Version 3.1
TLA714 Standard or with Option 1S TLA720 Standard	Microsoft Windows 98	Version 3.0

Note: TLA704 and TLA711 mainframes are no longer eligible for upgrades, but still qualify for our “Mainframe Trade-In” program. Please contact your local Tektronix field representative for further details.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add More DRAM & Larger HDD Provides 512 MB DRAM and/or: 1) replace current hard disk with a larger, replaceable, bootable MAX hard disk drive (configured as master); 2) reconfigure replaceable hard disk drive for data storage only and add second, internal fixed, bootable hard disk drive (configured as master); 3) add an additional, replaceable MAX hard disk drive (configured as slave). Works with Windows 98 Second Edition or Windows 2000 Professional	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 12 ^{*2,*3}
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 12 ^{*2,*3} TLA7UP Option 22
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A (TLA715 and TLA721 controller upgrade already includes MAX DRAM/HDD)
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	N/A TLA7UP Option 22 (TLA715 and TLA721 controller upgrade already includes MAX DRAM/HDD)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 10 ^{*2,*3}
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 10 ^{*2,*3} TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 10 ^{*2,*3} TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 10 ^{*2,*3} TLA7UP Option 21
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 10 ^{*2,*3} TLA7UP Option 21
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 10 ^{*2,*3} TLA7UP Option 21

^{*2} For maximum performance and depending upon your current configuration, please order either TLA7UP Option 21, 22 or 23 for the latest TLA Application Software and Windows operating system. Otherwise, after installing your new MAX hard disk, you will need to reload Version 3.2/Windows 98.

^{*3} If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

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► TLA6UP and TLA7UP Mainframe Field Upgrade Kits

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add New SW Features Add new functionality (refer to "What's New" section) to existing TLA7xx logic analyzer by upgrading to Version 4.2 TLA Application Software. Version 4.2 requires Windows 2000 Professional Operating System	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 21* ³
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 21* ³
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 21* ³

*³ If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Upgrade TLA714 Controller Upgrade controller in TLA714 mainframe to the new controller used in TLA715 mainframe. Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System	TLA715 Standard or with Option 1S	Windows 2000 Professional	Version 4.2	N/A
	TLA715 Standard or with Option 1S	Windows 2000 Professional	Version 4.1	TLA7UP Option 22 <i>(SW upgrade only)</i>
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22 <i>(SW upgrade only)</i>
	TLA714 Standard or with Option 1S	Windows 2000 Professional	Version 4.2	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
	TLA714 Standard or with Option 1S	Windows 2000 Professional	Version 4.1	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
	TLA714 Standard or with Option 1S	Windows 2000 Professional	Version 4.0	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
	TLA714 Standard or with Option 1S	Windows 98 Second Edition	Version 3.2	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
	TLA714 Standard or with Option 1S	Windows 98	Version 3.1	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
	TLA714 Standard or with Option 1S	Windows 98	Version 3.0	TLA7UP Option 16 TLA7UP Option 23 ^{*3}
Upgrade TLA720 Controller Upgrade controller in TLA720 mainframe to the new controller used in TLA721 mainframe. Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System	TLA721 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22 <i>(SW upgrade only)</i>
	TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A
	TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22 <i>(SW upgrade only)</i>
	TLA720 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 17 TLA7UP Option 23 ^{*3}
	TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 17 TLA7UP Option 23 ^{*3}
	TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 17 TLA7UP Option 23 ^{*3}
	TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 17 TLA7UP Option 23 ^{*3}
	TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 17 TLA7UP Option 23 ^{*3}
	TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 17 TLA7UP Option 23 ^{*3}

^{*3} If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

TLA Family Upgrade Guide

► TLA6UP and TLA7UP Mainframe Field Upgrade Kits

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add New iView External Oscilloscope Capability Add new iView capability to view data from your TDS oscilloscope correlated directly on your TLA700 logic analyzer display. <i>(For a list of currently supported TDS oscilloscopes, please visit our website at www.tektronix.com/iview).</i> Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System. TLA700 mainframe memory requirements: 256 MB minimum, 512 MB preferred	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 15
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 15 TLA7UP Option 22
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	TLA7UP Option 15
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 15 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 15
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 15 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 15 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 15 TLA7UP Option 21 ^{*3}
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 15 TLA7UP Option 21 ^{*3}
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 15 TLA7UP Option 21 ^{*3}
Upgrade Logic Analyzer State Speed and Memory Depth Enhance your current TLA700 logic analyzer by increasing state speed or memory depth. Once installed on your TLA700, the PowerFlex Utility SW will inform you what PowerFlex upgrades are available. Complete instructions on how to obtain an option key are provided	Any TLA7xx Mainframe	N/A	N/A	TLA7UP Option PF

^{*3} If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add CD-RW Drive Add CD-RW Drive to backup or transfer user and data files	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 20
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 20 TLA7UP Option 22
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	TLA7UP Option 20
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 20 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	TLA7UP Option 20
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 20 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 20 TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 20 TLA7UP Option 21 ^{*3}
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 20 TLA7UP Option 21 ^{*3}
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 20 TLA7UP Option 21 ^{*3}

^{*3} If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

TLA Family Upgrade Guide

► TLA6UP and TLA7UP Mainframe Field Upgrade Kits

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add New Measurement Modules to Existing Mainframe Add new or existing TLA7Axx logic analyzer, TLA7Nx/Px/Qx logic analyzer, TLA7PG2 pattern generator and/or TLA7Dx/Ex digitizing oscilloscope module(s) to new or existing mainframe. Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 22
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 21* ³
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 21* ³
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 21* ³

*³ If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add New Pattern Generator Probes for PECL/LVPECL, LVDS, LVCMOS and Variable Data Strobe Support	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	N/A
Add new or existing P6472 (PECL/LVPECL), P6473 (LVDS), P6474 (LVCMOS) and P6475 (Variable Data Strobe). Requires Version 1.3 PatGen Application Software or greater, available as part of the Version 4.2 TLA Application Software which requires Windows 2000 Professional	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22*4
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22*4
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22*4
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 22*4
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 21*4
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 21*3,*4
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 21*3,*4

*3 If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

*4 Version 1.3 PatGen Application Software is available either as part of the Version 4.2 TLA Application Software or on the Web (primarily for TLA704/711 and TLA714/720 users who have Windows 98 and Version 3.2 TLA Application Software). Note that Version 4.2 on the Web does NOT have SnagIt, CheckIt nor the NI USB-to-GPIB SW due to licensing issues. Customers must order TLA7UP Option 21/22/23 to receive these SW components.

TLA Family Upgrade Guide

► TLA6UP and TLA7UP Mainframe Field Upgrade Kits

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add New Expansion Mainframe to Existing Mainframe Add new or existing TLA7XM expansion mainframe to new or existing TLA714/715/720/721 mainframe. Requires Version 4.2 TLA Application Software and Windows 2000 Professional Operating System	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.2	N/A
	TLA715 Standard or with Option 1S TLA721 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22*4
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.2	N/A (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S with TLA715 Controller Upgrade TLA720 Standard with TLA721 Controller Upgrade	Windows 2000 Professional	Version 4.1	TLA7UP Option 22*4 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.2	N/A (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.1	TLA7UP Option 22 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 2000 Professional	Version 4.0	TLA7UP Option 22 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98 Second Edition	Version 3.2	TLA7UP Option 21*3 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.1	TLA7UP Option 21*3 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)
	TLA714 Standard or with Option 1S TLA720 Standard	Windows 98	Version 3.0	TLA7UP Option 21*3 (TLA7UP Option 09 required for TLA720 mainframes with S/N B019999 or lower)

*3 If you need to preserve your user files on your current mainframe's hard disk, please order an additional hard disk drive using TLA7UP Option 10 (TLA714/720) or TLA7UP Option 12 (TLA715/721) and install it as a second, internal fixed hard disk in your mainframe. This procedure is documented in the TLA7UP Instruction Manual. For TLA7UP Option 16/17, TLA7UP Option 23 (new HDD Image CD-ROM) is required since there is a different controller with different drivers. Note that there are now two HDD Image CD-ROMs for the TLA700 mainframes: one for the TLA714/720 controller and a second for the new TLA715/721 controllers.

*4 Version 1.3 PatGen Application Software is available either as part of the Version 4.2 TLA Application Software or on the Web (primarily for TLA704/711 and TLA714/720 users who have Windows 98 and Version 3.2 TLA Application Software). Note that Version 4.2 on the Web does NOT have Snagit, CheckIt nor the NI USB-to-GPIB SW due to licensing issues. Customers must order TLA7UP Option 21/22/23 to receive these SW components.

New Capability Desired	Current Mainframe Configuration	Current Operating System Version	Current TLA Software Version	Please Order
Add LAN Card Add 10/100 Mb LAN interface to your TLA700 mainframe	Any TLA714/715/720/721	N/A	N/A	119-6072-00
Add 18" Flat-panel Display Add 18" 1280x1024 flat-panel display	Any TLA714/715/720/721	N/A	N/A	119-6568-00 <i>For wheeled transport case for 18" flat-panel display, order: 016-1895-00</i>
Add 21" Flat-panel Display Add 21" 1600x1200 flat-panel display	Any TLA714/715/720/721	N/A	N/A	119-6569-00 <i>For wheeled transport case for 21" flat-panel display, order: 016-1896-00</i>
Add 17" CRT Display Add 17" 1280x1024 CRT display	Any TLA714/715/720/721	N/A	N/A	119-6340-00 <i>For wheeled transport case for 17" CRT display, order: 016-1653-00</i>
Add 21" CRT Display Add 21" 1600x1200 CRT display	Any TLA714/715/720/721	N/A	N/A	119-6460-00 <i>For wheeled transport case for 21" CRT display, order: 016-1652-00</i>
Add Cart Add your choice of either the K4000 or LACART instrument carts	Any TLA714/715/720/721	N/A	N/A	Choice of either K4000 or LACART
Add Rackmount Kit	Any TLA714/715	N/A	N/A	<i>Recommend rack tray available from a number of third-party vendors</i>
Add Wheeled Transport Case for TLA7xx	Any TLA720/721/7XM	N/A	N/A	020-2369-00
	Any TLA714/715	N/A	N/A	016-1522-00
Add Wheeled Transport Case for Flat-panel Displays	Any TLA720/721/7XM	N/A	N/A	016-1651-00
	18" Flat-panel Display	N/A	N/A	016-1895-00
Add Wheeled Transport Case for CRT Displays	21" Flat-panel Display	N/A	N/A	016-1896-00
	17" CRT Display	N/A	N/A	016-1653-00
	21" CRT Display	N/A	N/A	016-1652-00

Notes: Version 4.2 has been tested, can be installed and will be supported by Tektronix only on the Tektronix-supplied version of Windows 2000 Professional.

The TLA7UP is designed for "one TLA7UP per TLA714/715/720/721 mainframe." If upgrading multiple TLA714/715/720/721s, you must order one TLA7UP with the appropriate options for each TLA714/715/720/721 mainframe.

TLA Family Upgrade Guide

▶ TLA6UP and TLA7UP Mainframe Field Upgrade Kits

NEW Version 4.2 TLA Application Software Downloadable From Tektronix Web Site

Version 4.2 TLA application software is also available for download directly from www.tektronix.com/tla_software and contains:

- ▶ Self-extracting image of the Version 4.2 TLA application software
- ▶ “What’s New in Version 4.2” document
- ▶ Installation instructions
- ▶ Release notes

Note: Version 4.2 TLA application software has been tested, can be installed and will be supported by Tektronix only on Tektronix-supplied Windows 2000 Professional.

The downloadable version of version 4.2 TLA Application Software does not contain any non-Tektronix licensed software (including CheckIt Utilities, SnagIt, Click’N Burn Pro and National Instruments GPIB-USB Software). You can receive a copy of the full version by ordering TLA7UP with Option 22 at no cost.

TLA Application Software Releases

Tektronix continues to innovate and enhance the TLA applications software for the TLA family of logic analyzers. Both the TLA600 and TLA700 logic analyzers share the same TLA applications software. Setups and data can be quickly and easily shared between the TLA600 and TLA700 Series. Tektronix has demonstrated its commitment to continually improving the TLA family with several software upgrades since the original Version 1.0 release. Version 4.2 is directly compatible with the TLA714/715 portable or TLA720/721 benchtop mainframes whereas the TLA704 portable and TLA711 benchtop mainframes require a mainframe trade in – V4.2 and Windows 2000 is not supported on the TLA704/711 mainframe. Version 4.2, which is the latest version, is available, either by ordering TLA6UP Option 22 or TLA7UP Option 22 or by downloading it from www.tektronix.com/tla_software. The following table shows the compatibility of software used in the TLA700 by version numbers. Each software version is compatible with the other software versions in the same column. Each column indicates the software or firmware history of the TLA products as shipped from the factory.

Release	4.2	4.2SP2	4.1	4.0	3.2	3.1
TLA Application SW	4.2	4.1SP2	4.1	4.0	3.2	3.1
TLA Application	4.2.098	4.1.112	4.1.108	4.0.037	3.2.038	3.1.089
TLA7Axx FW	4.2.81	N/A	N/A	N/A	N/A	N/A
TLA7N/P/Qx FW	4.1.4	4.1.1	4.1.1	4.0.3	3.2.0	3.1.8
TLA7L/Mx FW	3.2.1	3.2.1	3.2.1	3.2.1	3.2.1	3.1.1
TLA7D/Ex	3.1.1	3.1.1	3.1.1	3.1.1	3.1.1	3.1.1
TLA6xx FW	4.2.0	3.2.16	3.2.16	3.2.16	3.2.16	N/A
MF Diagnostics	4.2.098	4.1.108	4.1.108	4.0.037	3.2.038	3.1.023
Firmware Loader	4.2.098	4.1.108	4.1.108	4.0.037	3.2.038	3.1.023
TLAScript	4.2.098	4.1.108	4.1.108	4.0.037	3.2.038	3.1.089
TPI Client SW	4.2.098	4.1.108	4.1.108	4.0	3.2	3.1
TLAVu	4.2.098	4.1.112	4.1.108	4.0	3.2	3.1
PatGen App SW	1.3.032	1.3.032	1.3.032	1.1.032	1.0.000	N/A
PatGen FW	2.01	2.01	2.01	1.01	1.01	N/A
PPI Client SW	1.3.032	1.3.032	1.3.032	1.1	1.0	N/A
PatGenVu	1.3.032	1.3.032	1.3.032	1.1.032	1.0.000	N/A
Windows 2000 SP2	5.00.2195	N/A	N/A	N/A	N/A	N/A
Windows 2000 SP1	N/A	5.00.1295	5.00.2195	N/A	N/A	N/A
Windows 2000	N/A	N/A	N/A	5.00.2195	N/A	N/A
Windows 98	N/A	N/A	N/A	N/A	4.10.2222	4.10.1998
Windows 95	N/A	N/A	N/A	N/A	N/A	N/A
QA+Win32	N/A	N/A	N/A	2.0	2.0	1.3
SnagIt	5.2	5.2	5.2	N/A	N/A	N/A
Logitech Mouseware	9.41.2	9.0	9.0	N/A	N/A	N/A
CheckIt Utilities	6.5.5	6.5.5	6.5.5	N/A	N/A	N/A
NI-488.2	1.0	1.0	1.0	N/A	N/A	N/A
NI-MAX	2.0.3.17	2.0.3.17	2.0.3.17	N/A	N/A	N/A
Click’N Burn Pro	2.01	N/A	N/A	N/A	N/A	N/A
TLA715/721 BIOS	1.00.02	1.00.00	1.00.00	N/A	N/A	N/A
TLA714/720 BIOS	2.03.11	2.03.11	2.03.11	2.03.11	2.03.11	2.03.11
TLA704/711 BIOS	N/A	N/A	N/A	N/A	1.00.14	1.00.14
TLA600 BIOS	P9-0009	P9-0009	P9-0009	P9-0009	0005.P05	N/A

Note: Version 4.2 has been tested, can be installed and will be supported by Tektronix only on Tektronix-supplied Windows 2000 Professional.

We are consistently adding to the list of supported TDS oscilloscopes that combine with the TLA Series logic analyzers to provide iView (Integrated View) capability. The following table gives a history of TDS oscilloscopes and TLA Application Software versions along with interim iView updates. This includes which version of TLA software supports which TDS oscilloscopes.

Besides the latest features in Version 4.2 of the TLA application software, the following section shows the history of features added to the TLA application software (for more details, please visit www.tektronix.com/tla_software).

	TLA SW V4.1 Release	iView V4.1.1 Upgrade	TLA SW V4.1 SP2	iView V4.1.3 Upgrade	iView V4.1.4 Upgrade	TLA SW V4.2 Release
iView Version	4.1.0	4.1.1	4.1.2	4.1.3	4.1.4	4.2.0
TLA App Version	4.1	4.1	4.1 SP2	4.1 SP2	4.1 SP2	4.2
Date (approx)	4-Jun-01	1-Aug-01	20-Sept-01	13-Nov-01	11-Jan-02	Apr-02
Number of scopes	12	17	18	27	32	32
TDS724D				Yes	Yes	Yes
TDS754C				Yes	Yes	Yes
TDS754D				Yes	Yes	Yes
TDS784C				Yes	Yes	Yes
TDS784D				Yes	Yes	Yes
TDS794D				Yes	Yes	Yes
TDS654C					Yes	Yes
TDS684C	Yes	Yes	Yes	Yes	Yes	Yes
TDS694C	Yes	Yes	Yes	Yes	Yes	Yes
TDS3012	Yes	Yes	Yes	Yes	Yes	Yes
TDS3014	Yes	Yes	Yes	Yes	Yes	Yes
TDS3032	Yes	Yes	Yes	Yes	Yes	Yes
TDS3034	Yes	Yes	Yes	Yes	Yes	Yes
TDS3052	Yes	Yes	Yes	Yes	Yes	Yes
TDS3054	Yes	Yes	Yes	Yes	Yes	Yes
TDS3012B		Yes	Yes	Yes	Yes	Yes
TDS3014B		Yes	Yes	Yes	Yes	Yes
TDS3032B		Yes	Yes	Yes	Yes	Yes
TDS3034B		Yes	Yes	Yes	Yes	Yes
TDS3052B		Yes	Yes	Yes	Yes	Yes
TDS3054B		Yes	Yes	Yes	Yes	Yes
TDS5052				Yes	Yes	Yes
TDS5054				Yes	Yes	Yes
TDS5104				Yes	Yes	Yes
TDS6604					Yes	Yes
TDS7054	Yes	Yes	Yes	Yes	Yes	Yes
TDS7104	Yes	Yes	Yes	Yes	Yes	Yes
TDS7154					Yes	Yes
TDS7254	Yes		Yes	Yes	Yes	Yes
TDS7404	Yes	Yes	Yes	Yes	Yes	Yes
CSA7154					Yes	Yes
CSA7404					Yes	Yes

TLA Family Upgrade Guide

▶ TLA6UP and TLA7UP Mainframe Field Upgrade Kits

Key NEW Features in TLA Application Software Releases

Version 4.2 –

- ▶ TLA7Axx Logic Analyzer Modules for the TLA700 Series – including 8 GHz MagniVu timing, 2 GHz deep timing, 120 to 800 MHz state clock rates, 1.25 Gb/s data rates, 128 Kb to 64 Mb memory depth, 2 GHz analog multiplexer
- ▶ Low-capacitance, full differential, connectorless, 2 GHz active probing system with high-density and general-purpose probes
- ▶ 5-way module merging
- ▶ TLACAL2 calibration fixture
- ▶ CD-RW Drive for TLA6xx instruments and TLA700 mainframes
- ▶ 10/100 Mb LAN standard on all TLA700 mainframes
- ▶ iView (Integrated View) of your TDS data on your TLA display – support for TDS3000/3000B, TDS5000, TDS6000, TDS7000, CSA7000, TDS600C, TDS700C/D oscilloscopes
- ▶ EasyTrigger enhancements

Version 4.1 –

- ▶ Support for new TLA715 dual monitor portable mainframe
- ▶ Support for new TLA721 dual monitor benchtop mainframe
- ▶ Support for TLA714 controller upgrade
- ▶ Support for TLA720 controller upgrade
- ▶ Flat panel monitor options
- ▶ Wheel mouse support
- ▶ TLA-TDS interface for iView support of automatic data correlation from an external oscilloscope
- ▶ TDS3000, TDS7000, TDS684C/694C support
- ▶ iView setup wizard
- ▶ EasyTrigger
- ▶ Oscilloscope measurements
- ▶ Individual oscilloscope channel manual skew adjustment
- ▶ Overlay of waveforms
- ▶ Setup and Hold violation storage and display
- ▶ Setup and Hold window graphic control (advanced clocking)
- ▶ System trigger dialog
- ▶ Context-sensitive most-recently-used list
- ▶ Fast access to windows using hot keys
- ▶ Demux source and destination channel colors
- ▶ Trigger group values in more than one radix

- ▶ Magnitude waveform dot mode
- ▶ New Version 1.3 TLA7PG2 PatGen Application SW
- ▶ SnagIt software included (graphic capture software)
- ▶ CheckIt software included (diagnostic software)

Version 4.0 –

- ▶ TLA7Q2/Q4 64 M Logic Analyzer Modules
- ▶ Windows 2000 Professional with Service Pack 1, IME 5.01 and NTFS file system
- ▶ 500 MHz Timing on Half Channels at Twice Memory Depth
- ▶ Improved Logic Analyzer Demux Support
- ▶ Support for Up to Ten TLA7XMs
- ▶ Elf/Dwarf 2 object file format supported
- ▶ Support for >2 GB TLA System save/restore file operations (32-bit to 64-bit)
- ▶ New Version 1.1 TLA7PG2 PatGen Application SW
- ▶ Performance Verification and Adjustment Software Bundled in with TLA App SW

Version 3.2 –

- ▶ TLA600 Series Logic Analyzers
- ▶ TLA7PG2 Pattern Generator
- ▶ TLAVu and PatGenVu
- ▶ Waveform Windows Enhancements
- ▶ Windows 98 Second Edition
- ▶ Load System Enhancements
- ▶ Download TLA Software from Tektronix Web site

Version 3.1 –

- ▶ Support for NEW TLA7XM Expansion Mainframe
- ▶ Sample Suppression
- ▶ Click & Drag Zoom
- ▶ Variable Time/Div
- ▶ Busform Expansion
- ▶ Click & Drag Waveform and Column Resizing
- ▶ Status Monitor Enhancements
- ▶ User-defined Tools directly accessible from TLA toolbar
- ▶ TLAScript
- ▶ TPI (TLA Programmatic Interface) Enhancements
- ▶ Microsoft® Excel X-Y Plot Add-in
- ▶ Save System Enhancements including size, position and state of every window

- ▶ Magnitude Waveform and Color Symbols
- ▶ More tooltips
- ▶ OMF166 Object File Support

Version 3.0 –

- ▶ Support for NEW TLA714 and TLA720 mainframes
- ▶ Support for NEW TLA7Nx/Px 16 MB Deep Logic Analyzer Modules
- ▶ Hardware accelerated Waveform generation for the TLA7Nx/Px Logic Analyzer Modules
- ▶ Hardware accelerated search for the TLA7Nx/Px Logic Analyzer Modules
- ▶ Faster LA module data access
- ▶ Progress displays for Listing upgrade, Waveform upgrade, Searching upgrade and Saving data
- ▶ LA Setup Window's Channel Name Table is resizable. The Delete All Groups selection is now available
- ▶ Enhanced window placement: Cascade, Tile Horizontally and Tile Vertically
- ▶ The DSO Setup Window can now be maximized to be consistent with the other windows
- ▶ Symbol coloring
- ▶ High-level language (HLL) Source Code Support for OMF51
- ▶ Improved support for ELF/DWARF, ELF/STABS and COFF symbol files
- ▶ Range and Pattern Symbol table color binding
- ▶ Can now use symbol file in use by another application (compiler usually)
- ▶ Source file finder dialog accepts large file names

Version 2.0 –

- ▶ HLL Source Code Support
- ▶ Performance Analysis
- ▶ Enhanced Repetitive Acquisition Control with Memory Comparison
- ▶ TLA Programmatic Interface (TPI) for remote control using Microsoft COM/DCOM with support for advanced data analysis
- ▶ Faster UI performance
- ▶ New data window wizard
- ▶ Added Word Event to LA trigger and expanded number of IF-THEN clauses to 16
- ▶ Added binary format and additional delimiters to data export
- ▶ Added Print All to all data windows
- ▶ Enhanced Magnitude Mode in Waveform window
- ▶ Added "External LA Clock Source Idle" detection

Version 1.1 –

- ▶ TLA704 soft-power down

Installation Notes

When you purchase a new TLA Logic Analyzer, the basic TLA Version 4.2 application software is installed at the factory. Some software packages must be installed separately, such as microprocessor and bus support packages. For information about these packages, refer to their associated documentation or contact your local Tektronix account manager.

Do not install the TPI Client Software on the logic analyzer. The TPI Client Software is for installation on a separate, remote PC that will control the logic analyzer using the TLA Programmatic Interface (TPI). See the TPI online help on your TLA logic analyzer for more information.

File Compatibility

Saved system files which include setup and data information are "forward-compatible" with each release of TLA applications software, i.e., a V1.1 saved system file will properly load on TLA logic analyzers with Version 4.2 software. However, saved system files are not "backwards-compatible," that is, a Version 4.2 saved system file will not load on a TLA logic analyzer with Version 3.2 or earlier software.

Module Firmware Compatibility

After upgrading the TLA applications software in your TLA mainframe, you will often be required to upgrade the firmware in your logic analyzer, pattern generator and digitizing oscilloscope modules. However, while you are not required to re-run any performance verification/adjustment procedures, you are encouraged to run both self-calibration and extended diagnostics on all mainframes and instrument modules that have been upgraded. Please note that all instrument modules to be used in a TLA mainframe with Version 4.2 application software must have the instrument module firmware upgraded; otherwise, the TLA application software will not recognize the instrument module. The firmware process, however, is easy-to-do and takes about 5 minutes per instrument module. All of the firmware images are part of each TLA application software release.

TLA Backup Media

Each TLA logic analyzer comes standard with the Microsoft Windows 2000 Professional Operating System and TLA applications software preloaded on the hard disk. CD-ROMs for both Windows and the Version 4.2 TLA applications software are also provided as backup media.

TLA Family Upgrade Guide

▶ TLA6UP and TLA7UP Mainframe Field Upgrade Kits

The TLAVu and PatGenVu offline data viewers are on the backup media CD-ROMs for installation on any Windows 95/98/Me/NT4.0/2000/XP PC.

Please contact your local Tektronix account manager for complete instructions and information on ordering a TLA6UP or TLA7UP Field Upgrade Kit. Have the model number of your TLA mainframe ready when you call.

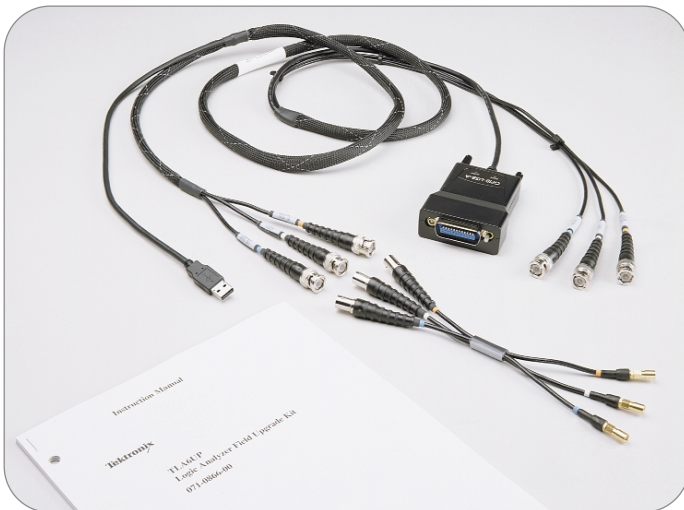
TLA6UP

TLA600 Series Logic Analyzer Field Upgrade Kit



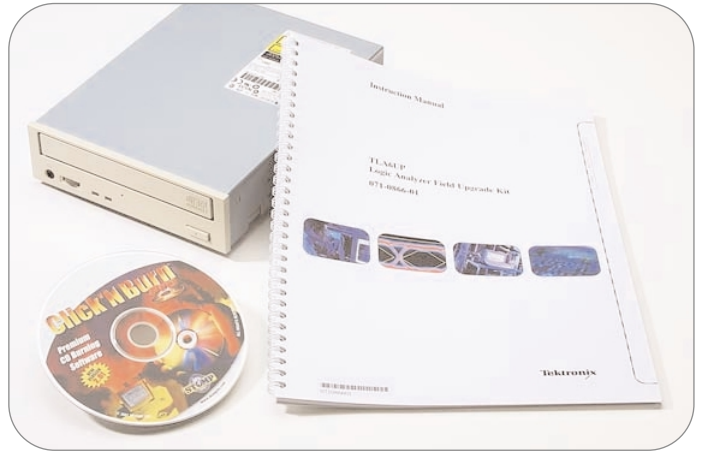
- ▶ TLA6UP Option 10 includes two 256 MB DIMM's, 60 GB fixed hard disk drive, TLA600 Controller BIOS floppy, TLA600 IBM ATA switch utility floppy, front panel trim ring removal tool, TLA6UP Mainframe Field Upgrade Kit instruction manual.

Option 10 – 256 MB DRAM with Internal Fixed Hard Disk for TLA60x/61x/62x*5.



- ▶ TLA6UP Option 15 includes an iView external oscilloscope interface with SMB-to-BNC adapter, TLA6UP Mainframe Field Upgrade Kit instruction manual.

Option 15 – iView External Oscilloscope Cable for TLA Family of Logic Analyzers.



- ▶ TLA6UP Option 20 includes CD-RW Drive for TLA6xx Logic Analyzers, Click N Burn Pro SW 2.0 media and license, blank CD-R and CD-RW media (one each), flat-panel trim ring removal tool, TLA6UP Mainframe Field Upgrade Kit instruction manual.

Option 20 – CD-RW drive for TLA6xx Logic Analyzers.



- ▶ TLA6UP Option 21 includes Version 4.2 TLA Application SW, Windows 2000 Professional, EasyRestore license, Win2k Pro license, Win2k Pro certificate of authenticity, CheckIt Utilities, TLA600 Controller BIOS floppy, TLA600 IBM ATA switch utility floppy, TLA Family user manual, TLA mouse pad, SW revision labels, TLA6UP Mainframe Field Upgrade Kit instruction manual.

Option 21 – Version 4.2 TLA Application Software and Windows 2000 Professional Operating System*6.

*5 Please refer to the section, "Current TLA Mainframe Capabilities" for the current production TLA mainframes.

*6 Please refer to the section, "Current TLA Software Versions" for the version numbers of current production TLA software.

TLA Family Upgrade Guide

► TLA6UP and TLA7UP Mainframe Field Upgrade Kits



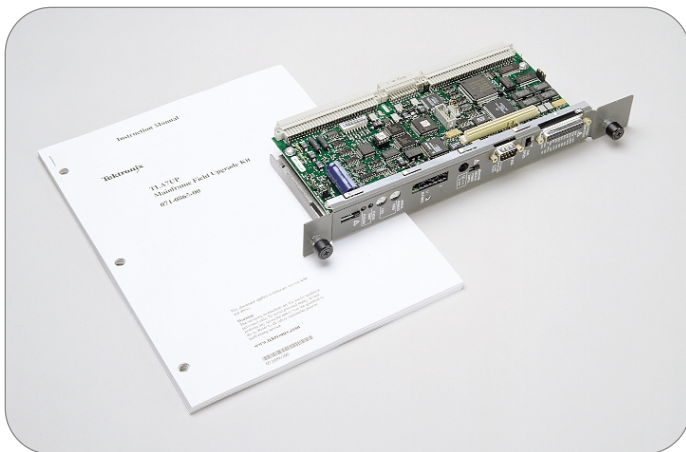
- TLA6UP Option 22 includes Version 4.2 TLA Application SW, CheckIt Utilities, TLA Family user manual, TLA mouse pad, SW revision labels, TLA6UP Mainframe Field Upgrade Kit instruction manual.

Option 22 – Version 4.2 TLA Application Software*6.

Option IF – Tektronix Service Center Installation.

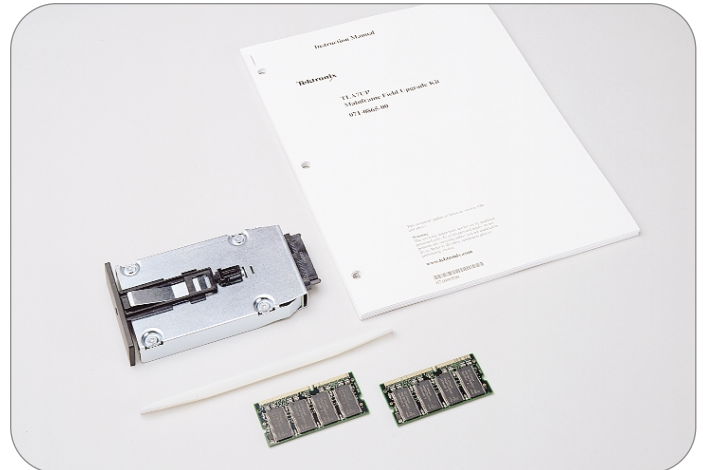
TLA7UP

TLA700 Series Logic Analyzer Field Upgrade Kit



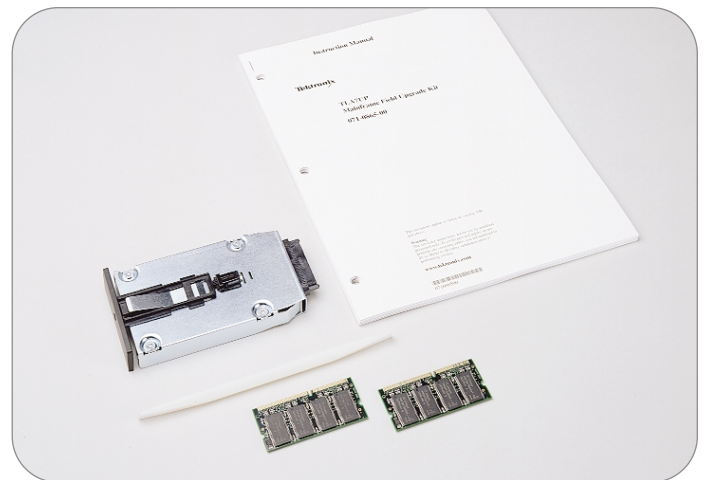
- TLA7UP Option 09 includes TLA720 fan controller module, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 09 – TLA720 Benchtop Mainframe Upgrade, S/N B0199999 or lower, Required for TLA7XM.



- TLA7UP Option 10 includes two 128 MB SODIMM's, Replaceable hard disk cartridge with 60 GB hard disk, jumpers, flat-panel trim ring removal tool, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 10 – For TLA714/720, 256 MB DRAM with Replaceable Fixed Hard Disk, Second Internal Fixed Hard Disk and Spare Replaceable Hard Disk.



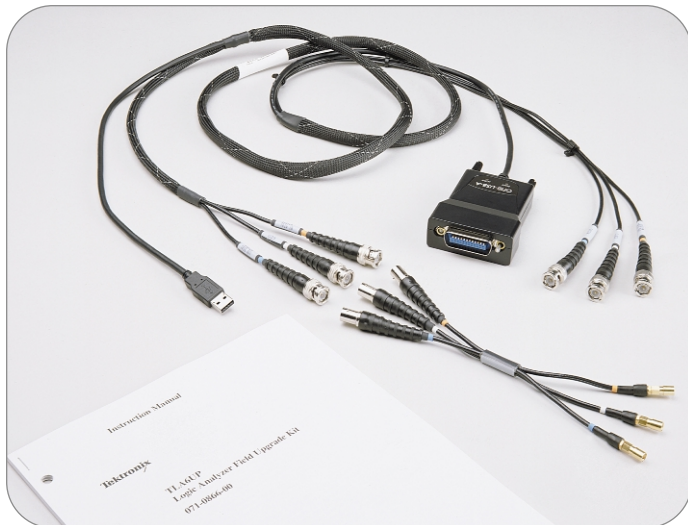
- TLA7UP Option 12 includes two 256 MB SODIMM's, replaceable hard disk cartridge with 60 GB hard disk, jumpers, front panel trim ring removal tool, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 12 – For TLA715, 512 MB DRAM with Replaceable Fixed Hard Disk, Second Internal Fixed Hard Disk and Spare Replaceable Hard Disk.

*6 Please refer to the section, "Current TLA Software Versions" for the version numbers of current production TLA software.

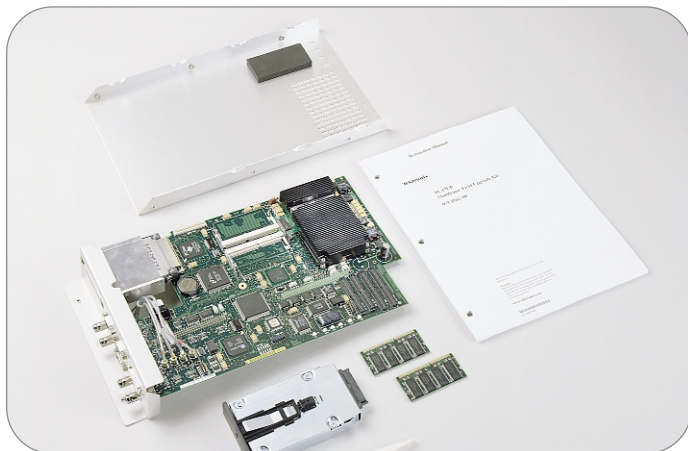
TLA Family Upgrade Guide

▶ TLA6UP and TLA7UP Mainframe Field Upgrade Kits



▶ TLA7UP Option 15 includes an iView external oscilloscope interface with SMB-to-BNC adapter, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 15 – iView External Oscilloscope Cable for TLA Family of Logic Analyzers.



▶ TLA7UP Option 16 includes TLA715 controller, two 256 MB SODIMM's, replaceable hard disk cartridge with 60 GB hard disk, flat-panel trim ring removal tool, jumpers, TLA715 controller card cover, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 16 – Controller Upgrade for TLA714 Mainframe. Requires TLA7UP Option 23.



▶ TLA7UP Option 17 includes TLA721 controller with 512 MB RAM installed, replaceable hard disk cartridge with 60 GB hard disk, wheel mouse, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 17 – Controller Upgrade for TLA720 Mainframe. Requires TLA7UP Option 23.



▶ TLA7UP Option 20 includes CD-RW drive for TLA714/720 and TLA715/721 Logic Analyzer Mainframes, Click 'N Burn Pro SW 2.0 media and license, blank CD-R and CD-RW media (one each), flat-panel trim ring removal tool, TLA7UP Mainframe Field Upgrade Kit instruction manual.

Option 20 – CD-RW drive for TLA714/720 and TLA715/721 Logic Analyzer Mainframes.

TLA Family Upgrade Guide

► TLA6UP and TLA7UP Mainframe Field Upgrade Kits



- TLA7UP Option 21 includes Version 4.2 TLA Application SW for a TLA714/720, Windows Professional, EasyRestore license, Win2k Pro license, Win2k Pro certificate of authenticity, CheckIt Utilities license, TLA Family user manual, TLA7UP Mainframe Field Upgrade Kit instruction manual, jumpers, TLA mouse pad, SW revision labels.

Option 21 – For TLA714/715/720/721, Version 4.2 TLA Application Software and Windows 2000 Professional Operating System*⁶.



- TLA7UP Option 22 includes Version 4.2 TLA Application SW, CheckIt Utilities license, TLA Family user manual, TLA7UP Mainframe Field Upgrade Kit instruction manual, jumpers, TLA mouse pad, SW revision labels.

Option 22 – For TLA714/715/720/721, Version 4.2 TLA Application Software*⁶.

*⁶ Please refer to the section, "Current TLA Software Versions" for the version numbers of current production TLA software.



- TLA7Up Option 23 includes Version 4.2 TLA Application SW, Windows 2000 Professional, EasyRestore license, Win2k Pro license, Win2k Pro certificate of authenticity, CheckIt Utilities license, TLA Family user manual, TLA7UP Mainframe Field Upgrade Kit instruction manual, jumpers, TLA mouse pad, SW revision labels.

Option 23 – TLA Application Software and Windows 2000 Professional Operating System for TLA714/720 with Controller Upgrade (TLAUP Option 16 or Option 17).

Option IF – Tektronix Service Center Installation.

Option IN – On-Site Installation Service.

The user manuals for both kits are available either by ordering from Tektronix or by downloading directly from www.tektronix.com/la

TLA6UP Field Upgrade Kit User Manual – Order 071-0866-02.

TLA7UP Mainframe Field Upgrade Kit User Manual – Order 071-0865-02.

If you have any questions about what upgrades you may need, or any applications or technical questions, you can contact the Tektronix Technical Support Center by either phone or e-mail:

- Inside US: 1-800-TEK-WIDE (1-800-835-9433, ext. 2400) (6AM-5PM PST)
- Outside US: (503) 627-2400 (6AM-5PM PST)
- E-mail: tm_aaa_supp@tek.com

TLA Family Upgrade Guide

► TLA Family PowerFlex™ Upgrade Kits

TLA Family PowerFlex™ Upgrade Kits

Unique to the entire TLA Family of logic analyzers is the PowerFlex™ concept – the ability to purchase only the measurement capability you need now and upgrade at a later date for only the difference in price plus a small surcharge as opposed to buying a completely new logic analyzer. All Tektronix TLA logic analyzers are available in a variety of channel widths, state speeds and memory depths to support a wide range of applications and budgets. The specific ordering options with each of the following PowerFlex kits will vary depending upon your current configuration. All PowerFlex kits are installed by Tektronix Field Service personnel either on-site or at a Tektronix Service Center. Please contact your local Tektronix account manager for the actual options to order.

TLA600 Series Logic Analyzers

For the TLA60x Logic Analyzers, upgrades for 100 MHz to 200 MHz state speed and 64K to 256K memory depth are available:

TLA601 34 channel – Order TLA6F01 with appropriate option.

TLA602 68 channel – Order TLA6F02 with appropriate option.

TLA603 102 channel – Order TLA6F03 with appropriate option.

TLA604 136 channel – Order TLA6F04 with appropriate option.

For the TLA61x Logic Analyzers, upgrades for 100 MHz to 200 MHz state speed and 64K to 256K memory depth are available:

TLA611 34 channel – Order TLA6F11 with appropriate option.

TLA612 68 channel – Order TLA6F12 with appropriate option.

TLA613 102 channel – Order TLA6F13 with appropriate option.

TLA614 136 channel – Order TLA6F14 with appropriate option.

For the TLA62x Logic Analyzers, upgrades for 100 MHz to 200 MHz state speed only are available:

TLA621 34 channel – Order TLA6F21 with appropriate option.

TLA622 68 channel – Order TLA6F22 with appropriate option.

TLA623 102 channel – Order TLA6F23 with appropriate option.

TLA624 136 channel – Order TLA6F24 with appropriate option.

TLA700 Series – TLA7Lx/Mx Logic Analyzer Modules

For the TLA7Lx Logic Analyzer Modules, upgrades for 100 MHz to 200 MHz state speed and 32K to 128K memory depth are available:

TLA7L1 34 channel – Order TLA7F2 with appropriate option.

TLA7L2 68 channel – Order TLA7F2 with appropriate option.

TLA7L3 102 channel – Order TLA7F2 with appropriate option.

TLA7L4 136 channel – Order TLA7F2 with appropriate option.

For the TLA7Mx Logic Analyzer Modules, upgrades for 100 MHz to 200 MHz state speed only are available:

TLA7M1 34 channel – Order TLA7F2 with appropriate option.

TLA7M2 68 channel – Order TLA7F2 with appropriate option.

TLA7M3 102 channel – Order TLA7F2 with appropriate option.

TLA7M4 136 channel – Order TLA7F2 with appropriate option.

TLA700 Series – TLA7Nx/Px/Qx Logic Analyzer Modules

For the TLA7Nx Logic Analyzer Modules, upgrades for 100 MHz to 200 MHz state speed and 64K to 256K to 1M to 4M memory depths are available:

TLA7N1 34 channel – Order TLA7F11 with appropriate option.

TLA7N2 68 channel – Order TLA7F12 with appropriate option.

TLA7N3 102 channel – Order TLA7F13 with appropriate option.

TLA7N4 136 channel – Order TLA7F14 with appropriate option.

For the TLA7Px Logic Analyzer Modules, upgrades for 100 MHz to 200 MHz state speed only are available:

TLA7P2 68 channel – Order TLA7F16 with appropriate option.

TLA7P4 136 channel – Order TLA7F18 with appropriate option.

For the TLA7Qx Logic Analyzer Modules, upgrades for 100 MHz to 200 MHz state speeds only are available:

TLA7Q2 68 channel – Order TLA7F20 with appropriate option.

TLA7Q4 136 channel – Order TLA7F22 with appropriate option.

TLA700 Series - TLA7Axx Logic Analyzer Modules

For the TLA7Axx Logic Analyzer Modules, upgrades for 120 MHz to 235 MHz to 450 MHz state speed and 128K to 512K to 2M to 8M to 32M memory depths are available:

TLA7AA1 34 channel – Order TLA7FAA1 with appropriate option.

TLA7AA2 68 channel – Order TLA7FAA2 with appropriate option.

TLA7AA3 102 channel – Order TLA7FAA3 with appropriate option.

TLA7AA4 136 channel – Order TLA7FAA4 with appropriate option.

For the TLA7ABx Logic Analyzer Modules, upgrades for 120 MHz to 235 MHz to 450 MHz state speed are available:

TLA7AB2 68 channel – Order TLA7FAB2 with appropriate option.

TLA7AB4 136 channel – Order TLA7FAB4 with appropriate option.

TLA700 Series - TLA7PG2 Pattern Generator Modules

For the TLA7PG2 Pattern Generator Module, upgrades for 256K to 1M memory depth only are available:

TLA7PG2 64 channel – Order TLA7F70 with appropriate option.

TLA700 Series - TLA7Dx/Ex Digitizing Oscilloscope Modules

No PowerFlex upgrades are available.

If you have any questions about what upgrades you may need, or any applications or technical questions, you can contact the Tektronix Technical Support Center by either phone or e-mail:

- ▶ Inside US: 1-800-TEK-WIDE (1-800-835-9433, ext. 2400) (6AM-5PM PST)
- ▶ Outside US: (503) 627-2400 (6AM-5PM PST)
- ▶ E-mail: tm_aaa_supp@tek.com

TLA Family Processor/Bus Support Upgrade Kits

In order to provide the broadest array of processor and bus support, Tektronix works closely with the leading semiconductor vendors and a variety of partners to bring you support in the most timely manner for the TLA family of logic analyzers. This support is divided into two categories:

- 1) Factory-developed TMSxxx packages, and
- 2) Third-party-developed packages

TMSxxx Processor/Bus Support Packages

For each TMSxxx package shown, the "TLA App SW Version Number" column indicates the version of TLA application software that was used to create the pre-defined setups and is the minimum version required. If your TLA mainframe has an earlier version of the TLA application software, you will need to upgrade to the latest version of the TLA application software. The "Probe Adapter Part Number" column indicates the current production version. If you have a 32DMxxx (Prism 3000) or a 92DMxxx (DAS9200/TLA500) from one of our classic logic analyzers, the probe adapter you have may be the same probe adapter being used in the TMSxxx version. If this is the case, you can order the appropriate TMFxxx kit to upgrade your support.

Due to intellectual property issues, for any Intel IA-32 or IA-64 support that is not listed, contact your local Tektronix account manager for more information on available upgrades.

TLA Family Upgrade Guide

► TLA Family Processor/Bus Support Upgrade Kits

Package	Processor/Bus	TMS Version	TLA App SW Version Number	TMFxxx Kit (If Available)	Probe Adapter Part Number
TMS101	8086/88	V1.0	V1.0	TMF101	010-0547-00
TMS102	80186/188	V1.0	V1.0	TMF102	010-0543-00 671-2577-00
TMS103	80286	V1.0	V1.0	TMF103	010-0538-00 671-2486-00
TMS104	i386DX	V1.0	V1.0	TMF104	010-0532-00
TMS105	i386SX	V1.0	V1.0	TMF105	671-2441-00
TMS106	i386EX	V1.0	V1.0	TMF106	010-0580-00
TMS107	i486	V1.0	V1.0	TMF107	010-0571-00
TMS109A	Socket 7	V1.1	V2.0		671-4737-00
TMS110	P6	V1.01	V1.0	TMF110	010-0596-00
TMS111	Klamath	V1.02	V2.0		010-0604-00
TMS112	Deschutes	V1.2	V2.0	TMF113	Slot 1: 671-4131-00 Slot 2: 671-4132-00
TMS140	8031/51	V1.0	V1.0	TMF140	010-0548-00
TMS141	8096/C196	V1.0	V1.0	TMF141	010-0545-00 671-2559-00
TMS142	80C196Nx	V1.0	V1.0	TMF142	010-0598-00 010-0599-00
TMS143	MCS251	V1.0	V1.0	TMF143	010-0617-00
TMS144	MCS296	V1.0	V1.0	TMF144	010-0618-00 103-0390-00
TMS161	i960CA	V1.0	V1.0	TMF161	010-0512-00 010-0513-00
TMS163	i960Jx	V1.01	V1.0	TMF163	010-0597-00
TMS164	i960Hx	V1.01	V1.0	TMF164	010-0600-00
TMS165	i960Rx	V1.10	V2.0	TMF165	010-0608-00
TMS201	68000/10	V1.0	V1.0	TMF201	010-0533-00 010-0534-00 671-2993-00 671-2351-00
TMS202	68020	V1.0	V1.0	TMF202	010-0529-00 010-0530-00
TMS203	68030	V1.0	V1.0	TMF203	010-0528-00
TMS204	68040	V1.0	V1.0	TMF204	010-0551-00
TMS205	68060	V1.0	V1.0	TMF205	010-0581-00
TMS220	MCF5202/03	V1.0	V1.0	TMF220	010-0609-00 103-0411-00
TMS221	MCF5204	V1.0	V1.0	TMF221	010-0615-00 103-0411-00
TMS222	MCF5206/E	V1.1	V2.0	TMF222	010-0620-00 103-0408-00 010-0634-00
TMS230	MMC2107	V1.01	V3.2		
TMS231	MC3X0	V1.01	V3.2		
TMS241	68HC12	V1.01	V1.0		N/A
TMS260	CPU32/68340	V1.0	V1.0	TMF260	010-0569-00
TMS261	68360	V1.0	V1.0	TMF261	010-0594-00
TMS420	R3051/81	V1.0	V1.0	TMF420	010-0563-00 671-2791-00

Package	Processor/Bus	TMS Version	TLA App SW Version Number	TMFxxx Kit (If Available)	Probe Adapter Part Number
TMS440	SH3	V1.0	V1.0	TMF440 103-0415-00	010-0621-00
TMS480	29030/35/40	V1.0	V1.0	TMF480	010-0952-00
TMS501	Z80	V1.0	V1.0	TMF501	010-0536-00
TMS531	PPC403GA/GC/GCX	V1.0	V2.0		N/A
TMS532	PPC405GP	V1.0	V3.2		
TMS540	PPC60x	V1.0	V1.0	TMF540	010-0588-00 103-0398-00 103-0369-01 103-0399-01
TMS541	PPC750/740	V1.01	V1.0		N/A
TMS545	PPC7400	V1.0	V2.0		N/A
TMS550	MPC505	V1.0	V1.0	TMF550	010-0611-00 103-0408-00
TMS560	MPC860	V1.1	V1.0		N/A
TMS561	MPC850/823/801	V1.01	V2.0		N/A
TMS562	MPC8260 (Power QUICC II)	V1.1	V2.0		N/A
TMS562A	MPC8260ITR	V1.1	V3.2		N/A – Software only
TMS600	SAB-C167	V1.0	V1.0	TMF600	010-0610-00 103-0407-00
TMS702	TMS320C3x	V1.0	V1.0	TMF702	010-0552-00
TMS710	TMS320C6201	V1.11	V2.0	TMF710	N/A
TMS801	APIC	V1.0	V1.0	TMF801	010-0587-01 174-3477-00
TMS802	SCSI Bus	V1.0	V1.0	TMF802	010-0574-00 012-1453-00 012-1454-00 012-1456-00
TMS806	AGP2X Bus	V1.01	V2.0	TMF806	671-4129-00 010-0612-00
TMS807	AGP4X-Timing Bus	V1.03	V2.0		010-0635-00
TMS808	AGP4X State & Timing	V1.050	V3.1		010-0629-01
TMS810	Rambus	V2.0	V2.0		671-5042-00
TMS871	IEEE 1394 Firewire	V1.01	V3.0		119-6253-00 012-1567-00

Please visit www.tektronix.com/processors for the most current list of available processor and bus supports.

Third-party Processor/Bus Support Packages

For any non-TMS support package or if you have any questions about what upgrades you may need, or any applications or technical questions, please contact the Tektronix Technical Support Center by either phone or e-mail:

- ▶ Inside US: 1-800-TEK-WIDE (1-800-835-9433, ext. 2400) (6AM-5PM PST)
- ▶ Outside US: (503) 627-2400 (6AM-5PM PST)
- ▶ E-mail: tm_aaa_supp@tek.com

TLA Family Upgrade Guide

► TLA Family Mainframe Trade-in Program and TLA Documentation

TLA Family Mainframe Trade-in Program

If you currently own a TLA704/714 or TLA711/720 mainframe and need the capabilities of the TLA715 or TLA721 mainframe, you can trade-in your old mainframe and receive a trade-in credit towards the purchase of a new TLA715 or TLA721 mainframe. In addition, Tektronix has a variety of trade-in programs for selected logic analyzers. Please contact your local Tektronix account manager for further details.

If you have any questions about what upgrades you may need, or any applications or technical questions, you can contact the Tektronix Technical Support Center by either phone or e-mail:

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TLA Family Documentation

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- E-mail: tm_aaa_supp@tek.com

Below is a list of the current TLA Family documentation as of the Version 4.1 TLA Application SW release:

TLA Documentation	Tek P/N
TLA Family User	071-0863-02
TLA Application SW On-Line-Help	On TLA Hard Disk
PatGen Application SW On-Line-Help	On TLA Hard Disk
TLAScript On-Line Help	On TLA Hard Disk
TPI On-Line-Help	On TLA Hard Disk
PPI On-Line Help	On TLA Hard Disk
FW Loader On-Line-Help	On TLA Hard Disk
MF Utils On-Line Help	On TLA Hard Disk
TLA Family User PDF	On TLA Hard Disk
TPI PDF	On TLA Hard Disk
PPI PDF	On TLA Hard Disk
TLA Application SW Release Notes	On TLA Hard Disk
PatGen Application SW Release Notes	On TLA Hard Disk
TLAVu Software Readme	On TLA Hard Disk
PatGenVu Software Readme	On TLA Hard Disk
P6417/18 Logic Analyzer General-purpose Probes	071-0567-00
P6434 Logic Analyzer Probe	070-9793-02
P6810/6860/6880 Probe Instruction Manual	071-1059-00
PatGen Probe User Manual	071-0976-00
TLA7QS Quickstart Training	070-9717-05
TLA7QS Quickstart Technical	070-9716-00
TLA6UP Field Upgrade Kit	071-0865-02
TLA7UP Field Upgrade Kit	071-0866-02
TLA6Fxx/TLA7Fxx PowerFlex	071-0591-04
TLA60x/61x/62x Rackmount Kit	071-0716-02
TLA720/721/7XM Rackmount Kit	071-0897-00
TLA60x/61x/62x Logic Analyzer Service	071-0728-01
TLA715 Dual Monitor Portable Mainframe Service	071-0913-00
TLA721/7XM Service	071-0912-00
TLA7Nx/Px/Qx LA Module Service	071-0864-01
TLA7Axx LA Module Service	071-1043-00
TLA7PG2 PatGen Module Service	071-0714-01
TLA7Dx/7Ex DSO Module Service	070-9780-03
TLACAL2 PV-ADJ Instruction Sheet	071-1125-00

TLA Family Software Support User Library

Tektronix has a large library of support software for the TLA600 and TLA700 Series logic analyzers. This software is free-of-charge upon request from your local Tektronix account manager or from the Tektronix Customer Support Center. Examples include:

- ▶ **Processor/Bus Support** In addition to its factory-developed TMSxxx processor/bus support, Tektronix has a wide variety of third-party developed processor/bus support. If you need a particular processor/bus support package customized for your application, be sure to contact your local Tektronix account manager or the Tektronix Customer Support Center to see if your particular device is supported.
- ▶ **PACQMEM (Packed Acquisition Memory)** Oftentimes, an application (e.g., video, radar, disk drives, serial communications, etc.) would benefit from trading channels for memory depth. Tektronix offers a special support package for the TLA family of logic analyzers called PACQMEM. PACQMEM comes in a wide variety of channel and memory configurations. Depending upon the width of the TLA logic analyzer, channels can be traded for memory at up to a 16-to-1 ratio. As an example, a single TLA7Q4 136 channel logic analyzer module with 64 Mb could provide 1/16 or 8 channels at 16x the memory depth for a total of 1 GB. A merged set of three TLA7Q4 136 channel logic analyzer modules could provide 24 channels at 1 GB memory depth.
- ▶ **TPI (TLA Programmatic Interface) Software Examples** In addition to the TLAScript capability provided in all TLA Application Software, Tektronix has several examples on how to effectively use TPI to remotely control your TLA logic analyzer from Microsoft Excel, National Instrument's LabView, MatLab, etc.
- ▶ **TLA-GPIB** While the TLA logic analyzers have LAN, there are occasions where control via GPIB is required. TLA-GPIB makes the TLA logic analyzers GPIB-programmable using the TLA Programmatic Interface (TPI), which is based upon Microsoft COM/DCOM. All TLA Series TPI functions are supported, including Load or Save: System, Module and Trigger setups; Start, Stop or Get system run status; Get module configurations; Get acquired data; Export data to the TLA700 file system; and Transfer any kind of file to and from the TLA file system. TLA-GPIB is available as an Excel 97 spreadsheet or as a compiled Visual Basic program.
- ▶ **TLA Serial Analysis** Convert serial data streams to a parallel format for easy triggering and display.

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- ▶ E-mail: tm_aaa_supp@tek.com

Value Protection Plan

For those "classic" logic analyzers that no longer have the performance to make those demanding measurements, you can still recover some of their value by trading them in for credit towards the purchase of a new TLA logic analyzer. The unit being traded in doesn't even need to be in working condition! Please contact your local Tektronix account manager for trade-in details.

If you have any questions about what upgrades you may need, or any applications or technical questions, you can contact the Tektronix Technical Support Center by either phone or e-mail:

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- ▶ Outside US: (503) 627-2400 (6AM-5PM PST)
- ▶ E-mail: tm_aaa_supp@tek.com

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For other areas contact Tektronix, Inc. at: 1 (503) 627-7111

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For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

Please visit "Resources For You" on our Web site at www.tektronix.com



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