

Agilent GS-8830 Series RF Design Verification Test Systems

GS-8832 2G RF Design Verification Test GS-8833 3G RF Design Verification Test GS-8834 cdma2000®/1xEV-D0 RF Design Verification Test GS-8835 UMTS (2G+3G) RF Design Verification Test

Data Sheet



GS-8830 Series RF Design Verification Test

System

- A single platform for
- GSM, GPRS, EGPRS, and DARP (Bands GSM 850, GSM 900, DCS 1800, and PCS 1900)
 - 3GPP TS51.010-01. Section 12, 13, 14, and 21.
- W-CDMA, HSDPA, and HSUPA (Bands I to IX)
 - 3GPP TS34.121-1. Section 5, 6, 7, 9, and 10.
 - $\circ~$ Rel.99, Rel.5, Rel.6, and Rel.7
- cdmaOne, cdma2000, 1xEV-DO, and 1xEV-DO Rev.A (Band Class
- www.Data30,19,13,14,6Fand 15) o 3GPP2 C.S0011-A1 and 3GPP2 C.S0033 V2.0

The GS-8830 Series is designed for mobile phone design verification and pre-conformance testing. In the design verification environment, tests can be easily configured or modified to suit your specific test requirements.

The GS-8830 Series is one of the families of scalable systems designed on the GS-8800 platform of test systems covering the entire product lifecycle:

- GS-8830 Series design verification
- GS-8850 Series conformance
- GS-8810 Series manufacturing, quality assurance and R&D entrylevel users.

The GS-8830 can be upgraded to the GS-8850 to perform conformance test, or scaled to the GS-8810 to support manufacturing and quality assurance test applications by re-using the GS-8830 hardware and software. The GS-8830 can also be easily upgraded to support new wireless formats to keep up to date with the latest technologies and safeguard your investment.



GS-8830 Series RF Design Verification Test System Overview

The GS-8830 Series RF design verification test (DVT) systems are full-featured test systems for design verification and pre-conformance testing of multiple mobile technology formats. The GS-8830 Series systems perform high accuracy measurements and provide excellent repeatability and performance test. The multitechnology test platform supports GSM/GPRS/EGPRS (3GPP TS51.010-01), W-CDMA/HSDPA/HSUPA (3GPP TS34.121-1), and cdmaOne/ cdma2000/1xEV-D0/1xEV-D0 Rev.A (3GPP2 C.S0011-A1 and 3GPP2 C.S0033 V2.0).

Agilent GS-8830 Series systems are designed to meet existing radio format requirements while providing a flexible upgrade path for future formats.

The system architecture makes it easy to modify or scale the system configuration to provide the test capabilities needed for the different stages of your product's life cycle and perform conformance test, and manufacturing or quality assurance test applications.

Plus, the system's single-platform scalability for multiple radio technology formats, bands, and product life-cycle safeguards your investment.

GS-8830 Series System Characteristics

Flexibility

The GS-8830 Series supports multiple formats and bands

- GSM/GPRS/EGPRS (GSM 850, GSM 900, DCS 1800, PCS 1900)
- W-CDMA/HSDPA/HSUPA (Bands I to IX)
- cdmaOne/cdma2000/1xEV-D0/ 1xEV-D0 Rev.A (Band Class 0, 1, 3, 4, 6 and 15)

In addition, the flexible measurement software provides users full control over parameters, as well as the ability to stress designs through a broad range of frequencies and power levels.

Easy-to-use UI (user interface)

GS-8830 Series systems are equipped with an easy-to-use UI, which makes it simple for end users to change test parameters and run design verification tests.

Scalability and upgradability

The GS-8830 2G, 3G, and cdma2000/1xEV-DO systems can each be easily upgraded to include other radio formats on the same hardware platform by adding the necessary radio format software option.

In addition, the systems can be scaled up to the GS-8850 for conformance testing, or scaled to the GS-8810 to support manufacturing and quality assurance testing.

Accuracy and repeatability

GS-8830 Series systems provide accurate measurements and repeatable results due to equipment stability and complete system calibration. They leverage the measurement speed, accuracy, and repeatability strengths of Agilent products; creating reliable, high performance design verification test systems.

Comprehensive test coverage

The GS-8830 Series systems cover a large array of test cases specified in 3GPP TS51.010-01, 3GPP TS34.121-1, 3GPP2 C.S0011-A1, and 3GPP2 C.S0033 V2.0. Agilent is committed to supporting more test case sections and enhancing test coverage as technology standards evolve.

www.DataSheet4U.com

Hardware Architecture

The GS-8830 base system is comprised of multiple racks (1.6 m in height) with integrated test equipment and test software.

The base or 'standard' system consists of:

- 8960 Series 10 (E5515C) wireless communications test set
- E4445A spectrum analyzer
- E4438C digital signal generator
- E8257D microwave generator
- 66311B power supply
- SR5500 fading simulator
- N1962A GSM filter module
- N1961A RF interface box
- E4418B single channel power meter
- E9304A (H18) 9KHz-18GHz Power sensor
- Industrial PC
- Wireless test manager software
- GS-8830 measurement software
- GS-883x calibration software
- GS-883x data viewer software

Optional 'add-on' components include¹:

- Plus 1
 - Anite fader adapter unit
 - Anite baseband processor
- Plus 2
 - o Anite fader adapter unit
 - Two Anite baseband processors
 - One additional 8960 Series 10 (E5515C) wireless communications test set
 - Anite CRMP/combiner
 - N8990A-P06 add-on RF test set

N1961A RF Interface Box

Automated testing is enabled by the N1961A RF interface box, which switches the appropriate instruments to the user equipment (UE) based on a particular test. It consists of functional modules such as a common filter module, reverse power protection module, fading module, maximize input level module, and a GSM/GPRS/ W-CDMA/CDMA filter module. Test procedure automation is achieved with a combination of the RF interface box, automated UE control feature, and the test software.

Software Architecture

The GS-8830 software is based on the Agilent wireless test manager (WTM) platform. GS-8830 software is an enhanced version of GS-8800 software and automates RF parametric tests according to the specified supported standards. The software's great value lies in its functions and features, which are specially designed to enhance the user's R&D design verification test experience.

The software is also designed with a user-friendly graphical user interface (GUI) (see Figure 1). In addition, the GS-8830 software is able to selectively perform subtests for a chosen test step to reduce the time required to identify root-cause failures.

The GS-8830 software automates test execution to enable a large number of test cases to run in a relatively short time frame.

Indigend rank Call by the rest rest rest rest rest rest rest res	F & Ø M ? III ()							REE_0_dBro	
set plan: Specification larget W_06_02_00 Max input CDMA FX Specification larget W_06_02_00 Max input Maximum Input Level BEF (h) None Movinum Input Level Max Sput Incentarity (dB) 0.7 Operation Band T1 for @Max input Indem/3 MMHz) 25 None 0.1 Operation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 None Deparation Band T1 for @Max input Indem/3 MMHz) 25 Parameter Inneti1 Compo Undem/3 MMHz) 25 Mand Index Info Inform Text Inform Maxed "Text Inform Work Inform Maxed W_0.00, 00, 00 In Band Shour Maxed Text Inform "Work Inform None Text Inform Maxed "Text Inform None None Text Inform "Text Inform	Run <u>T</u> est Plan <u>D</u> ef	ne Test Plan	Set Specs/Parameters	Set <u>G</u> lobal Parameters	Ť	Change Configu	ration		
ACDMA RX Image: Second Seco	est plan	Specificatio	ns for test plan step: W_06_03_00) Max Input				10 dB/	·
Maximum Input Level BER [X] None 0.1 Maximum Input Level BER [X] None 0.1 Maximum Input Level BER [X] None 0.1 VCDMA Global Parameter Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None VCDMA Global Parameter Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None VCDMA Global Parameter Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Operation Band Tiror (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Series Tor (Making Intel IGBN 38 MH1) 25 None V0.00, 00, 001 Bit Seris Tor (Making Intel Intel Intel Intel Intel		Specifica	tion Name(s)	Lower	Limit	Upper Limit			
ment tab jan stap: Diperation Band 11 for GM4a singut (Bm/3 84H1); 25 None VCDMA Glob Paresterin WCDMA CPD10 Band Singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None VDB Glob Difference Diperation Band 11 for GM4a singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None VDB Glob Difference Diperation Band 11 for GM4a singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 None Image: Constant and the singut (Bm/3 84H1); 25 Non	/CDMA RX 🔹	Maximum	Input Level BER (%)						
None Operation Band Drove (Makes Input GBm/2 BMH12) 25 None Operation Band Drove (Makes Input GBm/2 BMH12) 25 None Operation Band Trove (Makes Input GBm/2 BMH12) 25 None Operation Band Trove (Makes Input GBm/2 BMH12) 25 None Operation Band Trove (Makes Input GBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_03_00 Max Input (BBm/2 BMH12) 25 None Parameters for test plan step: W_06_00 Max Input (BBm/2 B									
WDDMA CPD10 Bare Station In Departure In Section Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 None Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 25 Image: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz) 1mage: Stating Band 1 for @Mdx input (Bm/2 8MHz)	urrent test plan steps:								
WCDMA CP1010 Base Station Info Operation Band31 for (M4ka Input (Ban/3 BMH12) 25 None WC08.00, 00H Sire Survey Parameters for test plan step: W_06, 03, 00 Max Input 25 None WC08.00, 00H Sire Survey Parameters for test plan step: W_06, 03, 00 Max Input 25 None State Bioching and State									
W (06) (20) 00 Het Sence Deration Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (Makingut (BBm/3 84MHz) 25 None Image: Comparison Band H for (BBm/3 84MHz) 25 None Image: Comparison Band H for (BBm/3 84MHz) 25 Image: Co									
State State <th< td=""><td></td><td>Operation</td><td>Band41^or @MaxInput (dBm/3.8</td><td>34MHz) -25</td><td></td><td>None</td><td>-</td><td></td><td></td></th<>		Operation	Band41^or @MaxInput (dBm/3.8	34MHz) -25		None	-		
W 06 00 000 CS Wolk 00 000 CS W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking and 1 W 06 00 000 Fis Blocking and 1 Wolk 00 000 Fis Blocking 00 Fis Bl								Start 999 MHz	Step 901
W_00_000000000000000000000000000000000		Parameters	for test plan step: W_06_03_00 M	lax Input			1	RBW 30 KHz	VBW 3KH
W_00_0_0001b Blocking International Setup to Complete (ms) Concourte Test W_00_0001b Blocking International Setup to Complete (ms) 3 W_00_0001b Blocking International Setup to Complete (ms) 0 Wight Graph 0n Wight Graph 0n "Save Graph 0n	W_06_05_00B1a Blocking and §	Paramoto	r Mamala)	1) (shuo			1.1		
W_000_0000 Ba RaM ""Field Vision peed 3 ""Test Name None ""Test Name None "W_000_000 Ba RaM "Test Name 0 0 "Wood Not Not Setup to Complete (ms) 0 0 0 "Save Graph 0 0 0 0 "Save Graph 0 0 0 0 0 "Save Graph 0	W_06_05_00B1b Blocking Inbar				te Test				
W_C00_000000000000000000000000000000000								vs Freq Power Trans Meas	Into Loo
WCDAA.CP040 End Cal Image in Maximum fail reports 0 Image in Maximum fail reports 0 Maximum fail reports None Image in Maximum fail reports 0 Image in Maximum fail reports 0 Instrument fail reports None Image in Maximum fail reports 0 Image in Maximum fail reports 0 Instrument fail reports None Image in Maximum fail reports 0 Image in Maximum fail reports 0 Image in Maximum fail reports Image in Maximum fail reports 0 Image in Maximum fail reports 0									
Digdsy Graph On "Save Graph On Save Graph On									
Maximum fail repeats: None Image: State								GSM/(E)GPRS 🛨 GSM	1850
inius text results Freq. 8242 to 848 8 Freq. 8824 to 683 inius text results Ch.128 to 251 Ch.128 to 251 2 3 4 5 6 Yeld = 1002; For Last 10 Veld = 1002; For Last 10 Veld = 1002; For Last 10	Maximum fail repeats None						-	Link (MS Transmit) Downlin	ok IBTS Tran
ious text results ③ ④ ⑤ ⑤ ⑤ ⑤ ③ ③ ⑤ ⑤ ⑤ ⑥ ③ ⑤ ⑤ ⑤ ⑥ ③ ⑤ ⑤ ⑥ ⑥ ③ ⑦ ⑤ ⑥ ⑥ ⑥ ③ ⑦ ⑤ ⑥ ⑥ ⑥ ③ ⑦ ⑦ ⑥ ⑥ ⑧ ⑥ ③ ⑦ ⑦ ⑥ ⑧ ⑧ ⑧ ○ ⑦ ∩ 128 to 251 □ T xRtv Frequency Separal 454Hz □ UFreq □ UCh ○ D Freq □ U									
Image: Second					_			1100.001.001.000000 1100.00	
i • U+req (U-the Q + the Q +	Image: Weight of the second						<u>^</u>	Tx-Rx Frequency Separa	at 454Hz
8242 128 8692	rield = 100% For Last 10						V.	● U-Freq ● U-Ch ● D	-Freq C D
								824.2 128	369.2
	J.			1			11	1 00010 1 120 1 1	I

Figure 1. GS-8830 software GUI overview

www.DataSheet4U.com

¹ These add-ons are necessary to perform more comprehensive performance test requirements in the 3GPP standard, such as transmit diversity mode, and multi-cells configuration. The GS-8830 measurement software provides integrated data collection. Results reporting, saved in a commaseparated value (CSV) format, allow easy sharing with other applications. The viewer software application (see Figure 2), provided as a standard option, allows you to perform off-line graphical analysis on measurement data.

The GS-8830 calibration software provides measurement points to collect path frequency characteristics, ensuring system measurements are within designated accuracy. The operation is simplified with clear instructions displayed on the screen. Calibration results are stored in calibration files and used for all subsequent measurements. Frequent system calibration helps prevent bad cables or worn calibration equipment from jeopardizing the accuracy and repeatability of your measurement results.

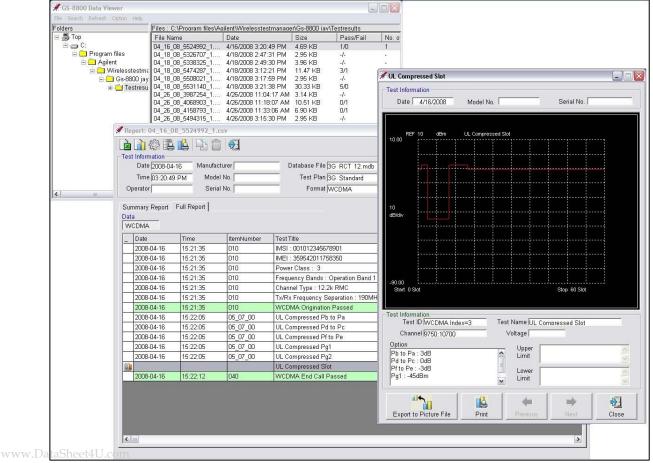


Figure 2. GS-8830 software data viewer

Specifications

Input and output				
RF input/output				
DUT RF IN/OUT	Maximum input: 4 W CW, 0 VDC			
(N1961A front)	Maximum output: Typically +15 dBm,			
	Input impedance: 50 Ohm nominal			
CAL RF OUT	Maximum output: +15 dBm			
(N1961A front)	Maximum reverse power: 1 W CW, 0 VDC			
	Nominal impedance: 50 Ohm			
External reference input				
EXT REF IN	Input frequency: 10 MHz (±5 ppm)			
(Located at rear panel of	Input level range: 0 to +13 dBm			
the rack)	Input impedance: 50 Ohm nominal			
PC/peripheral input/out	put			
USB	Four auxiliary ports are available: one on the front I/O panel, two on the			
	front panel, and one on the rear panel of the industrial PC			
Serial (RS-232)	Two on the front I/O panel, DB9 male connector			
LAN	One on the front I/O panel, one on the real I/O panel (for intra/internet			
	connection) 100 Base-T Ethernet, RJ-45 connector			
GPIB	One on the front I/O panel for additional instrument connection			
Timebase specificatio	n			
Internal timebase	Internal timebase of the 8960/E5515C wireless communications test set is			
	fed to all other instruments in the system. The 8960's internal oven-			
	controlled crystal oscillator's specifications are as follows:			
	• Aging rates: $< \pm 0.1$ ppm per year, $< \pm 0.005$ ppm peak-to-peak per day			
	during any 24-hour period starting 24 hours or more after a cold start			
	• Temperature stability: < \pm 0.01 ppm, frequency variation from +25 °C			
	over the temperature range 0 to +55 $^{\circ}\mathrm{C}$			
	Warm-up time: 5 minutes to be within \pm 0.1 ppm of frequency at one hour,			
	15 minutes to be within ± 0.01 ppm of frequency at one hour			
External timebase	When the external reference signal is present on the EXT REF IN, the			
	system instruments will be locked to it			
D III				
	n path loss calibration interval			
Nominal	One year			
Exception	System path loss calibration must be performed when any of the following			
	events occur in the related signal path:			
	Any instrument RF interconnect cable is replaced			
	Any instrument is calibrated			
	Any instrument is repaired and re-calibrated			
General specifications	3			
Operating conditions				
General	Indoor			
Storage temperature	–20 to +70 °C			
Operating temperature	+10 to +30 °C			
Accuracy specified	+20 to +30 °C (Refer to measurement accuracy specification of individual			
temperature	radio technology for further information)			

oporating contaitions	
General	Indoor
Storage temperature	–20 to +70 °C
Operating temperature	+10 to +30 °C
Accuracy specified	+20 to +30 °C (Refer to measurement accuracy specification of individual
temperature	radio technology for further information)
Humidity (relative)	5 to 80% relative humidity (non-condensing)
Altitude	0 to 2 km
Power requirement	90 to 254 VAC, 50 to 60 Hz, 4118 VA maximum
Rack dimensions	
1.6 m rack (EIA: 32 RU)	1620 mm x 1200 mm x 905 mm (63.8 in x 47.2 in x 35.6 in)
Two/three racks configuration (H x W x D)	When mounting work surfaces, maximum extra-depth is 500 mm (19.7 in)
Weight	
1.6 m rack x 2 racks	505 kg maximum (1,110 lbs)
1.6 m rack x 3 racks	714 kg maximum (1,570.8 lbs)

www.DataSheet4U.com

Regulatory compliance

Safety

IEC 61010-1:2001/EN 61010-1:2001 Canada: CAN/CSA-C22.2 No. 61010-1-04, 206349 USA ANSI/UL 61010-1:2004



Standard limit

IEC 61326:2002/EN 61326:1997+A1:1998+A2:2001+A3:2003 *Reference standards* CISPR 11:1990/EN 55011:1990 Class A Group 1

Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent trained technicians using the latest factory calibration procedures, automated diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

Agilent offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance, onsite education and training, as well as design, system integration, and project management.

For more information on repair and calibration services, go to:

www.agilent.com/find/removealldoubt



Agilent Email Updates

www.agilent.com/find/emailupdates Get the latest information on the products and applications you select.

Agilent Direct www.agilent.com/find/agilentdirect Quickly choose and use your test equipment solutions with confidence.

www.agilent.com

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at: www.agilent.com/find/contactus

Americas

Americas				
Canada	(877) 894-4414			
Latin America	305 269 7500			
United States	(800) 829-4444			
Asia Pacific				
Australia	1 800 629 485			
China	800 810 0189			
Hong Kong	800 938 693			
India	1 800 112 929			
Japan	0120 (421) 345			
Korea	080 769 0800			
Malaysia	1 800 888 848			
Singapore	1 800 375 8100			
Taiwan	0800 047 866			
Thailand	1 800 226 008			
Europe & Middle East				
Austria	01 36027 71571			
Belgium	32 (0) 2 404 93 40			
Denmark	45 70 13 15 15			
Finland	358 (0) 10 855 2100			
France	0825 010 700*			
	*0.125 €/minute			
Germany	07031 464 6333			
Ireland	1890 924 204			
Israel	972-3-9288-504/544			
Italy	39 02 92 60 8484			
Netherlands	31 (0) 20 547 2111			
Spain	34 (91) 631 3300			
Sweden	0200-88 22 55			
Switzerland	0800 80 53 53			
United Kingdom	44 (0) 118 9276201			
Other European Count				
www.agilent.com/find/contactus				
neviaeu. octubel 1, 2000				

Product specifications and descriptions in this document subject to change without notice.

www.DataSheet4U.com

cdma2000 is a registered certification mark of the Telecommunications Industry Association. Used under license. © Agilent Technologies, Inc. 2008-2009 Printed in USA, January 7, 2009 5989-9206FN



Agilent Technologies