

**2025**

Q3 NEWSLETTER  
NEW ENGLAND EDITION

# THE PROTEQ PULSE

*Your Quarterly Connection to the  
Pulse of the Industry -*

**PROTEQ**  
SOLUTIONS

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# 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

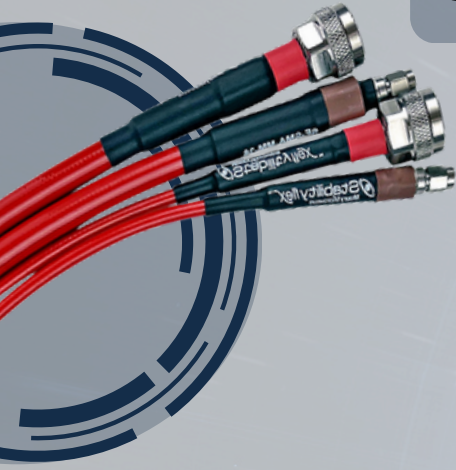


Like the **Asterion AC** family, the **Sorensen Asterion DC Series** sets a new standard for power density. All units up to 5.0 kW are just 1U (44.45 mm / 1.75") high so rack space requirements are minimal. **Asterion DC Series** supplies offer rated output voltages in 40 up to 400 V. The new DC series 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-parallel capability supports operating multiple units in parallel to increase the total output power level.



# maury

## StabilityFlex Low Profile Cables Series



**StabilityFlex™** 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. **StabilityFlex™** 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



**StabilityPlus™** phase-stable cable assemblies set the standard for high-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



**StabilityPlus™ Low Profile** phase-stable cable assemblies set the standard for high-performance low-profile microwave/RF cable assemblies. **StabilityPlus™ Low Profile** shares the same industry-leading electrical performance as **StabilityPlus™**, and its light weight, superior flexibility and small form factor make it ideal for daily use with high-density and fragile applications. **StabilityPlus™ Low 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

## StabilityVNA Cables Series

**StabilityVNA™** test port cable assemblies are the industry's highest performing VNA cables. **StabilityVNA™** 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. **StabilityVNA™** 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

## StabilityTVAC Cable Series

**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 permanent degradation. **Stability TVAC** cable assemblies undergo thermal conditioning to relieve mechanical stresses, ensuring reliable performance across varying temperatures.

### Features & Benefits

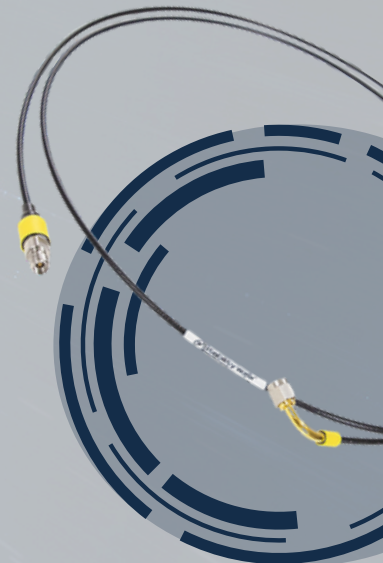
- Low outgassing
- Thermally conditioned & vented connectors
- Phase stable with flexure
- High power handling
- Low insertion loss

## StabilityWafer Cables Series

**StabilityWafer™** 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. **StabilityWafer™** is available with standard straight connectors, as well as right-angle (short 90°), extended 90° and extended 83° ferules.

### Features & Benefits

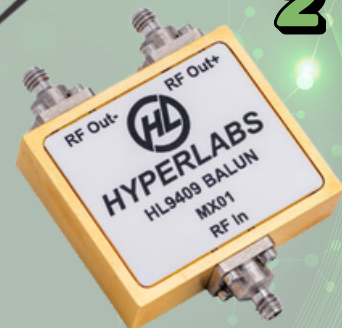
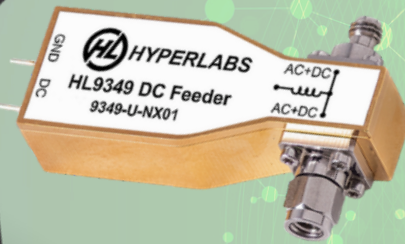
- Stable and repeatable electrical performance
- Small profile for tight spacing requirements
- Flexible to facilitate easy installation
- Lightweight for use with smaller DUTs
- Color-coded connectors to avoid damage caused by connector mismatches



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

Hyperlabs 110 GHz components set the benchmark for ultra-high-frequency performance, delivering unmatched bandwidth, flat insertion loss, and superior signal integrity for today's fastest applications. Engineered with advanced materials and proprietary design topologies, these bias tees, DC blocks, attenuators, and splitters ensure clean, low-distortion transmission from DC through 110 GHz—supporting the most demanding data rates and test environments. Trusted across the industry for their precision and reliability, Hyperlabs solutions empower engineers to push performance boundaries with confidence.



## **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, high-speed data systems, level shifting, and cascading.

## **2 - HL9409 Broadband Balun (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 - HL9449 Broadband Bias Tee (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.

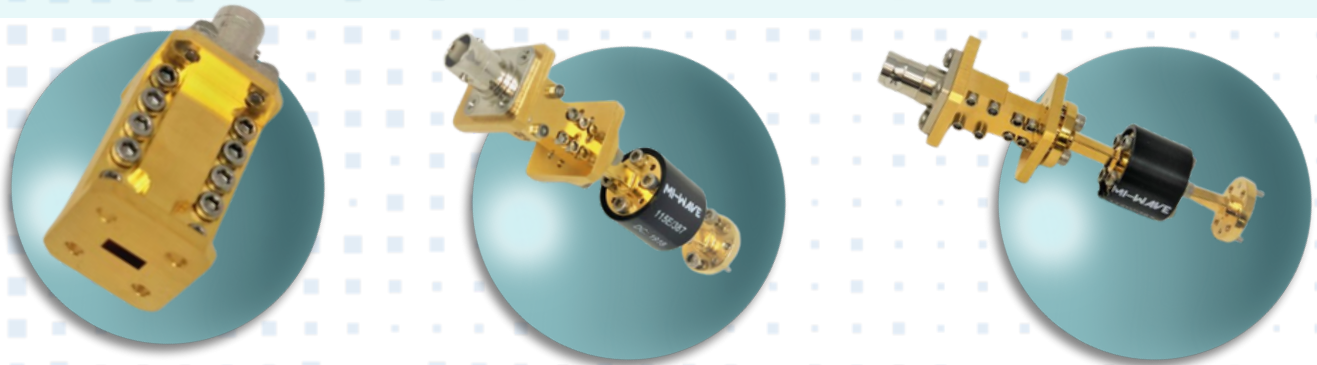
They can also be used to improve RF power measurements when a power meter with DC sensitivities is used.

# MI-WAVE

Millimeter Wave Products Inc.

## Mi-Wave 870 Series Broadband Calibrated RF Noise Sources

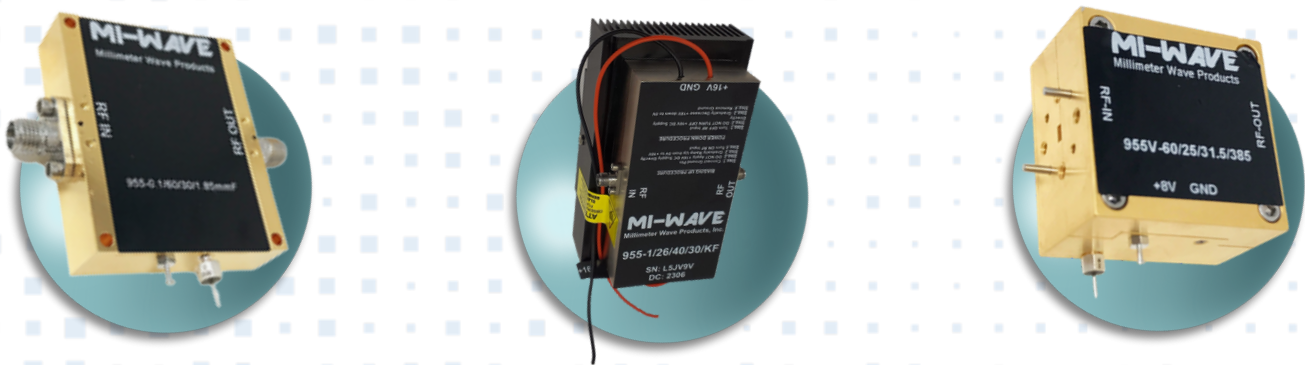
*The Gold Standard in High-Frequency Noise Sources*



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.

# TRANSCAT®

CALIBRATION SERVICES • TEST & MEASUREMENT INSTRUMENTS

[CLICK HERE](#)



TO SEE THE FULL LIST OF TRANSCAT  
MANUFACTURERS AND AVAILABLE  
PRODUCTS

## SUPPORT - SELECTION - SERVICE

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



## - PRODUCT LINES -

- CALIBRATION
- ELECTRONIC TEST
- PHYS-D WEIGHTS & MEASUREMENTS
- PLANT MAINTENANCE & SAFETY
- ELECTRICAL TEST
- ENVIRONMENTAL & WATER QUALITY
- PRESSURE & FLOW
- TEMPERATURE & HUMIDITY
- LAB EQUIPMENT & LIQUID HANDLING
- RECORDERS & DATA ACQUISITION
- WIND TURBINE TOOL KITS



**TELEDYNE LECROY**  
Everywhere you look™

# 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 **X500e** 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)**  
TECHNOLOGY

**Wi-Fi 7**  
TECHNOLOGY

**802.15.4**  
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)**  
TECHNOLOGY

**Wi-Fi 5**  
TECHNOLOGY

**802.15.4**  
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**

MAX BANDWIDTH

**20 GS/s**

MAX SAMPLE RATE

**12 bit**

RESOLUTION

**5 Gpts**

MAX MEMORY

**4**

CHANNELS



# "BRIDGING INNOVATION AND INDUSTRY"



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