

WIRELESS Product Selection Guide 2008



The Right Technology - when you want it!



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Welcome

to our Product Solutions Guide

Wireless operations permit services, such as long range communications, that are impossible to implement with the use of wires. The term is commonly used in the telecommunications industry to refer to telecommunications systems (e.g., radio transmitters and receivers, remote controls, computer networks, network terminals, etc.) which use some form of energy (e.g. radio frequency (RF), infrared light, laser light, visible light, acoustic energy, etc.) to transfer information without the use of wires.

At Livingston we are offering a wide range of Telecom Test and Measurement equipment that will allow you to perform the relevant test for the area you are operating.

Our goal through this pocket guide is to give you a brief on what we have to offer on rent depending on the area of your business with the “Wireless World”

If you can't see what you are looking for or you need clarification on a product please call our Technical Applications Engineers who will be happy to discuss your specific requirement.



FS 11035

ISO 9001:2000



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Amplifier Research - 25S1G4A

RF Amplifier (0.8 - 4.2GHz/25W)

PRODUCT DESCRIPTION

Solid state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required.



- ❖ Frequency range 0.8 - 4.2GHz
- ❖ Output power 25W (CW)
- ❖ Gain 44dB minimum
- ❖ IEEE & RS-232 interfaces

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**Infrastructure Installation &
Commissioning**

Aeroflex - 3920

Analog and Digital Radio Test Set

PRODUCT DESCRIPTION

Portable test for advanced professional analog and digital radio communications. The instrument is a platform onto which software options expand the measurement and signaling capabilities for communications systems that utilize advanced digital modulation and protocols. It does this while retaining the capability to test many current generation analog AM and FM systems.



- ❖ TETRA Mobile, Base Station and DMO tests
- ❖ P25 parametric analysis
- ❖ HPD® (High Performance Data)
- ❖ Spectrum analyzer with tracking generator
- ❖ GPIB, Ethernet, USB and RS-232 Interfaces

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**Infrastructure Installation &
Commissioning**

Aeroflex - 6970

Power Meter (30KHz - 46GHz/100pW - 30W Sensor Dependent)

PRODUCT DESCRIPTION

The 6970 RF Power Meter provides precision microwave power measurement in a hand portable battery powered package. A wide range of user features.



- ❖ Digital Hand-held Power Meter
- ❖ Battery Powered for field applications
- ❖ Frequency Range 30kHz - 46GHz (sensor dependent)
- ❖ Power Range:- 70dBm - +45dBm/ 100pW - 30W (sensor dependent)
- ❖ Compatible with 6910, 6920 and 6930 series RF Power Sensors

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Infrastructure Installation & Commissioning

Agilent Technologies - E4407B

Spectrum Analyzer 9kHz-26.5GHz

PRODUCT DESCRIPTION

The ESA-E standard analyzer is an ideal mid-performance spectrum analysis tool for general-purpose RF and microwave measurements.



- ❖ Frequency Range 9kHz to 26.5GHz
- ❖ Dynamic Range - 140dBm to +30dBm
- ❖ Resolution Bandwidth 1Hz to 5MHz
- ❖ 3GHz Tracking Generator
- ❖ GPIB and Parallel Interfaces

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**Infrastructure Installation &
Commissioning**

Anritsu - ML8720C

Triband Area Tester

PRODUCT DESCRIPTION

The ML8720C Area Tester is a convenient battery powered measuring instrument with an 8.4-inch colour display used for standalone measurements such as coverage area and other indoor measurements. Because of its excellent hardware performance, it can be used for accurate area-coverage tests even in severe measurement environment with high interference because it can obtain radio wave carrier characteristics with high reliability.



- ❖ GSM 925 to 960MHz, and 1805 to 1880MHz, W-CDMA 2110 to 2170MHz
- ❖ USB interface for PC connections and RS-232 for GPS Receiver
- ❖ Compatible with NEMO and Ericsson Drive Test Software Packages
- ❖ Built in colour display for stand alone operation

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Anritsu - ML8740B

Triband Area Scanner GSM/DCS/UMTS

PRODUCT DESCRIPTION

The ML8740B Area Scanner is a scanner for performing driving tests for optimising base station service areas. Due to its excellent hardware performance, it can be used for accurate area-coverage tests even in severe measurement environments with high interference because it can obtain radio wave carrier characteristics with high reliability.



- ❖ 925 to 960 MHz, 1805 to 1880MHz and 2110 to 2170MHz frequency bands
- ❖ Support GSM and W-CDMA
- ❖ GPS receiver input for location data
- ❖ USB interface

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**Infrastructure Installation &
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Anritsu - MS2026A

Handheld Vector Network Analyzer 6GHz

PRODUCT DESCRIPTION

For field engineers and technicians supporting aerospace & defence platforms, commercial wireless backhaul, and other general purpose applications, the VNA Master are the first and only truly portable handheld 2-port Vector Network Analyzers (MS2024A/26A) offering 2MHz to 6GHz frequency coverage for precisely detecting faults in RF cables, connectors, and antennas anytime, anywhere.



- ❖ Portable battery operated Vector Network analyser
- ❖ Frequency range 2MHz - 6GHz
- ❖ 1-port and 1-path 2-port magnitude and phase measurement
- ❖ Distance-to-fault (DTF), precision SWR and return loss measurements with immunity to line RF interference
- ❖ Dynamic Range: 65db
- ❖ Internal memory saves up to 1000 traces and setups
- ❖ Test port connector: N female, 50 & syntax error #937
- ❖ Available options:
 - 05 RF Wattmeter power monitor
 - 10 Built-in Variable Bias Tee
 - 31 GPS Receiver
- ❖ Please contact your local Livingston office for configuration
- ❖ USB & LAN Interfaces

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Anritsu - MS2711D

Handheld Spectrum Analyzer

PRODUCT DESCRIPTION

Covering the 100kHz to 3.0GHz frequency range, the MS2711D handheld spectrum analyzer is the proven solution for installing, provisioning, maintaining and troubleshooting wireless systems and RF frequency spectrum interference issues.

This portable spectrum analyzer features a built-in standard preamplifier in a compact, handheld design that can go “anywhere, anytime” with no backpack required.



- ❖ Frequency range 100kHz - 3GHz
- ❖ Input Level +20 to -135dBm
- ❖ Resolution bandwidth 100Hz to 1Mhz
- ❖ 300 Traces & 10 setups Memory
- ❖ Available options:
 - 05 RF Wattmeter Power Monitor
 - 06 Frequency Converter Control Module
 - 10A Bias Tee
 - 21 Transmission Measurement
 - 25 Interference Analyzer
 - 27 Channel Scanner
 - 28 CW Signal Generator
 - 29 Power Meter
 - 31 GPS
- ❖ Please contact your local Livingston office for configuration
- ❖ Connector 50 & #937; Type-N (f)
- ❖ Lightweight and battery powered
- ❖ RS-232 interface

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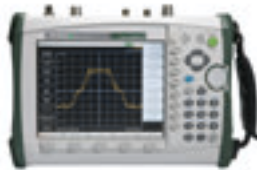
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Anritsu - MS2721B

9kHz-7.1GHz Spectrum Analyzer with Tracking Generator

PRODUCT DESCRIPTION

The MS2721B handheld spectrum analyzer is designed to conduct highly accurate on the new wave of wireless LAN and cellular signals, including 802.11a, 3G, ultra-wideband, WiMAX, and wireless medical patient monitoring systems. The MS2721B is ideal for AM and FM broadcast proofing because the wide dynamic range and low phase noise make NRSE measurements on analog and IBOC signals easy with no need for an external carrier notch filter.



- ❖ Frequency Range 9kHz to 7.1GHz
- ❖ Dynamic Range 95dB
- ❖ Resolution Bandwidth 1Hz to 3MHz
- ❖ Tracking Generator 100kHz to 7.1GHz
- ❖ USB and Ethernet Interfaces

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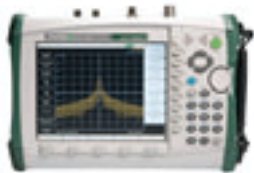
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Anritsu - MS2724B

9kHz-20GHz Spectrum Analyzer

PRODUCT DESCRIPTION

The MS2724B handheld spectrum analyzer is designed to conduct highly accurate analysis on the new wave of wireless LAN and cellular signals, including 802.11a, 3G, ultra-wideband. The MS2724B is a small and easy to use portable spectrum analyzer with unprecedented measurement capability for applications up to 20GHz.



- ❖ Frequency Range 9kHz to 20GHz
- ❖ Dynamic Range 101dB
- ❖ Resolution Bandwidth 1Hz to 3MHz
- ❖ USB and Ethernet Interfaces

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Anritsu - MS8609A

Digital Mobile Radio Transmitter Tester (9kHz - 13.2GHz)

PRODUCT DESCRIPTION

MS8609A is a transmitter tester equipped with an internal spectrum analyzer, a modulation analyzer and a power meter. Just one tester can cover the development and manufacturing of base stations and mobile stations, as well as the construction and maintenance of base stations.



- ❖ Frequency Range 9kHz to 13.2GHz
- ❖ DANL +30 to -124dBm
- ❖ Resolution Bandwidth 300Hz - 3MHz, 5, 10 & 20MHz
- ❖ Connector 50 & syntax error Ω Type-N
- ❖ Parallel & IEEE Interfaces

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**Infrastructure Installation &
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Anritsu - MT8212B

Cell Master Antenna Base Station Tester

PRODUCT DESCRIPTION

Cell Master MT8212B is the value choice for deploying, maintaining and troubleshooting wireless base stations. Compact, handheld and lightweight, it combines the functionality of built-in cable and antenna analyzer, spectrum analyzer, power meter, and also built-in GPS provides location (latitude, longitude, altitude) as well as UTC time.



- ❖ Frequency Coverage from 25Hz to 4.0GHz
- ❖ Options to support GSM, and CDMA standards
- ❖ Prime functions Spectrum Analyzer, Distance to Fault and Power Meter
- ❖ Portable battery operated unit
- ❖ RS-232 Interface

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Anritsu - MT8220A

Radio Communications Analyzer

PRODUCT DESCRIPTION

The UMTS Master model MT8220A is a handheld Node B analyzer designed to aid RF engineers and technicians during installation, deployment and maintenance of WCDMA/HSDPA Node B equipment. The MT8220A combines the functionality of a transmitter analyzer (WCDMA/HSDPA, GSM/GPRS/EDGE), channel scanner interference analyzer, and the field proven Spectrum analyzer into one lightweight, handheld, test tool.



- ❖ Frequency Range 100kHz to 7.1GHz
- ❖ Compatible with UMTS/W-CDMA Standards
- ❖ Over the air Transmitter Measurements
- ❖ Portable Battery Operated Unit
- ❖ LAN and USB Interfaces

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**Infrastructure Installation &
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Anritsu - S251 Site Master

Cable & Antenna Tester- Site Master (625 - 2500MHz)

PRODUCT DESCRIPTION

2-Port Cable and Antenna Analyzer for Tower Top and Duplex Applications. Performance enhancing design trends such as high sector to-sector isolation, tower-mounted amplifiers and duplexed antennas add new complexities to site installation, deployment, maintenance and troubleshooting cables. To help simplify performance verification for these systems, the Site Master™ Handheld Cable and Antenna Analyzer Model S251C features a second test port isolation, gain and insertion loss measurements.



- ❖ Portable battery operated antenna and cable analyzer
- ❖ Frequency range 625 - 2500MHz
- ❖ 2-ports
- ❖ Distance-to-fault(DTF), precision SWR and return loss measurements with immunity to line RF interference
- ❖ Dynamic Range: 54dB
- ❖ Internal memory : N female, 50 Ω
- ❖ Available options:
 - 05 RF Wattmeter Power Monitor
 - 10A Built-in Bias Tee (240mA)
 - 10B Built-in Bias Tee (240mA)
- ❖ Please contact your local Livingston office for configuration
- ❖ RS-232 interface

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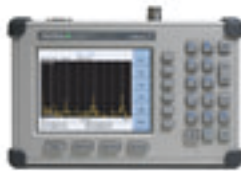
**Infrastructure Installation &
Commissioning**

Anritsu - S331D Site Master

Transmission Line & Antenna Analyzer (25 - 4000MHz)

PRODUCT DESCRIPTION

Site Master™ Handheld Cable and Antenna Analyzer Model S331D covering the 25MHz to 4000MHz spectrum is the defactor industry standard for installing, provisioning, maintaining and troubleshooting wireless base station cable and antenna systems. Accurate, versatile, affordable, rugged and a true handheld at under 5 pounds (including battery), Site Master is ideally suited for field technicians of any experience level working with VHF, broadcasting, paging, cellular, PCS/GSM, 3G, ISM, WLAN and WLL applications.



- ❖ Frequency Range 25-4000MHz
- ❖ 1-port
- ❖ Dynamic Range: 60dB
- ❖ Internal memory saves up to 300 traces and 25 setups
- ❖ RS-232 Interface

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**Infrastructure Installation &
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Anritsu - S332D Site Master

Transmission Line & Antenna Analyzer (25 - 4000MHz)

PRODUCT DESCRIPTION

Site Master™ Handheld Cable and Antenna Analyzer Model S332D includes all the features of our popular S331D - PLUS spectrum analysis for extra versatility in a single instrument. The standard cable & antenna analyzer spans from 25MHz to 4GHz.



- ❖ Frequency Range 25-4000MHz (3000MHz for Spectrum Analyzer)
- ❖ 1-port
- ❖ Dynamic Range: 54dB
- ❖ Internal memory saves up to 300 traces and 10 setups
- ❖ RS-232 Interface

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Anritsu - S810D/S820D Site Master

S810D SITE MASTER 1 port 25MHz - 10.5GHz

PRODUCT DESCRIPTION

Site Master S810D covering 2MHz to 10.5GHz, and S820D covering 2MHz - 20.0GHz, are the most accurate, reliable and convenient microwave transmission line and antenna analyzers available for installation, verification, troubleshooting, and repair of microwave communication systems. An “anytime, anywhere” solution designed for the rugged challenges faced by field technicians working with wireless and defense communications systems.



- ❖ Frequency Range 25MHz to 20GHz
- ❖ Single Port
- ❖ Colour LCD Display
- ❖ Internal memory saves up to 300 traces
- ❖ RS-232 Interface

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CP Towers - SPAA05

Antenna Alignment System

PRODUCT DESCRIPTION

The SPAA05 range of GPS based Antenna Alignment Tools is specially designed to improve the nominal antenna Bearing (azimuth) of GSM, DCS and UMTS Mobile cellular networks.



- ❖ GPS Based Antenna Alignment System
- ❖ Achievable accuracy of 0.5 degrees
- ❖ Suitable for GSM, DCS and UMTS Systems
- ❖ Bluetooth communications

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**Infrastructure Installation &
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Rohde & Schwarz - FSH3

Spectrum Analyzer With Tracking Generator (100kHz - 3GHz)

PRODUCT DESCRIPTION

The R&S FSH3 is the ideal spectrum analyzer for rapid, high-precision, cost-effective signal investigations. It provides a large number of measurement functions and so can handle anything from the installation or maintenance of a mobile radio base station, through on-site fault location in RF cables to development and service - an extensive range of applications.



- ❖ Frequency Range 100kHz to 3GHz
- ❖ DANL +20 to -125dbm
- ❖ Resolution Bandwidths 100Hz to 1MHz
- ❖ Built In Tracking Generator
- ❖ RS-232 Interface

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**Infrastructure Installation &
Commissioning**

Rohde & Schwarz - NRT/NRT-Z44

Power Reflection Meter with sensor (200kHz - 4GHz/0.3mW - 2000W Sensor Dependent)

PRODUCT DESCRIPTION

Directional power meters are used to measure power and reflection under operational conditions. Typical applications are in installation, maintenance and monitoring of transmitters, antennas and RF generators in industrial and medical fields.



- ❖ Digital Directional Power Meter
- ❖ Available options
 - B1 Interface for Power Sensors NAP-Z
 - B2 Second Power Sensor Input
 - B3 Battery supply with built-in charger and NiMH battery
 - ZZT222 Carrying Bag with Strape and Pocket for Accessories
- ❖ Compatible with NAP-Zxx (option B1 required) and NRT-Zxx sensors.
- ❖ IEEE / RS-232 interfaces

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**Infrastructure Installation &
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Tektronix - K1297G20-UMTS

Protocol Analyzer GPRS UMTS

PRODUCT DESCRIPTION

The K1297-G20 Protocol Testers provide a very flexible modular hardware and software platform for monitoring, simulating and emulating network traffic. A selection of interface modules and software packages that allow testing of most interfaces in mobile, core and access networks.



- ❖ UMTS GPRS Protocol Analyzer
- ❖ Full Monitoring and Simulation System
- ❖ Please contact your local livingston Sales Office for configurations

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**Infrastructure Installation &
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Tektronix - K15

Protocol Analyzer GSM/GPRS/EDGE/UMTS/CDMA2000

PRODUCT DESCRIPTION

This powerful Monitoring Solution with the highest port density per platform in the market enables to effectively test critical network segments and all mobile standards with the same unit. Version 2.0 now also includes UMTS 3GPP R6, H.32M, HSDPA, Real-Time luB deciphering and advanced EDGE monitoring capabilities.



- ❖ Protocol Analyzer to monitor Mobile Networks such as GSM, GPRS, EDGE, UMTS, HSDPA, Cdma One and CDMA2000 Networks.
- ❖ UMTS luB Deciphering in Real-Time all Messages on the luB Interface. Extensive Troubleshooting by Enabling Full Access to the Content of all Frames
- ❖ H324.M Protocol Suite. HSDPA Protocol Suite. EDGE Test Suite. Troubleshooting Video Telephony Services and Interactive Multimedia Services
- ❖ Multi Interface Call Trace. Enabling Fast and Easy Identification of Problems From the Symptom to the Root Cause.
- ❖ H324.M KPI and Video Quality Analysis. Enable Video telephony Troubleshooting and Quality of Services analysis.
- ❖ Availability of E1/DS1/J1. STM-1/OC-3c. 10/100 Fast Ethernet, 1000Base Tx (Gb Ethernet) Monitoring Cards With High Port Density Along With Fixed Network.
- ❖ Stream to Disk. Capabilities for Subsequent Off-line Analysis
- ❖ NTP and GPS Synchronization Along With the File Merge Application Permits Distributed Multi-site Monitoring
- ❖ Multi-user Environment. Five users can work concurrent
- ❖ For configuration, please contact your Livingston local

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**Infrastructure Installation &
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Tektronix - Y400

NetTek Measurement Platform

PRODUCT DESCRIPTION

The Tektronix NetTek analyzer is a revolutionary portable field tool. When combined with various test modules, the NetTek offers proven measurement capability at a surprisingly low price, in a rugged, easy-to-use package, suitable for all field environments.



- ❖ Handheld. Multi-standard Field Tester
- ❖ Modules Allow For Easy Future Expansion for New Functions
- ❖ Familiar Windows CE Interface with Touch Screen Design
- ❖ User-changeable Battery Packs with Optional External Charger for Uninterrupted Use
- ❖ Rugged. Light Weight. Easy to Use Anywhere

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**Infrastructure Installation &
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Tektronix - YBT250

Base Station Transmitter and Interference Analyzer

PRODUCT DESCRIPTION

The Tektronix NetTek® analyzer is an a revolutionary portable field tool. The YBT250 test module tailors this system for fast trouble resolution and easy transmitter verification of cellular, DCS/PCS and 3G base stations and Node Bs.



- ❖ Frequency Range 30MHz to 2500MHz
- ❖ GSM and W-CDMA Standards Supported
- ❖ Special Monitoring and Transmitter Power
- ❖ Required either Y350C or Y400C Mainframe

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**Infrastructure Installation &
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Thales - 3011 Mobile+

GPS Compass System for Antenna Alignment

PRODUCT DESCRIPTION

The Compass 3011 Mobile+ from Thales Navigation is a one receiver two antennas system for easy, fast and accurate mobile antenna positioning. With the patented GYROSKY technology the Compass 3011 Mobile+ requires only one GPS receiver to process the data on two antennas and to determine the azimuth with a 0.5 accuracy.



- ❖ GPS Compass System
- ❖ Azimuth Alignment to 0.5 & syntax error °
- ❖ Bluetooth Communication to PDA

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**Infrastructure Installation &
Commissioning**

Agilent Technologies - 8648C

Signal Generator (9kHz - 3.2GHz)

PRODUCT DESCRIPTION

The Agilent 8648C Synthesized RF Signal Generator is ideal for manufacturing high-volume products such as cordless telephones, pagers and two-way radios. Designed for semi-automated receiver test, and a variety of general purpose applications, It offers optional pulse modulation and high power, and extends the frequency to 3.2GHz to any test procedure.



- ❖ Frequency Range 9kHz - 3200MHz
- ❖ RF Output Level from -1.36 to +13dBm
- ❖ Frequency Resolution : 0.001Hz
- ❖ AM, FM and Phase Modulation
- ❖ IEEE Interface

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R&D , Manufacturing

Agilent Technologies - E4406A

Vector Signal Analyzer/Transmitter Tester (CDMA200, W-CDMA, GSM)

PRODUCT DESCRIPTION

The E4406A is a modern vector signal analyzer capable of characterising most of the world's cellular communications signal standards quickly. Its speed and price make it ideally suited for volume production environments. Extensive one-button measurement personalities and baseband inputs provide unparalleled convenience for research and development.



- ❖ Frequency Range 7MHz - 4GHz
- ❖ Frequency setting resolution 1Hz
- ❖ DANL -106dBm
- ❖ Built-in 3.5in floppy disk drive
- ❖ Parallel, IEEE & LAN interfaces

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R&D , Manufacturing

Agilent Technologies - E4419B

Dual Channel EPM Series Power Meter

PRODUCT DESCRIPTION

The EPM Series provides high-performance, programmable power meters for CW, average and peak power measurements.



- ❖ True dual-channel power meter - two simultaneous power readings. No range-switching delays with 8480 series sensors, and only one fast-range switching point with E-series sensors. Code compatibility with 438A power meter.

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R&D , Manufacturing

Agilent Technologies - E4440A

Spectrum Analyzer 3Hz to 26.5GHz

PRODUCT DESCRIPTION

The Agilent E4440A PSA high-performance spectrum analyzer measures and monitors complex RF and microwave signals up to 26.5GHz.



- ❖ Frequency Range 3Hz - 26.5GHz
- ❖ Frequency bandwidth 1Hz to 3MHz (10% steps) 4,5,6,8 MHz
- ❖ Built-in 3.5in floppy disk drive
- ❖ RS-232, Parallel, IEEE & LAN Interfaces

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R&D , Manufacturing

Agilent Technologies - E5071B

Network Analyzer 8.5GHz

PRODUCT DESCRIPTION

The Agilent E5071B network analyzer offers fast and accurate measurements for RF components. The advanced architecture minimises the number of sweeps to complete a multiport measurement and further improves test throughput.



- ❖ Frequency Range 300kHz - 8.5GHz
- ❖ 2, 3 or 4-ports (option 214, 314 or 414)
- ❖ Dynamic range 125dB
- ❖ Options available:
 - 008 Frequency Offset Mode
 - 010 Time domain analysis
 - 016 Touchscreen colour LCD
 - 1E5 high-stability frequency reference
- ❖ Connectors 50 & syntax error #937; Type-N
- ❖ Built-in 3.5in floppy disk drive
- ❖ Parallel, IEEE, USB and LAN Interfaces

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R&D , Manufacturing

Agilent Technologies - E5515C

Wireless Communications Test Set

PRODUCT DESCRIPTION

The Agilent E5515C with lab applications provides engineers with tools for RF measurements, network emulation, real-time protocol analysis, and service capabilities across a variety of wireless technologies. This flexibility helps shorten development time, expedite the transition of the wireless device into high-volume manufacturing and ensure end-user satisfaction of the device's multi-function capabilities in real-world conditions.



- ❖ Support GSM/GPRS/EDGE, W-CDMA, and CDM2000 mobile standards
- ❖ Full transmit, receive and audio functional tests
- ❖ Stand Alone system
- ❖ GPIB and LAN Interfaces

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R&D , Manufacturing

Agilent Technologies - E8362B

Vecor Network Analyzer 20GHz 2 port

PRODUCT DESCRIPTION

The Agilent E8362B vector network analyzer is a member of the PNA Series network analyzer platform and provides the combination of speed and precision for the demanding needs of today's high frequency, high-performance component test requirements.



- ❖ Frequency Range 10MHz to 20GHz
- ❖ 2 Ports
- ❖ Dynamic Range from 79dB to 123dB
- ❖ 1 GB Internal Memory
- ❖ GPIB, USB and Ethernet Interfaces

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R&D , Manufacturing

Agilent Technologies - N4010A

2.4GHz & 5GHz WLAN Tester

PRODUCT DESCRIPTION

The N4010A is a versatile multi-format wireless connectivity test solution that you can configure for your particular Bluetooth, ZigBee™, Wireless LAN (WLAN) 802.11a,b,g and verification, or manufacturing.



- ❖ Wireless LAN Test Set
- ❖ Transmit and Receive Analysis at 2.4 and 5GHz
- ❖ Supports 802.11x standards

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R&D , Manufacturing

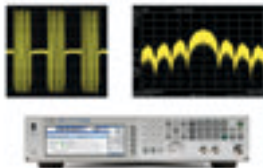
Agilent Technologies - N5182A

250kHz-6GHz Vector Signal Generator

PRODUCT DESCRIPTION

Featuring fast frequency, amplitude, and waveform switching, industry-best ACPR performance, high reliability, and simplified self-maintenance Agilent MXG vector is optimised for manufacturing cellular communications and wireless connectivity components.

Agilent MXG vector provides better value for your investment by increasing throughput, improving test yield, maximising uptime.



- ❖ Frequency Range 250kHz to 6GHz
- ❖ Amplitude Range -110dBm to +7dBm
- ❖ Frequency Resolution 0.01Hz
- ❖ Digital Modulation
- ❖ GPIB, USB and LAN Interfaces

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R&D , Manufacturing

Agilent Technologies - N9020A

MXA Spectrum Analyzer 8.4GHz

PRODUCT DESCRIPTION

The N4010A is a versatile multi-format wireless connectivity test solution that you can configure for your particular Bluetooth, ZigBee™, Wireless LAN (WLAN) 802.11a,b,g and verification, or manufacturing.



- ❖ Frequency Range 20Hz to 8.4GHz
- ❖ Dynamic Range -170dBm to +30dBm
- ❖ Resolution Bandwidth 1Hz to 3MHz
- ❖ GPIB, USB and LAN Interfaces

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R&D , Manufacturing

Anritsu - MD8480B

W-CDMA Signalling Tester

PRODUCT DESCRIPTION

The MD8480B W-CDMA Signaling Tester has been designed for developing and testing Third Generation Partnership Project (3GPP) user equipment (UE) and application software. The MD8480B's air interface fully complies with the 3GPP recommendations.



- ❖ Modulation/demodulation tests for W-CDMA, mobile stations
- ❖ Protocol sequence tests for W-CDMA, mobile station
- ❖ Flexible settings of test parameters and sequences for protocol sequences
- ❖ Voice and packet communications test, and communications testing between two mobile stations
- ❖ Please call Livingston to discuss your requirement

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R&D , Manufacturing

Anritsu - ML2488A

Wideband Peak Power Meter

PRODUCT DESCRIPTION

The ML2488A Wideband Peak Power Meter provides accurate peak power measurement for communications, wireless, and aerospace applications. For the design and implementation of wireless networks, they address the important issues of power control, peak power, and timing. With their high sampling rate of 64 Ms/s, these meters offer accurate peak power detection for wide bandwidth systems such as those compatible with 802.11a/b/g, eliminating the need for manual correction factors found on the current generation of power meters.



- ❖ Dual Channel Digital Wideband Peak Power Meter
- ❖ Designed for High Speed Modulated and Pulsed Power Measurements (Radar, WLAN, GSM/EDGE/UMTS)
- ❖ Requires MA24XX series power sensor
- ❖ IEEE, RS-232 and Parallel Printer Interfaces

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R&D , Manufacturing

Anritsu - MT8820A

Radio Communication Analyzer for 2G, 2.5G and 3G mobile handsets

PRODUCT DESCRIPTION

The MT8820A covers the frequency range from 30MHz to 2.7GHz and is designed to perform Transmitter and Receiver tests on 3G W-CDMA UE terminals in accordance with 3GPP TS34.121 and GSM terminals for both R&D and manufacturing applications. With appropriate measurement software and hardware options installed, this single platform supports evaluation of all the main transmission/reception test items for W-CDMA terminals including HSDPA.



- ❖ Frequency Range 30MHz to 2.7GHz
- ❖ GSM, W-CDMA, TDMA, CDMA and HSDPA Mobile Standards Supported
- ❖ Transmit and Receive measurement functions
- ❖ Stand alone system
- ❖ GPIB Interface

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R&D , Manufacturing

Anritsu - MT8852A

Bluetooth Test Set with Audio

PRODUCT DESCRIPTION

The MT8852A supports all the three codec air interfaces (u-law, A-law and CVSD) on up to three SCO audio channels. It offers the most comprehensive testing facilities of any Bluetooth wireless technology enabled test set, including EDR transmitter testing.



- ❖ Automated Bluetooth Testing
- ❖ Measurements performed as defined in Bluetooth RF Test specification
- ❖ Added Audio testing to three air interface codecs
- ❖ Stand alone system
- ❖ RS-232 and USB Interfaces

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R&D , Manufacturing

Rohde & Schwarz - CMU200

Universal Radio Communication Tester

PRODUCT DESCRIPTION

The Universal Radio Communication Tester R&S CMU200 is part of a complete range of mobile radio test equipment, encompassing everything from conformance test systems to system simulators, turnkey functional board test / final test systems and simple sales-counter Go/NoGo testers.



- ❖ Frequency Range 100kHz to 2.7GHz
- ❖ Mobile standards supported are dependant on Option Set
- ❖ Full Transmit, Receive, Speech and Data Test Functions
- ❖ Stand Alone System, please contact Livingston for option availability

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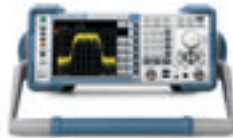
R&D , Manufacturing

Rohde & Schwarz - FSL6

9kHz-6GHz Spectrum Analyzer w/Tracking

PRODUCT DESCRIPTION

The Spectrum Analyzer R&S FSL is an extremely lightweight and compact analyzer with a wide range of applications in development, service and production. It offers functions that up to now have only been provided by high end spectrum analyzers and therefore has an excellent price/performance ratio. The R&S FSL is the only instrument in its class that provides a tracking generator up to 6GHz and a demodulation bandwidth of 20MHz.



- ❖ Frequency range 9kHz to 6GHz with or without tracking generator. IQ demodulation bandwidth 20MHz. Total measurement uncertainty <0.5dB. Measurement routines for: TOI, OBW, time domain power, CCDF, (A) CP and more

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R&D , Manufacturing

Rohde & Schwarz - FSQ26

Vector Signal Analyzer 20Hz-26GHz

PRODUCT DESCRIPTION

The Signal Analyzer R&S FSQ combines two instruments in one. It offers signal analysis at a demodulation bandwidth of up to 120MHz with the dynamic range of a high-end spectrum analyzer.



- ❖ Frequency Range 20Hz - 26GHz
- ❖ DANL +30 to -145dBm
- ❖ Resolution Bandwidth 10Hz - 20MHz, 50MHz
- ❖ Built-in 3.5in floppy disk drive
- ❖ RS-232, Parallel, IEEE, USB & LAN Interfaces

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R&D , Manufacturing

Rohde & Schwarz - SMJ100A

Vector Signal Generator

PRODUCT DESCRIPTION

The R&S®SMJ100A meets all challenges that drives applications place on modern vector signal generators. It offers the signal quality and flexibility required in research and developmet - not to mention a convenient graphical user interface (GUI). Flexible high speed measurement with RF List mode and multisegment waveforms.



- ❖ Frequency Range : 100kHz - 3/6GHz
- ❖ RF Output Level from -144 to +13dBm
- ❖ Frequency Resolution : 0.01Hz
- ❖ Am, FM Pulse and Phase Modulation
- ❖ IEEE and LAN Interfaces

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R&D , Manufacturing

Rohde & Schwarz - SML03

Signal Generator 9kHz to 3.3GHz

PRODUCT DESCRIPTION

The Signal Generator family R&S®SML offers all features required of a state-of-the-art general-purpose signal generator: wide frequency range, large variety of modulation functions and high reliability - at an extremely attractive price. The fields of application of the R&S SML are virtually unlimited in development, servicing or production where it is used as a flexible signal source in automatic test systems.



- ❖ Frequency Range 9kHz - 3.3GHz
- ❖ RF Output Level from -140 to +13dBm
- ❖ Frequency Resolution : 0.1Hz
- ❖ AM, FM Phase and Pulse Modulation
- ❖ RS-232 and IEEE Interfaces

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R&D , Manufacturing

Rohde & Schwarz - SMU200A

Dual Channel Generator 3GHz & 6GHz WCDMA

PRODUCT DESCRIPTION

The R&S®SMJ200A has been designed to meet all requirements encountered in research and development of modern communication systems as well as in their production. The R&S®SMU200A Vector Signal Generator not only combines up to two independent signal generation in one cabinet of only four height units, it also offers unrivalled RF and baseband characteristics.



- ❖ Frequency Range (1st RF Path): 100kHz - 2.2/3/4/6GHz and 2nd RF Path): 100kHz - 2.2 or 3GHz
- ❖ RF Output Level from -144 to +19dBm (with high power range options)
- ❖ Frequency Resolution : 0.01Hz
- ❖ Am, FM Pulse and Phase Modulation
- ❖ IEEE and LAN Interfaces

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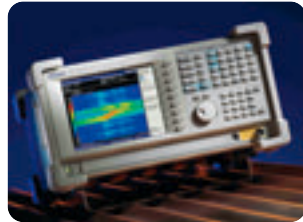
R&D , Manufacturing

Tektronix - RSA3408A

DC-8GHz Real-Time Spectrum Analyzer

PRODUCT DESCRIPTION

The RSA3408A Real-Time Spectrum Analyzer (RTSA) captures a continuous time record of changing RF events and enables time-correlated analysis in the Frequency, Time, and Modulation domains. You get the functionality of a vector signal analyzer, a wide band spectrum analyzer, a wide band spectrum analyzer, plus the unique trigger-capture-analyzer capability of RTSA – in one, transportable package.



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R&D , Manufacturing

ETSA - PVER506001

WiMax Radio Coverage Transmitter

PRODUCT DESCRIPTION

The ETSA radio coverage transmitter is a portable outdoor unit dedicated for wireless applications. This equipment is designed to stimulate the radio coverage of Wimax. The ability of this unit is to work under two modes, a CW mode (to transmit a pure signal) or a spectrum mode (Access to baseband I&Q signals). The outdoor usage has been carefully taken in account to preserve the stability of the output power under all conditions.



- ❖ Frequency band 3400-3600MHz in 1MHz steps
- ❖ Output power: 20W (CW mode) or 5W (Spectrum mode)
- ❖ Dynamic range 17dB in 0.5dB steps (CW mode)
- ❖ I&Q Modulation Plug in

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Site Survey & Drive Test
Equipment

ETSA - PVER402001

UMTS Radio Coverage Transmitter

PRODUCT DESCRIPTION

The ESTA radio coverage transmitter is a portable outdoor unit dedicated for wireless applications. This equipment is designed to stimulate the radio coverage of UMTS node-B. The ability of this unit is to work under two modes, a CW mode (to transmit a pure signal) or a spectrum mode (to transmit a UMTS like signal). The outdoor usage has been carefully taken into account to preserve the stability of the output power under all conditions.



- ❖ Frequency band 2110-2170MHz in 2.5MHz steps
- ❖ Output power: 25W (CW mode) or 10W (Spectrum mode)
- ❖ Dynamic range 22dB in 0.5dB steps (CW mode)
- ❖ UMTS Spectral Mode

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Site Survey & Drive Test
Equipment

LMW Electronics - STXX Series

Survey Signal Generator

PRODUCT DESCRIPTION

The LMW Electronics Ltd. range of STXX Survey Signal Generators have been designed for the GSM, PCN, PCS, DECT, UMTS, mobile PMR and cordless phone bands.



- ❖ Site Survey Signal Generators
- ❖ Available for 870-960MHz, 1750-1900MHz and 2100-2200MHz
- ❖ 20W Output Power
- ❖ AC or DC Operation
- ❖ Weatherproof Case

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Site Survey & Drive Test
Equipment

Nemo Technologies - Outdoor

Outdoor Base Software

PRODUCT DESCRIPTION

Nemo Outdoor is a versatile and portable engineering tool designed for measuring and monitoring the air interface of wireless networks. Nemo Outdoor supports all major wireless standards such as GSM, HSCSD, GPRS, EDGE, WCDMA, AMPS, IS-136, cdmaOne, CDMA2000 and Tetra. Moreover the system can be either used with measurement terminals (e.g. Nokia, Motorola, Sagem) or scanners like the Anritsu ML8720D.



- ❖ Drive Test Software Package
- ❖ Will require scanner or test mobile
- ❖ Enables monitoring of the air interface in Wireless Networks
- ❖ Includes GPS location system
- ❖ Please contact Livingston for configuration

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Site Survey & Drive Test
Equipment

Nokia - N95

Test Terminal

PRODUCT DESCRIPTION

The Nokia N95 is a quad band handset suitable for testing GSM and 3G networks and HSDPA Datalinks.



- ❖ Nokia Test Terminal
- ❖ Quad Band Operation
- ❖ GSM, UMTS
- ❖ Support for HSDPA
- ❖ Built in GPS Receiver

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Site Survey & Drive Test
Equipment

PCTEL - Seagull 6030

GSM / W-CDMA Triband Receiver

PRODUCT DESCRIPTION

PCTEL's scanning receivers are used by leading OEM providers in drive test and measurement, tower site survey, base stations monitoring, wireless analysis and post processing solutions. They are also used to optimised wireless network performance, either on their own networks or as services provided to wireless carriers.



- ❖ Frequency Ranges 925 to 959MHz, 1805 to 1880MHz and 2210 to 2170MHz
- ❖ Supports GSM and W-CDMA mobile standards
- ❖ USB Interface

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Site Survey & Drive Test
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As Global's leading supplier of Test Equipment for rental, we provide the most cost effective and flexible solutions available today. For however long you need a piece of equipment, Livingston has the right options to suit. Livingston has a range of options available to support any of your needs.

Short Term Rental

Complete flexibility to use equipment to support emergency requirements, product evaluation or to cover workload peaks and troughs.

- ❖ Immediate availability
- ❖ Total flexibility - extend or shorten your contract as required
- ❖ Cost and tax effective
- ❖ Budget equipment costs with 100% certainty
- ❖ Damage waiver option for peace of mind

Long Term Rental

Ideal for project use. You get the benefits of traditional short term rental flexibility at a lower cost and avoid upfront purchase costs.

- ❖ Lower cost solution - the longer you rent, the lower the rental rates
- ❖ Plan your project requirements: Rent the equipment when you need it and return it when you've finished
- ❖ No long term lock-in if your technology requirements change
- ❖ Convenience - rental includes all maintenance and calibration and replacements in the event of equipment failure.

Sales

In today's marketplace, with reduced budgets and capital spending controls, keeping down costs to furnish your new laboratory with essential instruments, or equipping your installation and repair team can be a major headache. If you could buy equipment for substantially less than the manufacturer's list price. your limited budget would go much further. Livingston is one of the world's largest independent suppliers of quality used test and computer equipment. Buying from us gives you exceptional savings and worry free ownership.

- ❖ Big savings on manufacturer list prices
- ❖ Warranty and certificate of calibration supplied
- ❖ 7 day sale or return policy
- ❖ Immediate availability from stock
- ❖ Multi-vendor packages available from a single source

Disposal Management

You may have an abundance of test equipment you no longer use. Best case it is just taking up shelf space, worst case you may still be paying for it to be maintained. Livingston can promote this equipment for you worldwide, through one of the largest used equipment networks.

- ❖ Convert unused equipment back into cash
- ❖ Equipment valuation service available
- ❖ Access to an extensive network of used equipment sellers
- ❖ Achieve best re-sale price for equipment



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