2025
Q3 NEWSLETTER
NEW ENGLAND EDITION

THE PROTEQ PULSE

Your Quarterly Connection to the Pulse of the Industry –



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performance for next-generation designs.

CONTACT INFORMATION









FRESH NEW LOOK. SAME TRUSTED PARTNER

At **ProTEQ Solutions**, we've built our reputation as a trusted Tier-One Manufacturers' Representative by connecting world-class test and measurement manufacturers with customers across New England and the Mid-Atlantic. With decades of combined expertise, we don't just represent products, we deliver complete solutions that empower engineers, researchers, and organizations to push the limits of innovation.

Our strength lies in more than our portfolio. We bring deep technical knowledge, consultative support, and a commitment to simplifying the buying process. By bridging the gap between manufacturers and end-users, we streamline procurement, shorten lead times, and provide unmatched access to cutting-edge technologies in RF, environmental, compliance, and precision testing.

The **ProTEQ** advantage is clear: dedicated regional coverage, long-standing industry relationships, and a customer-first approach that ensures measurable value long after a purchase. For our partners, that means stronger market reach and brand visibility. For our customers, it means confidence that every solution is tailored to their unique needs.

At **ProTEQ Solutions**, we don't just represent technology, we enable progress, building lasting value at every step

We are proud to serve as your trusted partner, and we thank you for the opportunity to continue building progress with you. We are grateful for the partnerships that make innovation possible, and we look forward to achieving more, side by side. We value your trust and remain committed to delivering lasting solutions that continue to shape the future of test and measurement. Thank you for continuing to let **ProTEQ Solutions** be your trusted partner as we move innovation forward – together.

Aldo Quarino

Gary Holbrook

Chris Poling





THE FUTURE OF AC & DC POWER SOURCES

500 VA – 18000 VA High Performance Programmable AC and DC Power Sources

ASTERION AC SERIES





0-400VAC / 0-500VDC



0 - 60 Arms/phase



500VA - 36000VA

Inspired by the enduring power of a brilliant star, the California Instruments Asterion line of AC power sources by AMETEK Programmable Power combines intelligence and flexibility to create an advanced platform of AC solutions. This easy-to-configure design features sophisticated technology for delivering high performance, programmable AC and DC power. Also available are economical AC only models. The sleek design packs maximum power density into a low-profile form factor with an intuitive touch screen interface. Centralized control and unparalleled modularity make Asterion the most adaptable platform on the market. Its groundbreaking capabilities set the standard for affordable, precision power sources.

ASTERION DC SERIES



40V, 60V, 80V, 100V, 150V, 200V, 300V, 400V & 600V



1.7kW, 3.4kW, 5kW & 10kW



Like the **Asterion** AC family, the **Sorensen Asterion DC Series** sets a new standard for power density. All units up to 5.0 kW are just 1U (44.45 mm / 1.75") high so rack space requirements are minimal. **Asterion DC Series** supplies offer rated output voltages in 40 up to 400 V. The new DC series features two types of product lines: fixed range and autoranging. The fixed range supplies are economical, traditional rectangular wave output power supplies with all the enhanced operation advantages standard with the **Asterion platform**. The autoranging supplies feature expanded current and voltage range at the full output power level, enabling the ability to satisfy a wider testing need without requiring the purchase of additional models. The intuitive front panel touchscreen interface and multi language display ensure exceptional ease of use. An auto-paralleling capability supports operating multiple units in parallel to increase the total output power level.





StabilityFlexTM ultra-flexible cable assemblies are the industry's best flexible daily-use lab cable assembly. Designed for general testing applications, it offers excellent value, high flexibility at a low cost. **StabilityFlexTM** is the ideal assembly for reliable and repeatable measurements when used with microwave & RF test instrumentation and employs color-coded connectors to reduce potential for connection mistakes. They are available with SMA, Type N, 2.92mm and 2.4mm connectors up to 50 GHz.

Features & Benefits

- Ultra-flexible
- Excellent value
- Low insertion loss
- Reliable and repeatable measurements
- Amplitude and phase stable with flexure High mating-cycle durability
- Color-coded connectors



StabilityPlus Cables Series

StabilityPlusTM phase-stable cable assemblies set the standard for high-performance ruggedized microwave/RF cable assemblies. Designed specifically performance ruggedized microwave/RF cable assemblies. Designed specifically for phase-stable and amplitude-stable applications, **StabilityPlus™** offers excellent measurement repeatability even after cable flexure. With a ruggedized, durable construction, **StabilityPlus™** will outlast and outperform other assemblies resulting in a reduced total cost-of-test. **Stability Plus™** is equally suited for for daily use with VNA's as well as high-end test instrumentation. **StabilityPlus™** employs color-coded connectors to reduce potential for connection mistakes and is available with TNCA, SMA, Type N, 7mm, 3.5mm, 2.92mm, 2.4mm, 1.85mm, and 1mm connectors up to 110 GHz.

Features & Benefits

- The industry's best amplitude and phase stability with flexure
- Flexible to facilitate easy installation
- Durable, ruggedized and crush-resistant Color-coded connectors to avoid damage caused by connector mismatches



StabilityPlus Low Profile Cables Series

StabilityPlusTM Low Profile phase-stable cable assemblies set the standard for high-performance low-profile microwave/RF cable assemblies. StabilityPlusTM Low Profile shares the same industry-leading electrical performance as StabilityPlusTM, and its light weight, superior flexibility and small form factor make it ideal for daily leading and profile of a large stability plusTM Low Profile of a large stability plus places and the stability plus places and the stability plus places. **Profile** also employs color-coded connectors and is available with TNCA, SMA, Type N, 7mm, 3.5mm, 2.92mm, 2.4mm and 1.85mm connectors up to 67 GHz.

Features & Benefits

- Stable and repeatable electrical performance Small profile for tight spacing requirements Flexible to facilitate easy installation
- Lightweight for use with smaller DUTs
- Color-coded connectors to avoid damage caused by connector mismatches

EXPLORE MAURY'S BEST IN CLASS RANGE OF CABLE ASSEMBLIES

Stability VNA Cables Series

StabilityVNATM test port cable assemblies are the industry's highest performing VNA cables. StabilityVNATM offers superior amplitude and phase stability with flexure, thereby improving measurement accuracy while reducing measurement uncertainty and increasing confidence in measurements. Its superior flexibility and anti-skid band ensures the cables can be arbitrarily positioned with no spring-back or stress on DUTs. Its increased crush resistance and flex cycles enhances longevity and can lead to years of uninterrupted use. **StabilityVNATM** employs color-coded connectors to reduce potential for connection mistakes

Features & Benefits

- Industry's best phase stability with flexure improves measurement accuracy and ensures repeatable and reliable measurements
 Superior flexibility and anti-skid band ensures the cables can be arbitrarily positioned with no spring-back or stress on DUT increased crush resistance and flex cycles enhances longevity and can lead to
- years of uninterrupted use
- Color-coded connectors reduce potential for connection mistakes



Thermal Vacuum (TVAC) chambers simulate space-like conditions for testing space components. To test devices inside the chamber, specifically designed T&M components and cable assemblies are crucial to withstand the pressure and temperature effects. Changes in vacuum conditions can damage cable assemblies if not properly addressed, requiring connectors with slow pressure changes. Maury's Stability TVAC series employs vented connectors that allow air to escape quickly, enabling rapid pressurization/ depressurization cycles and minimizing delays in testing. Cable assemblies in TVAC chambers experience thermal expansion and contraction, which can affect performance and lead to thermal expansion and contraction, which can affect performance and lead to permanent degradation. Stability **TVAC** cable assemblies undergo thermal conditioning to relieve mechanical stresses, ensuring reliable performance across varying temperatures.

Features & Benefits

- Low outgassing
 Thermally conditioned & vented connectors
 Phase stable with flexure
 High power handling
 Low insertion loss

StabilityWafer Cables Series

StabilityWaferTM on-wafer probing cable assemblies have been specifically designed to empower accurate and repeatable on-wafer measurements when used with coaxial wafer probes. Its small outer diameter, light weight and superior flexibility allow for the tight spacing typically required for on-wafer measurements and eliminate pressure on the wafer probes that would cause a loss of contact with the device-under-test. **StabilityWaferTM** is available with standard straight connectors, as well as right-angle (short 90°), extended 90° and extended 83° ferules.

Features & Benefits

- Stable and repeatable electrical performance Small profile for tight spacing requirements Flexible to facilitate easy installation Lightweight for use with smaller DUTs

- Color-coded connectors to avoid damage caused by connector mismatches



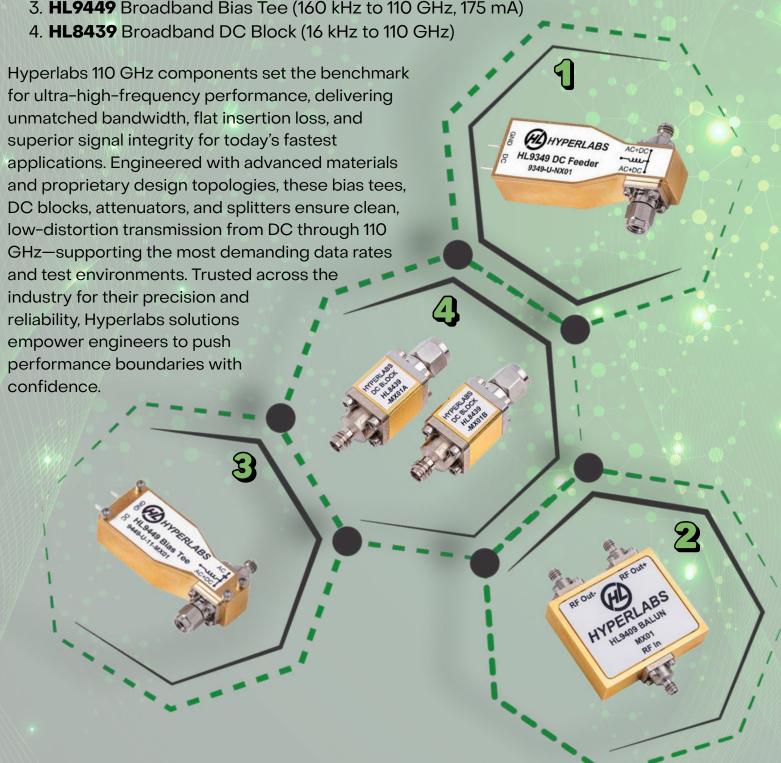






HYBERLABS 110 GHz components deliver unmatched bandwidth, ultra-flat performance, and rock-solid signal integrity, empowering engineers to push the limits of speed and precision with confidence.

- 1. HL9349 Broadband DC Feeder (13 kHz to 110 GHz)
- 2. **HL9409** Broadband Balun (500 kHz to 100 GHz)
- 3. **HL9449** Broadband Bias Tee (160 kHz to 110 GHz, 175 mA)



1 - HL9349 Broadband DC Feeder (13 kHz to 110 GHz)

The HL9349 is an ultra-broadband DC feeder with a typical insertion loss of 2.5 dB from 13 kHz to 110 GHz.

A DC feeder functions similarly to a bias tee, but without a DC blocking capacitor on the RF input.

The HL9349 allows for the insertion of a DC bias current or voltage onto the RF circuit path with minimal perturbation of the impedance of a 50 ohm transmission line.

These devices can be used for biasing amplifiers, lasers, optical modulators, and other devices. Applications include 224 Gbps PAM4 communications systems, optical communication systems, highspeed data systems, level shifting, and cascading.

2 - <u>HL9409 Broadband Balun</u> (500 kHz to 100 GHz)

The HL9409 is an ultra-broadband 180° signal splitter and combiner that offers excellent amplitude and phase match over an industry-best bandwidth of 500 kHz to 100 GHz.

This ROHS-compliant product is suitable for use in 224 Gbps PAM4 communications systems, high-speed analog-to-digital conversion, frequency response testing for differential devices, and many other applications.

For other high-performance balun products, please see our complete line of ultra-broadband baluns.

3 - <u>HL9449 Broadband Bias Tee</u> (160 kHz to 110 GHz, 175 mA)

The HL9449 is an ultra-broadband bias tee with a maximum insertion loss of 2.5 dB from 160 kHz to 110 GHz.

These devices block any existing DC signal and allows for the insertion of a DC bias current into a circuit with minimal perturbation of the impedance of a 50 ohm transmission line.

These devices can be used for biasing amplifiers, lasers, optical modulators, and other devices.

Applications include 224 Gbps PAM4 communications systems, optical communication systems, high-speed data systems, level shifting, cascading, and interfacing between devices with incompatible DC operating points.

4 - HL8439 Broadband DC Block (16 kHz to 110 GHz)

The HL8439 is an ultra-broadband DC Block with a typical insertion loss of < 2 dB over an industry-best bandwidth of 16 kHz to 110 GHz.

The DC block will remove DC bias from the input signal to prevent damage to DC-sensitive devices or equipment.

These devices are suitable for use in 224 Gbps PAM4 communications systems, optical communication systems, high-speed data systems, level shifting, cascading, and interfacing between devices with incompatible DC operating points.

They can also be used to improve RF power measurements when a power meter with DC sensitivities is used.



Mi-Wave 870 Series Broadband Calibrated RF Noise Sources

The Gold Standard in High-Frequency Noise Sources



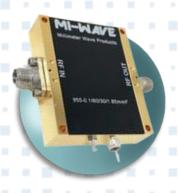




Mi-Wave's 870 Series Broadband Calibrated Noise Sources, spanning 18 to 110 GHz, set the industry benchmark for precision, stability, and speed. Engineered with tailored responses to minimize ripple and deliver exceptional ENR flatness, these sources provide unmatched accuracy for calibration, system verification, and advanced R&D. Trusted across aerospace, telecom, and defense, the 870 Series ensures cleaner measurements, faster results, and absolute confidence—making it the gold standard in high-frequency testing.

High-Power & Low Noise Power Amps to 110GHz

Power Without Limits: Mi-Wave's Wide-Band Amplifiers







Mi-Wave's High-Power & Wide-Band RF Power Amplifiers deliver superior gain, output power, and bandwidth coverage across frequencies up to W-band. Engineered for unmatched linearity and efficiency, these amplifiers ensure reliable, distortion-free performance in the most demanding aerospace, telecom, and defense applications. With rugged construction and precision design, Mi-Wave amplifiers provide the power and stability engineers need to push systems further and faster—making them the trusted choice for high-frequency amplification.





PRODUCTS

SUPPORT - SELECTION - SERVICE

- LARGE SELECTION OF RENTAL UNITS
- USED & REFURBISHED EQUIPTMENT AVAILABLE
- THOUSANDS OF INSTRUMENTS IN-STOCK & READY TO SHIP



- PRODUCT LINES -

- CALIBRATION
- ELECTRONIC TEST
- PHYS-D WEIGHTS & MEASUREMENTS
- PLANT MAINTENANCE & SAFETY
- FLECTRICAL TEST
- ENVIORNMENTAL & WATER QUALITY

- PRESSURE & FLOW
- TEMPERATURE & HUMIDITY
- LAB EQUIPMENT & LIQUID HANDLING
- RECORDERS & DATA ACQUISITION
- WIND TURBINE TOOL KITS



BLUETOOTH & WIFI PROTOCOL ANALYZERS

Frontline X500e Wireless Protocol Analyzer

Powerful One-Box Wireless Test Solution with Wi-Fi 7

Building upon the success of its predecessor, the **Frontline X500**, **the X500**e is a comprehensive one-box solution that seamlessly captures and correlates data from a wide range of wireless communication technologies including Wi-Fi 7. It gives instant visibility into over-the-air traffic, enabling rapid identification and resolution of performance and coexistence issues due to Bluetooth, Wi-Fi and 802.15.4 all coexisting in the 2.4 GHz ISM band.



Bluetooth (BR/EDR/LE)

Wi-Fi 7

802.15.4

TECHNOLOGY

TECHNOLOGY

TECHNOLOGY

Frontline X240 Wireless Protocol Analyzer

Flexible and Portable

The **Frontline X240** Wireless Protocol Analyzer captures information streaming between wireless devices and can do so utilizing various technologies including Bluetooth, Wi-Fi, and 802.15.4. It is paired with the powerful Teledyne LeCroy Wireless Protocol Suite software to provide developers with a robust set of analysis tools including Bluetooth protocol analysis, Bluetooth audio analysis, and spectrum analysis.



Bluetooth (BR/EDR/LE)

Wi-Fi 5

802.15.4

TECHNOLOGY

TECHNOLOGY

TECHNOLOGY

Frontline BPA 100 Bluetooth Protocol Analyzer

Frontline's USB-powered BPA 100, used only in conjunction with Apple's ATS software and available exclusively from Avnet, Inc., is the special purpose tool required for developers and test engineers to certify that their Bluetooth Classic-enabled devices and accessories are officially MFi compliant. Compliance means that your product bears the MFi mark identifying it as conforming to Apple's iAP protocol standards.



Path to Bluetooth

CERTIFICATION

Path to Apple MFi

COMPLIANCE

OSCILLOSCOPES - SERIAL DATA SUPERPOWER

WaveRunner 8000HD 8 Channel High Definition Oscilloscope

The WaveRunner 8000HD is the only oscilloscopes to offer 8 analog channels and 16 digital channels, allow synchronization of two 8-channel systems, and not penalize you for using a digital channel. Other oscilloscopes require that you trade a valuable analog channel in exchange for digital inputs.

- Provides 12 bits all of the time
- More channels than any other oscilloscope
- Long memory without tradeoffs

2 GHz

MAX BANDWIDTH

10 GS/s

MAX SAMPLE RATE

12 bit

RESOLUTION

5 Gpts

MAX MEMORY

8

CHANNELS



WavePro HD High Definition Oscilloscopes

WavePro HD High-Definition oscilloscopes employ unique Teledyne LeCroy HD4096 technology to achieve 12-bit resolution at up to 8 GHz bandwidth, for the lowest noise and unmatched signal fidelity. Up to 5 Gpt of highly responsive acquisition memory gives more visibility into system behavior, and the exceptional analysis toolbox enables deep insight.

8 GHz

20 GS/s

MAX BANDWIDTH

MAX SAMPLE RATE

12 bit

RESOLUTION

5 Gpts

MAX MEMORY

4

CHANNELS



"BRIDGING INNOVATION AND INDUSTRY"





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