MegaPhase

# RF & Microwave Products Through 110 GHz

Test & Measurement Cables RF & Microwave Cables Hi-Rel Components Connectors Adapters & Accessories







With the right connections, anything is possible.

#### Space

MegaPhase cable assemblies have been used in space programs, including the first rendezvous with the asteroid Itikawa, the successful 7-year Hayabusa mission, the LunIR lunar flyby mission, and others including Jupiter 3, Echostar, Sirius XM, Worldview Legion, and Intelstat 40.

#### Missiles

Megaphase offers comprehensive support for a variety of missile systems. Some of these have included the highly advanced SM3, Paveway II, NetFires, RF TOW, and Griffin. With Megaphase cables, you can be confident in the reliable operation of your missile systems.

#### **Global Security and C51SR**

MegaPhase is a leading provider to the US Armed Forces and its Allies. Our strong legacy of reliable past performance, relentless quality, and technical capability the Warfighter can trust. With fast prototypes and rampto-production times, MegaPhase is a recognized leader in sensors, ECM, ISR, and communications systems. Our heritage includes CREW, Prophet, TPS, and JTRS, many featuring the Warrior Cable<sup>®</sup>.

#### **Military Airborne & Unmanned Systems**

MegaPhase designs and manufactures cable assemblies meeting the rigorous standards for Military airborne applications (MIL-T-81490). With a range of lightweight cable assemblies, including our patented high-frequency hermetic, our heritage is expanding. Our products are employed on telemetry, ISR, and EW systems including E-2D, ARES, VUIT-2, V-22, Hunter, CEC, and Guardrail.

#### **Telecom, Broadband & Mobile Backhaul**

MegaPhase products offer very low insertion loss and low PIM (-165dBc). With capability through 110 GHz our products are installed in multi-gigabit data links and backhaul and widely used in production and field test applications.

#### **Instruments & Automated Testing**

MegaPhase was built on providing phase-stable external accessory cables for vector, scalar and spectrum measurements. Today our products are an important part of advanced automated test equipment systems for mobile devices, semiconductors, industrial automation and other RF and microwave components.

#### SATCOM & Broadcast

MegaPhase supports a wide variety of antennas, ground communications and other critical components of integrated satellite communications systems. Our products are an essential link in the transmission and reception of a range of systems from Deep Space Network to commercial satellite radio.

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# Design and Manufacturing of RF & Microwave Cables and Components Through 110 GHz

We design and manufacture cables, components, connectors, and accessories with the understanding that if a connection fails, it can take your whole system with it. We provide best-in-class service, a powerful warranty, AS9100 level quality, the most responsive deliveries, and highly competitive pricing. Because doing one thing right just isn't enough. That's why our products are known for low loss, superior phase & amplitude stability over flexure and temperature, repeatability, and extra rugged mechanical strength.

And that's why we believe that **with the right connections**, **anything is possible**. Call us at 570-424-8400 or Solutions@MegaPhase.com. Visit us online www.MegaPhase.com.

![](_page_3_Picture_3.jpeg)

![](_page_3_Picture_4.jpeg)

# **Test and Measurement Cables**

#### VNA Test Port Extension Cables to 67 GHz The Perfect Alternative to Overpriced OEM Test Cables

- Phase Stable
- Low VSWR
- Consistent, Repeatable Performance
- Armored & Rugged
- Wide Variety of Connectors
- Excellent Flexibility

VNA test port extension cables provide the highest precision in vector network analyzer measurements in the lab while holding your calibration. In addition to the electrical performance, these VNA cables are rugged and feature a lightweight armor to ensure consistent performance over time in both lab and production environments, up to 67 GHz. A wide variety of connectors are available including precision NMD or port-ruggedized connectors, which mate directly to the VNA port. Connector attachments are designed to enhance sudden axial and radial loading. Test cables are available as phase matched sets.

### Killer Bee<sup>®</sup> Test Cables to 50 GHz Phase & Amplitude Performance through Q-Band

- Phase Stable
- Armored
- Low VSWR
- Wide Variety of Connectors
- Low Loss
- Ultra-Flexible

The MegaPhase Killer Bee<sup>®</sup> features low loss and outstanding phase and amplitude stability over flexure and temperature. Featuring our proprietary Boundless<sup>™</sup> low loss dielectric, this rugged and light-weight test cable provides a long service life with repeatable performance through the life of the cable. A wide variety of connectors and phase matching are available. Fewer calibrations mean less downtime, resulting in the MegaPhase promise of Lowest Cost Per Measurement<sup>™</sup>.

![](_page_4_Picture_17.jpeg)

**KILLER**BEE<sup>®</sup>

#### **RF Orange® Test Cables to 110 GHz** The Industry Standard for Bench Testing

- Phase Stable
- Low VSWR
- Repeatable
- Armored
- Wide Variety of Connectors
- Great Flexibility

![](_page_5_Picture_7.jpeg)

The MegaPhase RF Orange<sup>®</sup> coaxial test cable is the gold standard (at MegaPhase we call it the "orange standard") for the best overall value in test cables. Whether you're in a lab, production environment, or building an ATE, this rugged test cable provides a long service life with repeatable performance throughout the life cycle of the cable. A wide variety of connectors are available, custom lengths, a variety of colors, and phase matching. Fewer calibrations mean less downtime, resulting in the MegaPhase promise of Lowest Cost Per Measurement<sup>™</sup>.

## Survivor<sup>™</sup> Ruggedized Cables to 50 GHz Low Loss Armored Cables for Rigorous Environments

- Crush Resistant
- Low Loss Robust Connector Termination
- Pull Resistant
- Stainless Steel Armor
- Robust Connector Termination
- Wide Variety of Connectors

![](_page_5_Picture_16.jpeg)

The Survivor<sup>™</sup> cable assemblies employ a low loss cable inside a light weight stainless steel armor to survive rigorous installation conditions through 50 GHz. These low density dielectric cables are designed to handle rigorous test environments and provide high crush resistance for applications including outdoor antenna testing, production test, and lab test. The Survivor<sup>™</sup> cables are cost effective and available with Type N, SMA connector, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors.

#### EMC Lab Test Cables to 40 GHz Low Loss Armored Test Cables for Compliance Measurements

- Low Loss
- Long Lengths Available
- Excellent Shielding -110 dB
- Armored & Rugged
- RF Shielded Per MIL-PRF-39012
- Wide Variety of Connectors
- Flexible

![](_page_6_Picture_8.jpeg)

EMC Lab Test series cables are specifically designed to meet the needs of EMC lab technicians, with a maximum frequency of 40 GHz. With assembly shielding effectiveness of -110 dB, these low-loss, ultra-rugged armored cables are constructed using materials that meet electromagnetic compatibility standards including conductive interface gaskets. Phase matching, alternative conductive jackets (such as ferrite), and long lengths are just some of the features available for EMI/RFI test environments including transient and spurious emissions measurements. A wide variety of connectors are available.

#### Thermal VAC Test Cables to 50 GHz **Thermal-Vacuum Cables for Altitude Testing**

- Low Outgassing to 10<sup>-7</sup> torr
- Ideal for High Bay Testing
- Phase Stable
- Vented Connectors
- Rugged Construction
- Thermal Stability

Thermal VAC microwave test cables are specifically designed for testing space and airborne systems and components and offer a maximum frequency of 50 GHz. These rugged and phase stable cable assemblies are ideal for high bay testing of RF payloads, and applications in the severe environments of thermal vacuum chambers, altitude chambers, thermal shock, or any other application requiring thermal stability.

#### 75-Ohm Broadband Test Cables to 8 GHz For Testing of IoT Devices, Cable Modems, CATV, IPTV, and Broadcast Components

- Light Weight
- Rugged Design
- Precision Connectors Available
- 75-ohms
- Excellent VSWR 1.10:1 at 4 GHz

![](_page_7_Picture_6.jpeg)

MegaPhase 75-Ohm broadband test cables offer are designed for bench-top testing of devices in broadcast, Internet of Things (IoT), satellite and cable TV receivers, cable modems, high-definition televisions, AM/FM radio receivers, and police scanners. With a maximum frequency of 8 GHz, these cable assemblies are designed to survive in rugged test environments and provide stable performance under flexure, as well as excellent VSWR, enabling repeatable measurements between calibrations. Precision connectors include Type N, F, and BNC.

### **RF Green<sup>™</sup> Test Cables to 26.5 GHz** Low Environmental Impact Meets High Performance

- RoHS Compliant
- Armored
- Zero Halogen
- Phase Stable
- Zero Flourine
- Light Weight

![](_page_7_Picture_15.jpeg)

RF Green<sup>™</sup> eco-friendly test cables prove that MegaPhase is the leader in high-performance cables with minimal environmental impact. In addition to using eutectic RoHS-compliant solders (Pb-free), these lightweight assemblies use a cellular polyethylene dielectric to eliminate Fluorine typically found in PTFE-based products. The jacketing and labels are made from SmartGrid rubber, a Zero-Halogen solution to further our commitment to reduce environmental impact. These rugged cables offer a maximum frequency of 26.5 GHz and provide a great overall value for your laboratory without expanding your carbon footprint.

#### SiteLine<sup>™</sup> Armored Test Cables to 50 GHz **Crush-Proof Cables Designed for Severe Environments**

- Phase & Amplitude Stable
- Crush Proof 250 lbs/linear In (.46 kg/cm)
- Field and High Impact Production
- Armored & Rugged
- For Severe Environments
- Ideal for Flight Line Testing

![](_page_8_Picture_7.jpeg)

SITELINE SiteLine<sup>™</sup> rf test cable assemblies are protected by a super-rugged armor designed for severe environments, such as flight lines, outdoor antenna testing, and other demanding production environments. With a maximum frequency of 50 GHz, this "gorilla proof" cable endures torgue, twist, and crush forces better than any cable on the market, period. SiteLine cables are crush-proof to 250 lbs/linear In (.46 kg/cm). Ideal for use with FieldFox<sup>®</sup>, SiteMaster<sup>™</sup>, and Site Analyzer<sup>®</sup>.

#### **Private Labeled Test & Measurement Cables Enhance Brand Visibility, Increase Revenue, and Provide Customers End-To-End Test Solutions**

- Custom Jacket Color
- Custom Logo and Labeling
- Test Data on Your Letterhead
- Customer-supplied Serial Numbers
- Custom Packaging & Shipping Labels
- Wide Variety of Cable Types
- Easy, Seamless & Confidential

MegaPhase offers highly-customizable, private labeled test and measurement cables. As an industry leader in test and measurement cables for a wide variety of RF & Microwave applications, our products feature vertically-targeted cables used from 10 MHz through 110 GHz for telecommunications, semiconductor, spacecraft and C5ISR test sets using vector and spectrum analyzers, probe stations, environmental test chambers, and many more.

MegaPhase provides private-labeled test cables to some of the largest instrumentation manufacturers globally as well as many customers in equipment rental, "rack and stack" integrators, brand-conscious component manufacturers, distributors, and many others. Our capabilities for both large and small-quantity customers make the process easy, seamless, and confidential.

Options include custom jacket colors, custom logo, and labeling, test data included on your letterhead, inclusion of customer-supplied serial numbers, as well as custom and branded packaging and shipping labels.

# **RF & Microwave Cables**

### Phase3<sup>™</sup> Cables to 67 GHz Ultra Low Loss Performance

- Space Qualified
- Ultra Low Loss
- Excellent Shielding Effectiveness -110 dB
- Low VSWR
- Helical Foil/Braid Outer Conductor
- Super Flexible
- Light Weight

Phase3<sup>™</sup> rf coaxial cables offer the absolute lowest loss possible without sacrificing flexibility or shielding effectiveness. The Phase3<sup>™</sup> product line is used in airborne phased-array radars, ground-based EW, and ATE. Available with phase matching, delay matching, and armoring upon request.

## HyperFlex<sup>™</sup> Flexible, Solderless Coaxial Cables to 67 GHz Superior, "Behind the Connector" Flexibility

- Space Rated
- Unique Flexibility at the Termination
- Minimizes Mechanical Fatigue
- For Applications Requiring Tight Bends/Routing and "Inside-The-Box"

MegaPhase's patented HyperFlex<sup>™</sup> Series Cable offers superior flexibility when compared to traditional solder-terminated connectors of similar sizes and applications. The HyperFlex<sup>™</sup> Cable incorporates a solderless termination, eliminating solder wicking and enabling tight, right-angle bends directly behind the connector.

The HyperFlex<sup>™</sup> offers three different series, with a .090, .120 and .141 diameter ranging from DC – 67 GHz. This cable is ideally suited for inside-the-box and small form factor applications where tight routing is required.

![](_page_9_Picture_17.jpeg)

Phase

#### AlumiBend<sup>™</sup> Semi-Rigid Cables to 90 GHz Space Qualified and Ultra-Light

- Phase Stable Over Temperature
- Low Loss
- 40% Lighter Than Copper
- Cost-Effective Alternative to Standard Semi-Rigid Coax
- Space Qualified

AlumiBend

TRAPHASE

Looking for a high-performance and cost-effective alternative to standard semi-rigid coax? MegaPhase's aluminum jacketed semi-rigid coaxial RF cable assemblies are all of this and more. AlumiBend cables feature a microporous dielectric, which provides lower attenuation and higher operating temperatures. These unique, low-loss cable assemblies are suitable for applications up to 90 GHz, and offer exceptional phase stability vs. temperature when compared to solid PTFE semi rigid cables. Space-Qualified AlumiBend cable assemblies are 40% lighter than their copper-jacketed equivalents. Like the entire MegaPhase AL Series, AlumiBend is easily bent with a fixture and will maintain its finished shape.

#### UltraPhase<sup>™</sup> Cables to 110 GHz Phase and Temperature Stable Performance

- Space Rated
- Phase Stable Over Temperature
- Phase & Amplitude Stable Vs. Flex
- Low Loss
- No PTFE "Knee" From +15 To +22 °C
- Ultra Flexible
- Light Weight

MegaPhase UltraPhase<sup>™</sup> products offer thermal stability without sacrificing insertion loss and phase stability versus flexure. This light weight product line features linearity across a wide temperature range, without the notorious PTFE "knee" at ambient temperatures. UltraPhase<sup>™</sup> is ideal for applications including both air-, sea-, and ground-based phased array radars, sensors, mobile backhaul, and temperature testing. A wide variety of connectors are available.

#### The Warrior Cable® to 50 GHz Rugged and Crush-Proof — When Downtime Is Not an Option

- Soldier Proof Solution
- Stable Under Vibration and Abuse
- Crush Resistant to 250 lbs/linear in (45 kg/linear cm)
- Rugged GrooveTube<sup>®</sup> Technology
- Proprietary Pull-Resistant Connector Design
- Jacketed to withstand the elements, including chemicals.

The MegaPhase Warrior Cable<sup>®</sup> is a combat proven, "soldier proof" solution ideal for ground-based EW and ECM. This cable is internally armored with GrooveTube<sup>®</sup> Technology, a crush-proof outer conductor, surviving in the harshest conditions including salt, fog, humidity, dust, sand, vibration, and flexure.

THE WARRIOR CABLE®

#### **GrooveTube® Cables to 50 GHz** Rugged, Low Loss Performance for Severe Environments

- Space Rated
- Low Insertion Loss
- Phase and Amplitude Stable
- Stable Under Vibration and Severe Conditions
- Rugged Groovetube<sup>®</sup> Technology
- Boundless<sup>™</sup> PTFE Dielectric
- Proprietary Pull-Resistant Connector Design

MegaPhase offers these cables with rugged GrooveTube<sup>®</sup> Technology, a crush-proof convoluted copper armor and outer conductor. GrooveTube<sup>®</sup> features low insertion loss, phase and amplitude stability, and low VSWR. Applications include phased array radar, electronic warfare radar systems, and applications where high reliability interconnects are critical. Available with phase matching, delay matching, and custom configurations.

## Semi-Rigid Cables to 110 GHz Custom and Standard Designs Using CNC Bending

- Space Rated
- Catalog or Build-to-Print
- Stable Performance
- Custom Design Services
- Precision CNC Bends
- Sizes 0.034in (0.86mm) to .25in (6.35mm)
- Wide Variety of Connectors

![](_page_12_Picture_8.jpeg)

MegaPhase offers high reliability semi-rigid cable assemblies in a variety of configurations. With precision CNC bending, our customers are guaranteed consistency among multiple assemblies. MegaPhase offers custom design services complete with engineering drawings. These assemblies are MIL-DTL-17 qualified, typically with a tin-plated copper outer conductor. Applications include delay lines, switch matrices, test fixtures, instrumentation, and other integrated systems.

## MegaForm<sup>™</sup> Cables to 20 GHz Hand-Formable Jumper Cables

- Low VSWR
- Alternate to Semi-Rigid
- Easy Installation
- Tin-Dipped Copper Braid Outer Conductor
- Bends in Place
- .086 in (2.18 mm), and .141 in (3.5 mm) Diameters Available

MEGAFORM

MegaForm<sup>™</sup> hand-formable jumper cables are ideal for "on the fly" bending when semi-rigid cables are not practical. These cable assemblies can be hand formed in-place and eliminate the cost of design and drawings which semi-rigid cables would require. Applications include cabinet interconnects, ATE, and systems integration. A wide variety of connectors are available.

## JumpShot<sup>™</sup> Cables to 18 GHz Low Cost Jumper Cables For Systems Integration

- Replacement for RG402 and RG405
- Cost Effective
- Ultra-Flexible
- Double Shielded Outer Conductor
- Blue FEP Jacket
- .086 in (1.2 mm) and .141 in (2.18 mm) Diameters Available

## **JUMPSHOT**<sup>™</sup>

JumpShot<sup>™</sup> ultra-flexible cables are easily installable and designed for fixed installations such as ATE, switch matrix, and board fixtures where multiple flexures and mating cycles are not anticipated. These cost-effective alternatives to semi-rigid RG402 and RG405 feature a small diameter and high flexibility through 18 GHz. A wide variety of connectors are available.

#### **RF Wiring Harnesses** Custom and Build-to-Print Designs for Multiport RF Connections

- Multipin Connectors Including 38999
- Wide Variety of Braid and Finish Options
- Wide Variety of RF & Microwave Cables Available
- Airborne & Space Applications
- Custom Multi-Port Connectors Available
- Custom Design Services Available

MegaPhase RF wiring harnesses are typically built-to-print, but MegaPhase also offers custom design services using our experience and expertise. Connectors typically include a multi-pin connector such as 38999 (MIL circular) or a custom multi-port design. Mating connectors and test harnesses also available. Phase matching available.

![](_page_13_Picture_17.jpeg)

#### **N-Way Power Dividers Highly Dependable Port-to-Port Isolation**

- SMA connectors, 3.5mm, 2.92mm, and 2.4mm Connectors Available
- 0.5 40 GHz, Octave, and Multi-Octave Bandwidths
- Low Insertion Loss & Amplitude Balance
- Meets MIL-DTL-23971
- Environmental Screening Available

![](_page_14_Picture_7.jpeg)

loss solutions for both low and high-power signal applications. Using lumped element or stripline circuit technology, standard and custom designs deliver high port-to-port isolation and tight phase tolerance with optimum VSWR. Our engineering team can complete and deliver first samples of most new designs within a very short lead time.

#### **Directional Couplers** The Coupling Precision You Need for **Any Environment**

RF Directional Couplers offer a range of coupling values and bandwidths to suit various applications and system needs. These can be designed for the most benign laboratory environment to the rigorous demands of military airborne and space systems. Tight tolerances on coupling value, directivity, and insertion loss can be achieved in various packages and connector combinations.

![](_page_14_Picture_11.jpeg)

## **Customized Connector Design, Prototyping, and** Manufacturing Services When Off-The-Shelf Interconnects Do Not Meet Your **Application Requirements**

MegaPhase is an engineering-focused manufacturer utilizing the latest EM simulation and 3D modeling software packages to deliver state-of-the-art microwave connector designs for ultra-high frequencies with precision-level performance. When standard off-the-shelf interconnect do not meet your application requirements, MegaPhase is your partner in cutting-edge solutions. MegaPhase technical experts have over 20 years of experience designing solutions for the aerospace, defense, and telecommunication markets.

Our knowledge base and experience offer products such as hermetically-sealed connectors, phase shifters, high-density connectors, wire harnesses per MIL-PRF-38999, custom multi-port solutions, spring-loaded rf connectors, multipactionfree vented and space-grade connector designs, high power solutions, ultra-high temperature connectors (+200°C), IP67 & IP68 compliant designs, custom precision adaptors, 50 Ohm terminations and more.

![](_page_15_Figure_4.jpeg)

- SMA, 2.4mm, 1.0 mm, etc.
- Custom mounting pattern

- Best of both worlds short profile connector envelope with 90 dB isolation.

## High Density Interconnects (HDI) for Printed Circuit Boards (PCB)

When Lightweight, Higher Density and Performance Are Critical

- Solutions Include PCB Mounting types: Surface Mount, Through Mount, Surface Mount Right Angle, and Edge Mount.
- Interfaces Offered: 1.0mm, 2.4mm, 2.92mm, SSMA, SMP, SMPM, SMP3 and More.
- Coaxial-to-PCB Transition Simulation Service Provided at No Cost.

The MegaPhase High-Density Interconnect product line offers a large variety of connector configurations to system designers to optimize packaging miniaturization while maintaining electrical and mechanical robustness. When lightweight, higher density and performance are critical to the application, MegaPhase's line of High-Density Interconnects and High-Density Packages is the answer. Solutions are based on snap-in interfaces, SMP, SMPM and SMPS per MIL-STD-348B. We offer PCB mount (Edge, Surface and Through mount), cable connectors, adapters, hermetics and multiports.

Coaxial-to-PCB transition simulation service is provided at no additional cost. Our customers provide the PCB stack up (layered thickness, materials, and transmission waveguide type) and, upon completion, our customers receive the connector transition in DXF format.

![](_page_16_Picture_7.jpeg)

#### NMD Connectors Ruggedized Test Port Connectors

Most often, NMD connectors are 3.5mm, 2.9mm, 2.4mm, and 1.85mm connectors. They include a large threaded body that is specially designed to stabilize the test port cable when attached to the front of the analyzer or test set using MegaPhase test port cables.

The NMD design allows the use of standard female cables and adapters. Since the test port connectors are male connectors, they have standard inside threads that can accommodate the female connectors. It is best to use the recommended cables with NMD connectors. NMD stands for Network Measurements Division, an outdated term for the original HP division that produced the Agilent 8510A and 8720A analyzers.

### **SMPM-T Connectors** Ideal for High Bandwidth Signal Transmission

MegaPhase Threaded-SMPM, commonly referred to as SMPM-T is a sub-miniature push-on design ideal for applications such as microwave antenna arrays, test and measurement equipment, and high-speed data communications systems. The connector interface features a threaded coupling mechanism that provides a secure and reliable connection in high-vibration environments. The SMPM-T two-step installation process is advantageous for system verification and conducting a rapid assessment by simply plugging in the connector. Afterward, the threaded coupling mechanism is employed to ensure a secure RF connection. Overall, the SMPM-T connectors are a high-performance, miniature connector that is well suited for demanding RF applications where reliable and high bandwidth signal transmission is critical.

![](_page_17_Picture_5.jpeg)

![](_page_17_Picture_6.jpeg)

#### Optimized Super SMA Connectors Through 32 GHz Space Qualified & MIL-STD-348 Compliant

Optimized Super SMA Connectors feature a 32 GHz operating frequency, leading the market in precision reflection (VSWR) performance. MegaPhase, with its team of design experts, drives innovation in RF/Microwave connectors and improvement of interconnects supporting aerospace, satellite, military and telecommunication applications. These connectors are Space Qualified.

![](_page_18_Picture_2.jpeg)

The SMA cable connector interface has been on the market since the late 1950's, and throughout the years design improvements have extended the operating frequency from the initially developed frequency of 18 GHz, up to 27.5 GHz. SMA connectors operating at 27.5 GHz are widely known as a "Thick-Wall SMA" or "Super SMA."

These precision SMA Connectors go one step further, to 32 GHz, and are designed to maintain transition ID differences or steps to a minimum to achieve low VSWR for high operating frequencies. In the detailed view below, one can observe the ID differences between male and female across three different design approaches: Classic, Super, and the MegaPhase Optimized SMA designs. The MegaPhase Optimized SMA design maintains compliance with the interface standard MIL-STD-348 while significantly improving operating frequency and VSWR performance.

MegaPhase offers the Optimized Super SMA connector with our AlumiBend<sup>™</sup> AL141 Series Cable.

#### Mega8 Multi-Port Connector System High-Performance Rf Interconnects for the Harshest Conditions

- Individually sealed connector housings and cable assemblies
- Spring-loaded interfaces to ensure positive mating under the most extreme vibration
- Simple front release of individual cable assemblies
- Housings can accept a variety of cable assemblies including flexible, semi-rigid HyperFlex<sup>™</sup> up to .480 inches in diameter
- Available in various numbers of ports and housing configurations
- Keyed housings to allow for multiple housings on a single box
- Single jack screw housing mating feature
- Two standard plating options: Chemical Film and EN-PTFE

The Mega8 multi-port connector system offers high-performance RF interconnects, equivalent to Times Microwave M8 connectors, for use in both fixed and rotary winged airframes. Mega8 multi-ports meet the harsh requirements of MIL-T-81490 and MIL-C-87104 and are guaranteed to mate with other leading industry brands.

![](_page_18_Picture_16.jpeg)

#### Hermetically-Sealed Waterproof Connectors IP67 & IP68 Rated in Unmated Conditions

- Coaxial Cable: UltraPhase<sup>™</sup> Low Loss, Ultra Phase Stable
- Interface of weatherproof coax connector: 2.4mm (40 GHz Max.)
- Available Protection: GrooveTube® Armor

Hermetically sealed waterproof coaxial connector 2.4mm designs offer a compact coaxial cable connector envelope and are watertight in unmated conditions. Rated to IP67 and IP68, these connectors have the ability to withstand rain,

100% condensation, and water submersion up to 1m depth. Extreme applications demand high-performance and reliable interconnects in severe environments including ground, sea, and airborne applications. Every potential water ingression path is mitigated with at least two waterproofing methods to maintain long-lasting performance under extreme environmental conditions. Other interfaces and cable types upon request.

#### SMP3 Interfaces Quality Electrical Performance Through V and W Bands

- Coaxial Cable: UltraPhase<sup>™</sup> Low Loss, Ultra Phase Stable
- Connector Interface: SMPS, Male Full Detent
- DC 70 GHz, VSWR: 1.30:1, Max.
- 30% Smaller Than SMPM
- 45% Smaller Than SMP

SMP3 Interfaces are ideal for applications with ultra-high density interconnect requirements where quality electrical performance is

required up to V and W frequency bands using a plug-in interface. The SMP3 interface is designed with a frequency cutoff above 90 GHz and specified by MegaPhase up to 70 GHz.

![](_page_19_Figure_14.jpeg)

#### Straight & Right Angle Test Adapters Ideal for Probe Station Testing Through 50 GHz

Straight and right angle test adapters are designed to work with in-series and between-series connectors. Applications include defense and commercial uses, and they are ideal for probe station testing through 50 GHz. MegaPhase adapters feature linear phase slopes, low SWR, and high reliability.

## Factory Form Right Angle Unique Permanent Right Angle Design

The Factory Form Right Angle design will extend the life of your cable assemblies without sacrificing electrical performance. MegaPhase designed the Factory Form Right Angle as a replacement for right-angled connectors and test adapters. The unique permanent curved flexure minimizes electrical reflection and loss found in right-angled connectors and adapters. It provides the necessary space needed for cable mate/de-mate processes.

This design option is available on most MegaPhase Test and Measurement and RF Cables.

![](_page_20_Picture_6.jpeg)

![](_page_20_Picture_7.jpeg)

#### **Torque Wrenches (Break-Over Style)** Essential to Preventing Overtorquing of RF Connectors

"Break-Over" style torque wrenches are essential to limiting the amount of torque applied to coax RF connectors, products, or equipment during testing or assembly. When the preset torque value is reached, the calibrated torque wrench "break over" indicating torque has been reached and eliminating over-torquing.

This product is designed and manufactured to meet or exceed the accuracy and repeatability requirements of ISO 6789:2003 (±6% of setting). There are color-coded aluminum handles for specific connector types and torque values.

#### Oasis<sup>®</sup> Custom-Made Cable and Adapter Kit Customized Kits for Field Testing of Telecommunications Systems

- Choose Your Cable Types
- Designed for Field Applications
- Choose Your Connectors
- Reliable Measurements of Base Stations
- Choose Your Adapter
- Military Communications Setup

The Oasis<sup>®</sup> custom cable and adapter kits are equipped to your custom specifications from cable type, connectors, adapters, and accessories such as torque tools. These kits were originally designed for US Military applications,

including set-up of communications and EW antennas. Today this kit is widely used for field testing of telecom systems.

![](_page_21_Picture_13.jpeg)

![](_page_21_Picture_14.jpeg)

# Don't Take Our Word For It.

"I wanted to take a moment to thank you for the hasty turnaround on our order. The service was fantastic as always. We will look to MegaPhase for all of our continued cabling needs." - Senior buyer at a leading space systems company

"Thank you so much for your prompt response on this matter. I have made notes in our system to never use [your competitor] again and to try MegaPhase for those needs instead. Just want to say thanks again for your help!"

- Buyer at a compliance test lab

"We have always been very satisfied with the quick service and delivery we receive from MegaPhase."

- Test engineer at a large semiconductor OEM

"My guys in [our corporate location] love these MegaPhase cables! We'll buy more this year."

- Senior RF test system designer at a large mobile phone OEM

![](_page_22_Picture_8.jpeg)

122 Banner Road Stroudsburg, PA 18360-6433 570-424-8400 Solutions@MegaPhase.com www.MegaPhase.com

![](_page_23_Picture_1.jpeg)