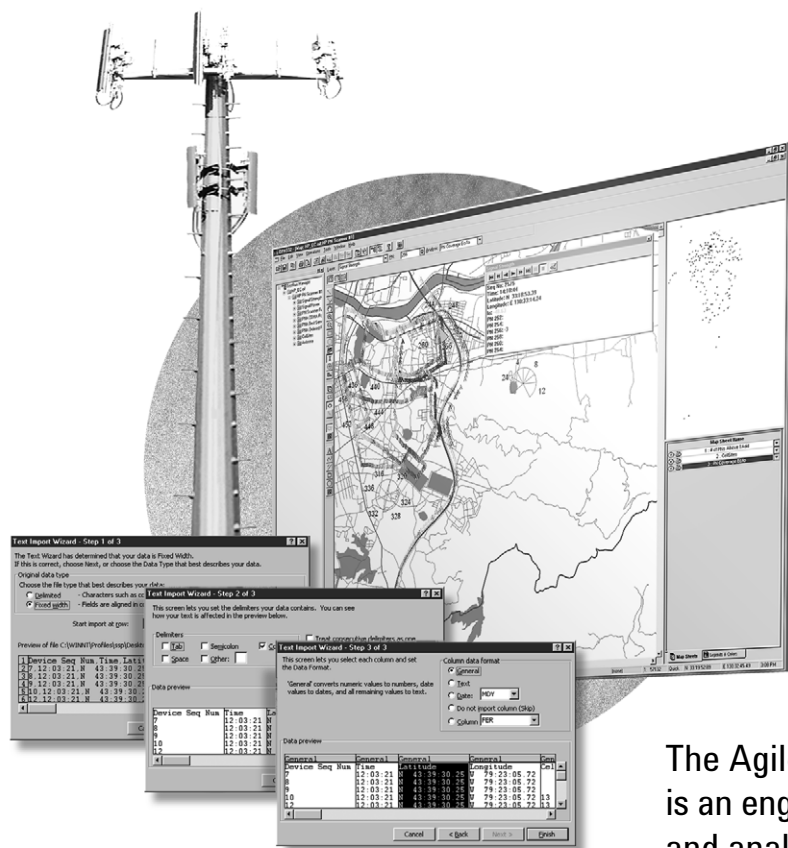# Agilent
E6481A OPAS32
Engineering Information Management and Analysis Software

Configuration Guide

The Agilent Technologies E6481A OPAS32 is an engineering information management and analysis software tool, designed to help engineers effectively review and troubleshoot complex wireless data. The package supports the following major analog and digital wireless technologies: AMPS, TACS, PDC, IS-136, iDEN, GSM, DCS 1800, PCS 1900, GPRS, CDMA, JCDMA, cdma2000, and W-CDMA.

∴∵ **Agilent Technologies**

The Agilent Technologies E6481A is post-processing software for wireless optimization.

The E6481A analyzes survey data generated by any of Agilent's wireless drive test data collection tools. It can also analyze data from several other network drive test sources. It can help you with the following engineering tasks:

- benchmarking and comparing quality of service on competing networks
- identifying and managing interference
- troubleshooting call processing problems
- automatic processing of complex measurement data into reports

The system requires a PC with Windows® 95, 98, 2000, NT or ME running.

The OPAS32 system is available in the following configuration:

- annual, single (1) technology license
- annual, multiple (2+) technology license
- perpetual, single (1) technology license
- perpetual, multiple (2+) technology license

The purpose of this configuration guide is to assist you in ordering the correct system configuration for your application. It is designed to be used in conjunction with the Agilent OPAS32 Product Overview (literature number 5988-0247EN). This document is divided into several parts:

Part 1: Basic description of product configuration

The E6481A OPAS32 network analysis software can be configured to supply exactly the functionality you require to process the data you want. As your requirements chance, you can easily upgrade the post processing functionality by adding options.

1. Choose the license term you want (Option 201, 202, 401, 402, 501, 502).

2. If ordering a single technology system choose the technology you want from option 1xx. If ordering a multiple technology system, do not order 1xx options.

3. Choose the license key type you want (Option 301, 302).

4. Choose reverse link NEM licensing options.

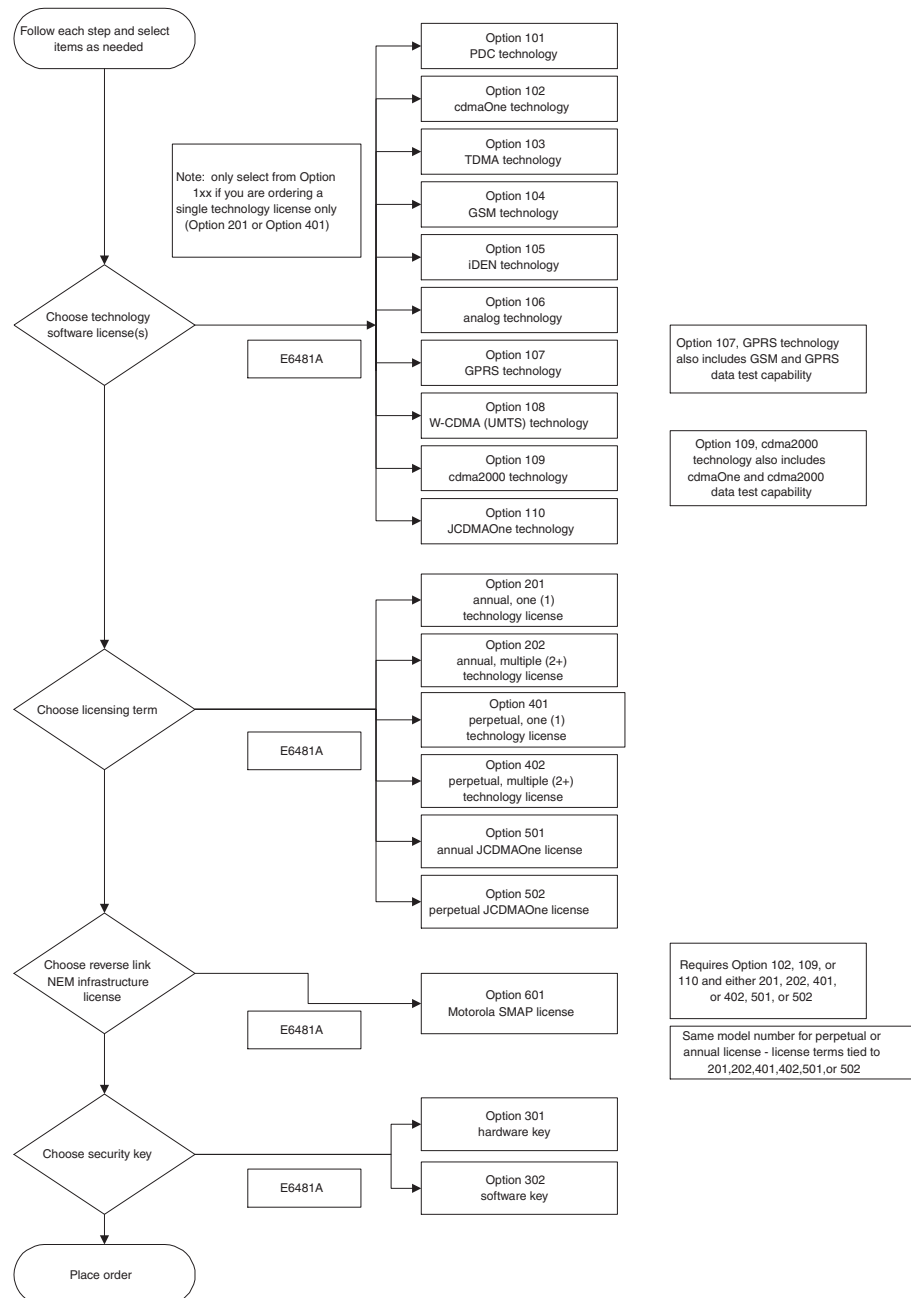Figure 1 illustrates the process of choosing the specific options to order with OPAS32.

Figure 1. Ordering decision process

Part 2: Software options

This part of the document assumes that you are creating a new system. If you are adding functionality to an existing system, refer to *Part 3: Upgrading existing systems.*

There are ten basic software license options; each software license relates to a particular type of technology. If you want to analyze data collected from more than one network employing different technologies, you need to purchase the multiple technology license (Options 202 and 402).

When selecting a mutliple technology license (Option 202 or 402), you do not need to select any technology options (1xx). A multiple technology license will include all 1xx options.

When selecting a single technology license (Option 201 or 401), you need to specify which technology option (1xx) to include.

The E6481A is the system model number used for OPAS32 licenses. The following options are available for OPAS32 for new orders:

Agilent E6481A Technology options

Option	Description
Option 101	PDC network analysis software license
Option 102	CDMA network analysis software license
Option 103	TDMA network analysis software license
Option 104	GSM network analysis software license
Option 105	iDEN network analysis software license
Option 106	ANALOG network analysis software license
Option 107	GPRS network analysis software license
Option 108	W-CDMA (UMTS) network analysis soft–ware license
Option 109	cdma2000 network analysis software license
Option 110	JCDMAOne network analysis software license

Once you have selected the software license to enable the analysis you want, you need to purchase the appropriate license term. There are two classes licensing terms: annual and perpetual.

Agilent E6481A Software license options

Option	Description
Option 201	annual OPAS32 license, single technology
Option 202	annual OPAS32 license, multiple technology
Option 401	perpetual OPAS32 license, single technology
Option 402	perpetual OPAS32 license, multiple technology
Option 501	annual OPAS32 JCDMAOne license
Option 502	perpetual OPAS32 JCDMAOne license

Note: When selecting JCDMAOne, only software license Options 501 or 502 are applicable.

Agilent E6481A security key options:

Option	Description
Option 301:	hardware based security key
Option 302:	software based security key

Agilent E6481A NEM reverse link license option:

Option	Description
Option 601:	Motorola SMAP R16 reverse link data license

Table 1 illustrates the requirements for software license options for OPAS32.

Option	Requirements for new orders	Options that shouldn't be ordered	One-year response center sup–port, one-year software update service and startup assistance included
201	one of the following: 101, 102, 103, 104, 105, 106, 107, 108, or 109, and one of option 3xx to be ordered	Options 5xx and 110 should not be ordered	included
202	one of option 3xx to be ordered	Option 1xx should not be ordered, since all 1xx options are included with a multiple technology license. Option 5xx should not be ordered with Options 202.	included
401	one of the following: 101, 102, 103, 104, 105, 106, 107, 108, or 109, and one of option 3xx to be ordered	Options 5xx and 110 should not be ordered	included
402	one of option 3xx to be ordered	Option 1xx should not be ordered, since all 1xx options are included with a multiple technology license. Option 5xx should not be ordered with Options 402.	included
501	One of option 3xx to be ordered and one Option 110. *(Note: for JCDMA2000 technology, order Option 109 with Options 201 or 401, and 3xx or order Options 202 or 402 with 3xx.)*	Options: 2xx, 4xx, 101, 102, 103, 104, 105, 106, 107, 108, 109 should not be ordered.	included
502	One of option 3xx to be ordered *(Note: For JCDMA2000 technology, order Option 109 with Options 201 or 401, and 3xx or order Options 202 or 402 with 3xx.)*	Only Option 110 should be ordered. Options: 2xx, 4xx, 101, 102, 103, 104, 105,106, 107, 108, 109 should not be ordered.	included

Table 1. Agilent E6481A ordering requirements for software license options

Please note: when selecting JCDMAOne only software license Options 501 or 502 are applicable.

Table 2 illustrates the requirements for the NEM reverse link data option.

Option	Requirements for new orders (requires only one of the following in the list below)
601	Option 201, either 102, 109, or 110, and either 301 or 302
	Option 202 and either 301 or 302
	Option 401, either 102, 109, or 110, and either 301 or 302
	Option 402 and either 301 or 302
	Option 501 and 110 and either 301 or 302
	Option 502 and 110 and either 301 or 302

Table 2. Agilent E6481A ordering requirements for the NEM reverse link data option

Please note: Option 601 is considered an addition to the software platform - the license term applies based on the license term options. Option 601 is an annual license when concurrently ordering Options 201, 401, or 501. Option 601 is considered a perpetual license when concurrently ordering Options 202, 402, or 502.

Each software order includes the following components:
• CD with software and documentation
• teach-yourself OPAS32 self training guide
• one of either:
    • parallel port hardware key and a certificate with a license number (for hardware based licensing only)
    • a certificate with a license key number and a telephone number to call support (this is to issue a software based license which is tied to a specific computer for software based licens–ing only)

Part 3: Upgrading existing systems

The Agilent E6481A OPAS32 engineering analysis solution is a scaleable system. You can start with one set of capability and integrate additional capability later. An example includes:

- start with a cdmaOne system and upgrade to a cdma2000 + data test system (includes cdmaOne)
- start with a GSM system and upgrade to a GPRS + data test system (includes GSM)
- start without reverse link functionality and upgrade to include reverse link functionality (where applicable)
- start with a perpetual license and upgrade to get the latest software updates

This part of the document assumes that you are upgrading an existing system. If you are creating a new system, refer to Part 2: Software Options.

The E6481A is the system model number used for OPAS32 licenses. The following options are available for upgrading OPAS32 technologies:

Agilent E6481A
- **Option 702**: upgrade from cdmaOne to cdma2000 + data test (includes cdmaOne)
- **Option 704:** upgrade from GSM to GPRS + data test (includes GSM)

For Option 702, the customer must provide proof of purchase of a cdmaOne OPAS32 system. Option 702 can upgrade technologies for either an annual license or a perpetual license. The license term does not change when upgrading to a cdma2000 license. The license term is determined through the original order of options 201, 202, 401, 402, 501, or 502. For annual licenses, this does not extend the yearly license. The original license term still applies. For perpetual licenses, this does not include software updates or call center support. For additional software updates beyond the cdma2000 updates and for call center support, order from the support options.

For Option 704, the customer must provide proof of purchase of a GSM OPAS32 system. Option 704 can upgrade technologies for either an annual license or perpetual license. The license term does not change when upgrading to a GPRS license. The license term is determined through the original order of options 201, 202, 401, 402, 501, or 502. For annual licenses, this does not extend the yearly license. The original license term still applies. For perpetual licenses, this does not include software updates or call center support. For additional software updates beyond the GPRS update and for call center support, order from the support options.

Both options come with the following components:

- CD with software and documentation
- a certificate with your license key number and a telephone number to call support (this is to issue a software based license which is tied to a specific computer (for software based licensing only) or to modify the customers hardware based license (hardware based licensing keys can be upgraded by telephone or e-mail)

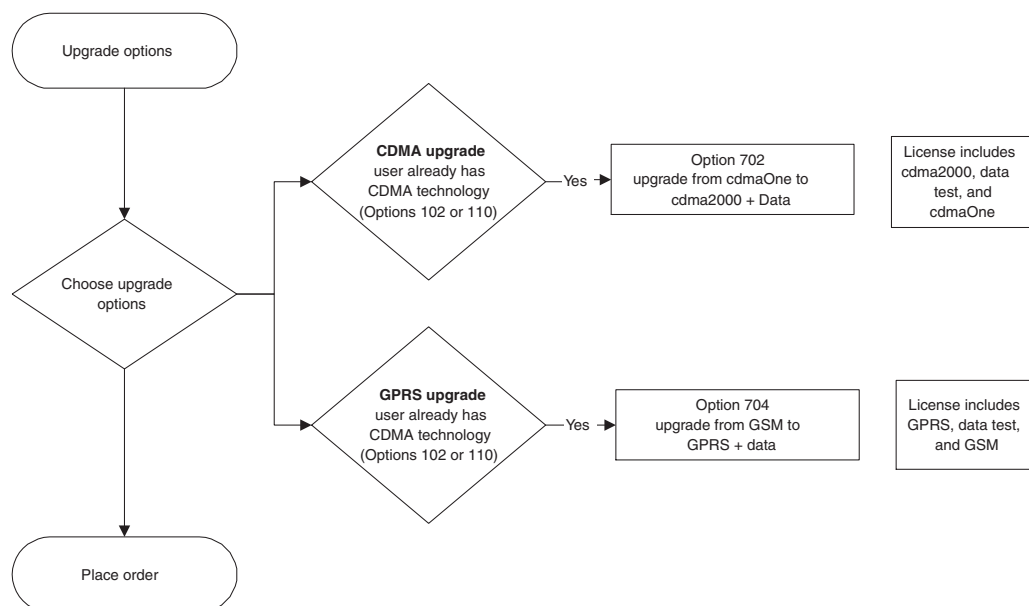Figure 2 illustrates the process of choosing the specific options to order when you are upgrading OPAS32.

Figure 2. Upgrade decision process

In addition, the following options can be used to add on to existing systems:

Agilent E6481A
- **Option 601:** Motorola SMAP R16 reverse link data license

Option 601 for upgrade orders requires proof of either of the following purchases:

- Option 201 either 102, 109, or 110, and either 301 or 302
- Option 202 and either 301 or 302
- Option 401, either 102, 109, or 110, and either 301 or 302
- Option 402 and either 301 or 302
- Option 501 and 110 and either 301 or 302
- Option 502 and 110 and either 301 or 302

Option 601 is considered an addition to the software platform - the license term applies based on the license term options. The license term does not change when upgrading to add reverse link NEM functionality. The license term is determined through the original order of options 201, 202, 401, 402, 501, or 502. For annual licenses, this does not extend the yearly license. The original license term still applies. For perpetual licenses, this does not include software updates or call center support. For additional software updates beyond the SMAP update and for call center support, order from the support options.

Support options

If the customer has purchased an annual license, one-year software updates and one-year response center support are included in the annual purchase. If the customer has purchased a perpetual license, one-year software updates and one-year response center support are included for the first year. Beyond the first year, the following software options are available:

Agilent E6481A
- Option 401 H00: perpetual, single (1) technology license, one year response center support
- Option 401 UAF: perpetual, single (1) technology license, software updates, license to use
- Option 402 H00: perpetual,multiple (2+) technology license, one year response center support
- Option 402 UAF: perpetual, multiple (2+) technology license, software updates, license to use
- Option 502 H00: perpetual, JCDMAOne license, one-year response center support
- Option 502 UAF: perpetual, JCDMAOne license, one-year response center support

Part 4: Ordering examples

Part 4.1: Typical new order - ordering examples
Table 3 lists several typical OPAS32 (E6481A) configurations along with the products and options that need to be ordered for each configuration. This is not a complete list of all possible configurations, but it uses typical configurations to illustrate the ordering process.

Desired system capability	What to order	Description	Quantity
Only one technology needed. cdma2000 technology desired. Annual (one-year) license term. software based key to lock license to a computer - no dongle.	**Agilent E6481A** Option 109 Option 201 Option 302	OPAS32 cdma2000 technology license annual, one (1) technology license software key	1 1 1 1
Only one technology needed. iDEN tech–nology desired. Perpetual license term (no expiration date to current version of the software). If you want to move license from one computer to another a hardware license key is needed.	**Agilent E6481A** Option 105 Option 401 Option 301	OPAS32 iDEN technology license perpetual, one (1) technology license hardware key	1 1 1 1
Multiple technology licenses needed for GSM and UMTS technologies. Annual license (one-year) term. Software based key to lock license to a specific computer - no dongle.	**Agilent E6481A** Option 202 Option 302	OPAS32 annual, multiple (2+) technology license software key	1 1
Only one technology needed. cdma2000 technology desired. Reverse link support for Motorola SMAP files. Annual license (one- year term). Hardware based key so license can be moved from one computer to another.	**Agilent E6481A** Option 109 Option 201 Option 301 Option 601	OPAS32 cdma2000 technology license annual, one (1) technology license hardware key Motorola SMAP R16 license	1 1 1 1 1
Multiple technology licenses needed for competitive comparison. Reverse link support for Motorola SMAP files. Perpe–tual license and software key desired.	**Agilent E6481A** Option 402 Option 302 Option 601	OPAS32 perpetual, multiple (2+) technology license software key Motorola SMAP R16 license	1 1 1 1

Table 3. OPAS32 - typical ordering configurations for new orders

Part 4.2: Upgrade and support ordering examples
Table 4 lists several typical E6481A OPAS32 configurations for upgrades and support along with the products and options that need to be ordered for each configuration. This is not a complete list of all possible configurations, but it uses typical configurations to illustrate the ordering process.

Desired system capability	What to order	Description	Quantity
Customer already has a perpetual single technology license. One-year bundled support and software updates has expired. Desire new software updates.	**Agilent E6481A** Option 401 H00 Option 401 UAF	OPAS32 perpetual, single (1) technology license - one-year response center Support perpetual, single (1) technology license - software updates, license to use.	1 1 1
Customer already has a perpetual multiple technology license. One-year bundled support and software updates has expired. Desire new software updates.	**Agilent E6481A** Option 402 H00 Option 402 UAF	OPAS32 perpetual, multiple (2+) technology license - one-year response center support perpetual, multiple (2+) technology license - software updates, license to use.	1 1 1
Customer already has a perpetual cdmaOne icense and desires to upgrade to cdma2000 functionality.	**Agilent E6481A** Option 702	OPAS32 upgrade from cdmaOne to cdma2000 + data test	1 1
Customer already has an annual GMS license and desires to upgrade to GPRS functionality.	**Agilent E6481A** Option 704	OPAS32 upgrade from GSM to GPRS + data test	1 1 1
Customer already has an annual cdma license and one-year license term is about to or has expired. Customer desires to upgrade to cdma2000 func–tionality. Customer desires to continue using a hardware based licensing scheme. (Note: Upgrade here is considered pur–chasing a new annual license consisting of cdma2000 technology).	**Agilent E6481A** Option 109 Option 201 Option 301	OPAS32 OPAS2000 technology annual, single (1) technology license hardware license key	1 1 1 1
Customer already has a CDMA license and has Motorola NEM equipment. Desires to upgrade to include reverse link logging SMAP capability.	**Agilent E6481A** Option 601	OPAS32 Motorola SMAP reverse link data license	1 1
Customer already has a perpetual single technology GSM license and desires to upgrade to GPRS technology. Customer's software update and call center support services are about to or have expired.	**Agilent E6481A** Option 704 Option 401 H00 Option 401 UAF Option 401 UAF	OPAS32 upgrade from GSM to GPRS + data test Perpetual, Single (1) Technology license – one-year response center support perpetual, single (1) technology license - software updates, license to use	1 1 1 1 1

Table 4. OPAS 32 - typical order configurations for upgrades

Additional training

You can order additional OPAS32 training at your location or at Agilent's site. This encompasses two days of training for up to six people.

Recommend PC requirements
- Pentium processor 300 MHz (or faster)
- 64 MB RAM (or more)
- 6.4 GB hard drive (data dependent)
  (Note: loading map data onto the hard drive, instead of running off the CD-ROM drive, will achieve better performance)
- 32X CD-ROM drive
- MS Windows NT (4.0 or later) or Windows 95

Minimum
- Pentium processor 133 MHz
- 32 MB RAM
- 6.4 GB hard drive (data dependent)
  (Note: loading map data onto the hard drive, instead of running off the CD-ROM drive, will achieve better performance)
- 8X CD-ROM drive
- MS Windows NT" (4.0 or later) or Windows 95

Additional literature

Product overviews
E6481A OPAS32 Product Overview 5988-0247EN
E7475A GSM Drive Test Product Overview 5980-0439
E7476A W-CDMA Drive Test Product Overview 5980-2132E
E7477A cdma2000 Drive Test Product Overview 5980-2131E
E7478A GPRS Drive Test Product Overview 5980-2375E
Indoor Wireless Measurement Systems Product Overview 5968-8691E
Wireless Data Measurement Product Overview 5980-2310E

Configuration guides
E7475A GSM Drive Test Configuration Guide 5968-5563E

Technical specifications / data sheets
E7475A GSM Drive Test Data Sheet 5968-5564E
E7477A cdma2000 Drive Test Data Sheet 5980-2306EN
E7478A GPRS Drive Test Data Sheet 5988-1506EN
Wireless Data Measurement Data Sheet 5988-1507EN

Product Notes
Using E7473A CDMA Drive Test System 5988-0896EN

Agilent Technologies' Test and Measurement Support, Services, and Assistance
Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

Our Promise
Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

Your Advantage
Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

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(fax) (81) 426 56 7840

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