

Prime Connection

1Q 2018

PRIMUS

P6 / TOWER SOLUTIONS

From Public Safety & Wireless to 5G & VSAT/
SATCOM Millimeter-Wave Products

P8 / RAILROAD SOLUTIONS

Polyphaser - Acses & ITC RRF Filters

P10 / 3M SOLUTIONS

The Slim Lock Closure and Cold shrink
connector sealing kits

P12 / DAS SOLUTIONS

EMR - Mobile duplexers

PRIMUS

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Primus West

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Office Hours

Monday - Friday
7 am - 6 pm

Pickup Hours

Monday - Friday
7 am - 8 pm

Connect with us



Proudly serving our customers since 1980.
Privately held and proud of it.
President – Michael A. Johnson

PRIMUS WEST [PHOENIX, ARIZONA]

Primus is proud to announce
the opening of Primus West
in Phoenix, Arizona.

Monday - Friday

7 am - 7 pm

Saturday

7 am - 1 pm



Trade Shows & Training

2018 TRADE SHOWS

GLMSS: February 1-3 in St. Pete Beach, FL

NATE: February 19-22 in Nashville, TN (Booth 217)

IWCE: March 5-9 in Orlando, FL

UTC Region 3 Spring Meeting and EXPO: March 7-9 in Jacksonville, FL

EDMSSA: April 24-27 in Pocono Manor, PA

ENTELEC: May 15-17 in Houston, TX (Booth 221)

RSSI: May 21-22 in Omaha, NE

APCO: August 5-8 in Las Vegas, NV (Booth 1148)

TRAINING

Anritsu SiteMaster™ Certified Line Sweep Training 2-Day Course, \$1,395 pp

Anritsu PIM Master™ Certified PIM Training 1-Day Course, \$1,295 pp

CITCA Authorized Climber

CITCA Tower Rescue & Competent Climber

CITCA Train-the-Trainer

CommScope, ComStar, ODM Fiber, EXFO, Harger, Bird Technologies, JMA, and Kaelus Trainings
available upon request.

Visit primuselectronics.com or contact Training with Primus at (800) 435-1636 or
training@primuselectronics.com for more information and registration.



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NEW EMPLOYEE



Matt Costello

Matt Costello joins the Primus team as a new Inside Sales Representative. His previous job was with insurance auto claims. After living in Chicago for the last 6 years, he moved to his new home in Lisle, IL. This is Matt's first job in the wireless industry and he has extensive customer service and sales experience. Primus gladly welcomes Matt into the Primus team!

PRIMUS' NEW 2018 EXCLUSIVELY DESIGNED T-SHIRT!



Primus' 2018 t-shirt featuring the new exclusive design will be unveiled at the National Association of Tower Erectors (NATE) Tradeshow February 19 through 22 in Nashville Tennessee in Booth 217.



PRIMUS

RESERVE A SHIRT IN ADVANCE BY CALLING PRIMUS AT (800) 435-1636

RECOGNIZING PRIMUS



After being in the Tower Materials purchasing role for over 31 years one thing that has always bothered me was the inability of suppliers to offer everything that is typical to complete any tower site related scope of work. Not only does Primus offer a wide variety of site materials and products they do so without the drama associated with other purchasing efforts. Whether the order is very small or very large the quality of the Primus process has allowed us to be efficient which is so important to the success of our projects.

Jay Panozzo
President
MidAmerica Towers, Inc.



CRITICAL COMMUNICATIONS ENABLED IN PUERTO RICO



With the recent devastation of the hurricanes in Puerto Rico, agencies are moving swiftly to establish communications, restore infrastructure and bring aid to the people of Puerto Rico. Communications is critical in coordinating aid supplies and assisting with family welfare checks throughout the island. ViaSat's Mobile Satellite Services over Ligado Network's SkyTerra 1 satellite are providing critical communications services to partners and teams deployed in Puerto Rico. Steve Hailey of Primus Electronics and David Craig from Focused Mission have been working in Puerto Rico to support the communications efforts of multiple relief agencies. By leveraging Cobham's EXPLORER MSAT-G3 Push-to-Talk solution, they are able to provide critical communications for coordination

of repair and support missions in order to restore satellite and telecommunications infrastructure equipment of partners and government agencies across the island.

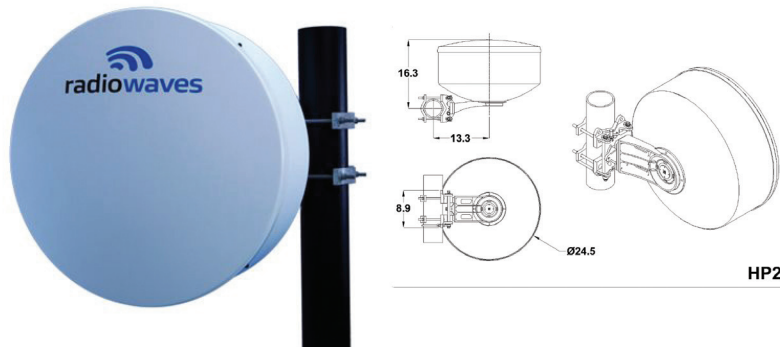
"We are using EXPLORER MSAT-G3 exclusively to communicate on our missions in Puerto Rico to repair communications infrastructure," said Steve Hailey of Primus. "In most cases, it is the only communications solution available that works island-wide and back to the mainland." "Our EXPLORER MSAT-G3 units give us the ability to coordinate our response and provide a safety net for our teams as they respond to areas with little or no communications," said David Craig of Focused Mission. "This is their proven communications link between team members and our support center back in Orlando, FL. The teams are also equipped with an EXPLORER MSAT-G3 unit and are available to us 24/7 for support and part ordering. This is the only solution that can provide this level of communications for our response requirements." In addition, Primus and Focused Mission are leveraging radio extenders, allowing the team to communicate via Radio-over-IP-over-Satellite when operating outside and away from their vehicles. This extends the range of the EXPLORER MSAT-G3 unit from the vehicle using handheld radios. "From a safety perspective, this is important," said Joseph Sheppard, of Focused Mission. "This means our team is always in communications with us no matter what they are doing. They can call for help and support while on a rooftop or inside a building while troubleshooting equipment. We could not do that with any other solution." "Primus, ViaSat, Ligado, and Cobham are providing a critical capability that is rugged, easy to use and reliable" said Mike Zeman, Team Member for Focused Mission "The EXPLORER MSAT-G3 has become a lifeline for our success in Puerto Rico. When we are asked how are we able to communicate across the island no matter where we are, we tell them it's because we have the EXPLORER MSAT-G3."

RELIABLE AND INNOVATIVE MICROWAVE ANTENNAS



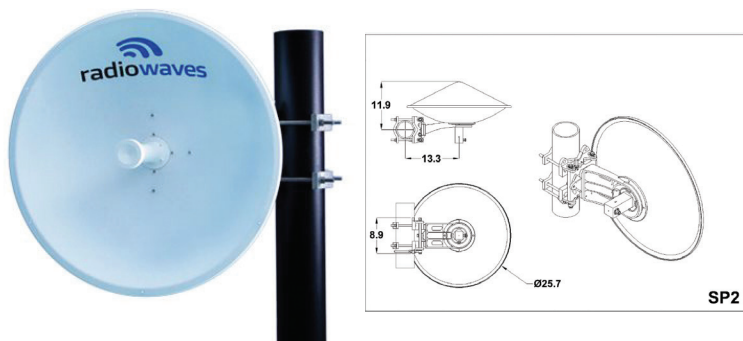
The demand for network bandwidth grows with each new connected device to the internet. The collective stress of user devices is anticipated to increase demand for network bandwidth by a factor of five by 2018. Increased demand for backhaul-cellular bandwidth is driving capacity requirements on individual links, as well as additional links for network deployment.

RadioWaves expansive portfolio of wireless and broadband antennas are designed to optimize RF performance and support densification programs in microwave systems. Each purpose-built design is manufactured to minimize part count, maximize system performance and provide rapid-on-site assembly in the harshest environments, while providing both high reliability and measured ROI for network operators.



The Standard Performance (SP), High Performance (HP), and Super High Performance (SHP) series support terrestrial microwave point-to-point applications. They are available as single-polarized or dual-polarized antennas and support standard frequency bands from 1.3 to 86 GHz. The products include 1 ft. (30 cm), 1.5 ft. (45 cm), 2 ft. (60 cm), 3 ft. (90 cm), 4 ft. (120 cm), 6 ft. (180 cm), and 8 ft. (240 cm) diameter antennas.

For greater efficiencies and customized packaging, the HP series offers direct integration of customers outdoor units to the antennas.



RadioWaves HP and SHP Series antennas are certified by CETECOM ICT Services GmbH to European Telecommunications Standard Institute (ETSI) standards. In addition, they comply with Federal Communications Commission (FCC) and Industry of Canada regulations, while meeting or exceeding EIA-195C and EIA-222E standards.

Primus is a key RadioWaves partner and carries stock in both our Chicago and Phoenix area warehouses. Our sales team is standing by to support your RadioWaves antenna requirements for new designs or project deployments.

FROM PUBLIC SAFETY & WIRELESS TO 5G & VSAT/SATCOM MILLIMETER-WAVE PRODUCTS

For over 56 years MECA Electronics (Microwave Equipment & Components of America) has served the RF/Microwave Industry with equipment and passive components operating up to 50 GHz, featuring products manufactured in the United States of America with a 36-month warranty! Also available, cost effective RF Parts On Demand globally manufactured products with a 1 year warranty!

Primus recognizes that MECA knows the growing and expanding needs of our customers for higher frequency, smaller packaging and improved efficiency. MECA offers a family of High Quality Components to address these needs. Their components are specifically engineered to support the following market segments: Public Safety, Commercial Wireless including Rail & Transportation industries, 5G ready, Millimeter-Wave, Space, Defense markets. The portfolio includes Power Dividers, Couplers, Attenuators, Terminations, Isolators/Circulators, Bias Tee's & DC blocks. Available in a variety of connector styles; SMA, N, BNC, TNC, 7/16, 4.1/9.5, 4.3/10.0, 2.92 & 2.4 mm interfaces covering up to 50 GHz.



Public Safety/Rail & Transportation - Applications

MECA's Components and Equipment are designed for the challenging environmental conditions of the public safety, rail and transportation industries. Many of their products meet IP 67/68 ratings and are subjected to harsh winters (extremely low temperatures and Road Salt) and summers (hot and humid) under public safety applications. Others are subjected to jet fuel in airport applications. MECA's rail products meet EN50155 "Railway Applications & Electronic Equipment used on rolling stock" which defines a variety of environmental, safety, and performance criteria such as; vibration, shock, thermal cycling, and various fuels/chemical exposures. These products feature components encased in a NEMA 4 Stainless Steel enclosure fully capable of withstanding the harshest of environments.

Commercial Wireless - Applications

Low PIM Products and Equipment covering the 0.380-2.7 GHz range with industry leading PIM Specification as well as non-low PIM components and equipment covering even broader frequen-



cy ranges to GHz. Featuring IP67/68 Low PIM Terminations/ Attenuators with low thermal noise with no deration of power handling capacity to 85 C, thereby eliminating the need for increased ratings for greater field reliability and reduced serviceability cost(s). DAS Equipment Solutions are provided using MECA's components.

5G & VSAT/SATCOM Millimeter-Wave Components

Featuring Power Divider and Couplers covering 6-40 GHz with 2.92 & 2.4 mm interfaces along with supporting components such as Attenuators, Terminations, Bias Tee's, DC blocks, and adapters. With octave & mulita-octave units covering 1-18 GHz with SMA interfaces all built by J-Standard certified Assemblers & Technicians. Many of their VSAT applications overlap into Defense Markets as noted below.

Aerospace, Defense & Space - Applications

Building upon 5G & VSAT Millimeter-Wave MECA also has extensive experience in Aerospace & Defense qualified components. With a variety of items in ground, air & space based communions where testing, qualifications, and traceability requirements are essential & required. Featuring the ML series; designed to meet applicable portions of MIL-DTL-23971, MIL-DTL-15370, MIL-DTL-39030E, and MIL-STD-202. The models are available with their standard screening process which incorporates a level of thermal screening combined with verification of electrical and mechanical performance features. Additionally they are available with enhance levels of screening for qualification and verification applications as required.

The Primus/MECA relationship can bring you solutions for your public safety, commercial wireless including Rail & Transportation industries, 5G ready, millimeter-wave, space, and defense markets. For more information on MECA products, contact Primus at (800) 435-1636 or support@primuselectronics.com.



POLYPHASER

ACES & ITC RRF FILTERS



Polyphaser's band pass filter surge protector for ACSES (Advanced Civil Speed Enforcement Systems) radio and ITC (Interoperable Train Control) radio signals is designed for 220 MHz railroad networks. Engineered for safe and secure PTC (Positive Train Control) applications to reduce interference issues by blocking unwanted signals due to co-location.

These 50 Ohm impedance filters have a two-port designed to pass ACSES or ITC radio signals. All ports are DC short circuited with a max power input of 20 Watts with 100% duty cycle.

RRF-ACE-220-NFF

- Band Pass: 217-219 MHz
- Band Stop: 220-222 MHz
- Termination: N-Female / N-Female

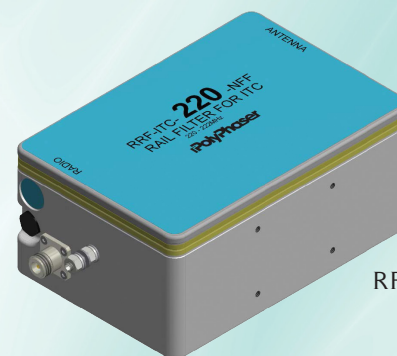
RRF-ITC-220-NFF

- Band Pass: 220-222 MHz
- Band Stop: 217-219 MHz
- Termination: N-Female / N-female

For more information on Polyphaser's ACSES and ITC RRF filters, contact Primus at (800) 435-1636 or support@primuselectronics.com.



RRF-ACE-220-NFF



RRF-ITC-220-NFF

PETZL

GRILLON - MARCH 2018



Primus would like to announce the updated GRILLON line of work positioning lanyards featuring the same durability and reliability that users have come to expect, but are redesigned with a smaller, more lightweight adjuster, and now have more customization options than ever: different lanyard lengths, materials, and connector choices. The updated system will be ANSI Z359.3 certified and will be available in March 2018.

The GRILLON line of adjustable lanyards are used to make work positioning systems that compliment a fall-arrest system. Their length can be easily and precisely adjusted as necessary for comfortable positioning at the workstation, even when the device is under load. The sewn terminations provide easy handling and increase the strength (compared to knotted terminations). It also protects the stitching while properly orienting the carabiner for ease of use. The customization options allow users to adapt their system to meet the requirements of the workplace.

The device can be used in double mode or single mode depending on the configuration.

Double mode

The GRILLON lanyard can be used in double mode (when the lanyard is attached to both side attachment points on the harness) and the user works with a main line while their feet are weighted on the structure. This type of attachment mode ensures better load distribution on the harness. To adjust lanyard length the user simply depresses the adjusters pivoting cam.

Single Mode

When there is a top anchor located above the user, the GRILLON lanyard is connected to the harness on a ventral attachment point so that the load is comfortably distributed between the waist belt and leg loops. The user adjusts their position by controlling the device handle with one hand while the other hand minds the free end of the lanyard.

For more information on the GRILLON lanyard, contact Primus at (800) 435-1636 or support@primuselectronics.com.

THE SLIM LOCK CLOSURE AND COLD SHRINK CONNECTOR SEALING KITS



The Slim lock Closure

Most are familiar with 3M™ Slim Lock Closures SLC-716 and SLC-A-Mini for use on ½ jumper cables that connect cellular antennas to remote radio units (RRUs), but did you know that 3M also makes a Slim Lock Closure for N-Type connections? Common applications include microwave antennas, broadcast, satellite and radar systems, railroad, oil and gas, 911 emergency services, and hospital paging systems.

The 3M™ Slim Lock Closure Difference:

3M Slim Lock Closures have a tacky, non-transferable gel that covers the entire internal surface area of the closure. Other closures have a sealing gel only around the perimeter. This is important because the Slim Lock gel insulates the cable and connector, pushing air out, reducing the possibility of condensation. Condensation may cause unwanted passive intermodulation (PIM).

And the Good News for Installers Is:

The 3M™ Slim Lock Closure does not require the application of oil to lubricate the connector and cable sealing surfaces prior to installation, unlike other weatherproofing closures. No fuss. No mess.

Cold Shrink and Connector Sealing Kits

The inventor of cold shrink technology has added a new product to its domestic RF weatherproofing product portfolio, the

3M™ Cold Shrink Connector Sealing Kit 98-KC Series. These new kits are made from silicon rubber (vs. EPDM) which provide installation and performance advantages:

- Do not require foam build-up on cable or connector prior to installation
- Do not require the use of butyl or threaded adapters on fully threaded device connections
- UV resistant
- Compact design
- Tool-less
- Named on the weatherproofing guideline of one of the major domestic carriers
- Competitively priced
- Reasonable MOQs

What is cold shrink tubing?

Invented by 3M more than 40 years ago, 3M™ Cold Shrink Tubes are open ended, silicone rubber, tubular sleeves. The sleeves are factory expanded and assembled on a removable supporting plastic core. Each rubber assembly is supplied for field installation in this pre-stretched condition. As the core is unwound, the insulating sleeve shrinks to form a tight seal.

For more information on 3M's Slim Lock Closures and Cold Shrink Connector Sealing Kits contact Primus at (800) 435-1636 or support@primuselectronics.com.

COMTELCO INDUSTRIES IS NOW A BRAND OF MOBILE MARK, INC.



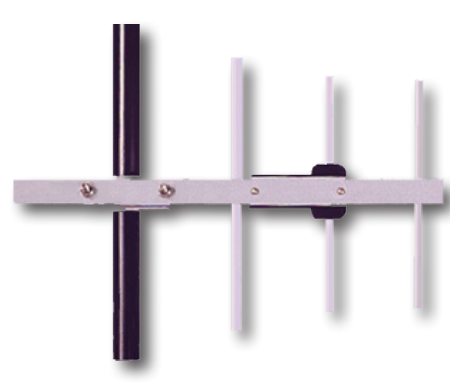
ED & EDX Series



A55 Series



BS150 & BS450 Series



Y22, Y33, & Y42 Series

In June of 2017, Mobile Mark, Inc. formally acquired antenna manufacturing company Comtelco Industries.

Product offerings from both companies complement each other and extend the frequency range and antenna styles available for Mobile Mark and Comtelco customers.

Comtelco manufactures a wide range of Land Mobile Radio (LMR) antennas for both mobile and site installations. Antenna styles include omni-directional base station antennas, directional Yagi and Folded Dipole Antennas, and in-building Panel and Ceiling mount antennas, as well as Cellular, ISM, UHF, VHF, and Low Band Mobile Antennas. Their antenna products are widely valued for their efficient performance and rugged construction.

Mobile Mark, Inc. designs and manufactures site, mobile, and device antennas for 600 MHz – 9 GHz. Applications include GPS Tracking & Fleet Management, Cellular 3G & 4G LTE, WiFi, RFID, Public Safety, Military, and Machine-to-Machine (M2M).

Michael Berry, President & CEO of Mobile Mark, explained, “This is part of Mobile Mark’s commitment to providing high quality antenna solutions for commercial wireless applications. Integrating Comtelco into the Mobile Mark family of antennas has been a great experience. Their antennas embody reliability and high performance and complement the current Mobile Mark antenna line. We respect and value Comtelco’s strong ties in the wireless industry and believe that together we are stronger.”

Bob Scorza, President of Comtelco, added, “Customers satisfaction has been our highest goal and we believe that Mobile Mark will continue to bring value to our customers by investing in research and development. We know how they operate their business and we know their commitment to the industry. We have every confidence that they will continue to provide the highest quality products, offering the best performance and reliability, at a reasonable price.”

Both Bob and his wife, Kathie, co-owner of Whisco, have been pleased with the move, “We are deeply committed to both our customers and our employees and the partnership with Mobile Mark has been a way to honor both commitments.”

The antenna manufacturing moved from Comtelco’s Glendale Heights, IL location to Mobile Mark’s Itasca, IL location allowing the “Made-in-the-USA” badge to continue with Mobile Mark. The Itasca office also gives customers access to Mobile Mark’s Engineering Technical Center, which offers custom design services and a large selection of RF testing capabilities.

Contact Primus for more information on Mobile Mark, Inc. at (800) 435-1636 or support@primuselectronics.com.



EMR

MOBILE DUPLEXERS



EMR is one of the leading manufacturers of RF filtering and amplification products in the U.S. EMR designs and manufactures combiners, duplexers, pre-selectors, tower top amplifiers, BDAs and other RF products at their factory in Phoenix, AZ. Products are covered by a 5-year warranty.

EMR's mobile duplexers are particularly popular because of their exceptional quality and technical specifications. A number of models of VHF and UHF mobile duplexers are available for different applications and are priced competitively. Primus stocks several of the most requested duplexer models and these can be tuned and shipped quickly.

Contact Primus for more information on EMR's RF filtering products and on our quick ship mobile duplexer program at (800) 435-1636 or support@primuselectronics.com.



WIRELESS LEADERSHIP SUMMIT DENVER OCT 11-12

Primus was one of the vendors participating in another successful EWA Wireless Leadership Summit held in Denver in October. The summit had sessions covering a year in review of the industry by Mark Crosby of EWA, FCC regulations on antenna structures, and 900 Mhz realignment. Patti Ryg of Primus also participates in WOW Com – Women of Wireless Communications which held their yearly meeting with guest speaker Miranda Allen from Radiofrequency Safety International speaking on “Bridging the Generation Gap” The key to four different generations working together. EWA Leadership summit was again a successful event seeing old friends and colleagues as well as meeting some new ones. Primus highlighted the partnership with EMWave mobile antennas – Fractal in building antennas – Commscope CNT cable and Motorola Repeater cable kit.



Pictured: Patti Ryg



Pictured from left to right: Sarah Beerbower and Patti Ryg

EWA Introduces Cevo Go at WLS 2017 Secure Certified Frequencies Today!

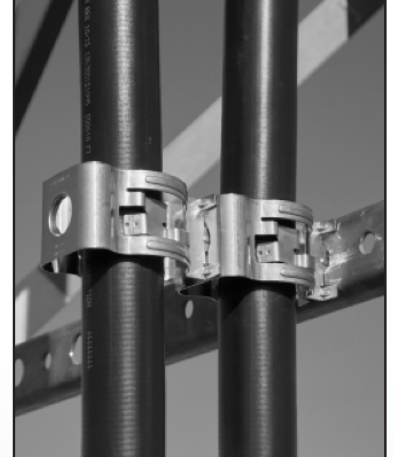
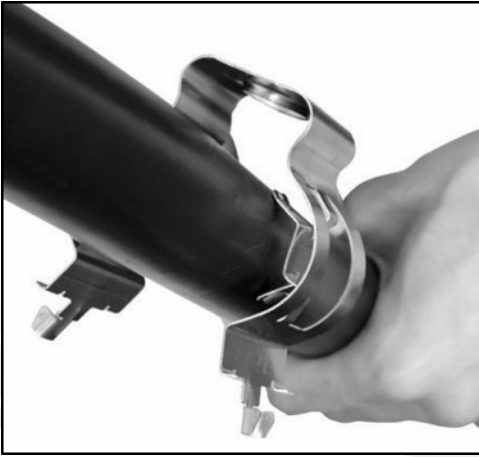
At the Wireless Leadership Summit in Denver, the Enterprise Wireless Alliance was excited to introduce Cevo Go™, a new mobile app for securing certified frequencies in hours or minutes, directly from a smartphone or tablet! Potential customers were all a buzz about the exciting announcement and the possibilities that follow. Mark Crosby and his team have again found a way for EWA to be a valuable partner in the licensing world.

Using Cevo Go is easy: fill in eight fields, view the certified frequencies that meet your requirements, and accept the results. EWA will complete the licensing process for you.

Cevo Go is available in the Apple or Google Play app stores. Learn more at www.cevogo.org or contact Sarah Beerbower with EWA at Sarah.Beerbower@enterprisewireless.org or 703-797-5108.

COMMSCOPE

THE FULL RANGE OF COMMSCOPE - SNAPSTAK® PLUS, SELF-ADJUSTING CABLE HANGERS ARE NOW AVAILABLE!



The SnapStak® Plus Hangers are now available to support a range of Coax, Fiber Jumpers, Hybrid Fiber Trunk, and Power Cables. The SnapStak® Plus hangers feature enhanced flexibility to fit a range of sizes versus hangers that were designed to fit a specific cable OD. The introduction of Hybrid Fiber Cables created a need for a support system that could handle the additional loads the copper power wiring added. Early hanger designs required the use of a rubber grommet to support the increased loads. The SnapStak® Plus was designed to adjust an OD range and eliminates the need for the grommet, reducing inventory, and more importantly, saving time. SnapStak® Plus hangers install, up to 2-3 times faster than grommet hanger designs. The SnapStak® Plus hangers fit cables from 4-51 mm. They can be stacked up to 2 deep for hybrid and power cables and up to 3 deep for coax and fiber jumpers. SnapStak® Plus Hangers for the 15 mm to 51 mm Vertical support are made of SST and the horizontal support hangers are made of engineered plastic. Both styles have been designed to meet the rigors of both mechanical and environmental stresses, to assure long lasting, reliable performance. SnapStak® Plus hangers fit into $\frac{3}{4}$ " holes on cable ladders, adapters, and virtually any industry standard support mechanism.



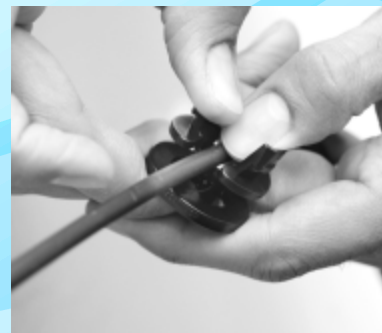
Trunk Size Cables

- SSH-XL (36 to 51 mm)
- SSH-L (26 to 36 mm)
- SSH-M (15 to 26 mm)



Jumper Size Cables

- SSH-47 (4 to 7 mm)
- SSH-710 (7 to 10 mm)
- SSH-1014 (10 to 14 mm)



PAR6 AND PARX6 SERIES ANTENNA FAMILIES

Commscope has taken its last orders for their PAR6 and PARX6 Series antenna families as of 12/15. The PAR series antennas were originally designed for those applications that required FCC Category A compliance to address potential interference issues in high density microwave paths. The PAR6 antennas employed dated feed technology and manufacturing processes that have been eclipsed by the ValuLine® enhanced feed designs that were first introduced to the marketplace in 1992. The VHLP6 and VHLPX6 antenna models offer equal to or better performance, up to 1.4 dBi better gain, and improved pattern performance vs the PAR6 models. The ValuLine® also offers higher survival windspeeds as standard - 250 km/h (155 mph) due in part to the robust, T-frame style mount. The T-frame mount also allows the ValuLine® a design benefit of easy access for direct radio integration.

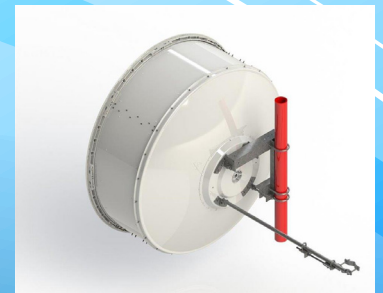
The ValuLine® antennas also offer the advantage of state of the art packaging, reducing shipping volume which translates to improved freight costs. ValuLine® antennas offers improved lead times of 2-4 week availability vs. the PAR6 antennas of 6-8 week availability. The matrix details the affected part numbers. This only affects the PAR6 series antennas.

For more information on CommScope products, contact Primus at (800) 435-1636 or support@primuselectronics.com.

Ordering Part Number	Replaces		
VHLP6-6W-4WH/B	PAR6-59-D7A/B PAR6-59-D8A/B	PAR6-59W-D8A/A	
VHLP6-6W-6WH/B	PAR6-59-P7A/B PAR6-59-P7A/B-P PAR6-59-PXA/B PAR6-59-PXA/B-P	PAR6-59W-P7A/A PAR6-59W-P7A/A-P PAR6-59W-PXA/A PAR6-59W-PXA/A-P	PAR6-65-P7A/B PAR6-65-P7A/B-P PAR6-65-PXA/B PAR6-65-PXA/B-P
VHLPX6-6W-4WH/B	PARX6-59-DXA/A PARX6-59-DXA/A-P	PARX6-59W-D7A/A PARX6-59W-DXA/A-P	
VHLPX6-6W-6WH/B	PARX6-59-P7A/A PARX6-59-PXA/A PARX6-59-PXA/A-P	PARX6-59W-P7A/A PARX6-59W-PXA/A PARX6-59W-PXA/A-P	PARX6-65-DXA/A PARX6-65-PXA/A
VHLP6-11W-6WH/B	PAR6-105-PXA/A	PAR6-107-P7A/A PAR6-107-PXA/A PAR6-107-PXA/A-P	

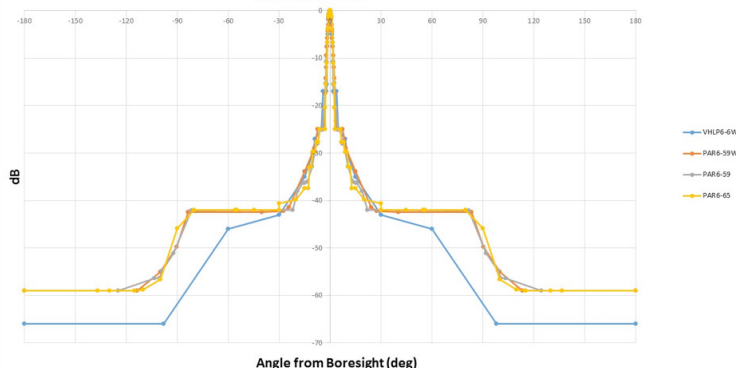


PAR6

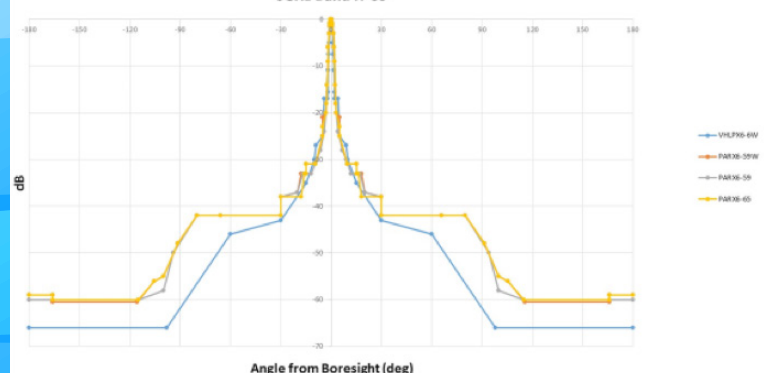


VHLP6

Pattern Comparison VHLP6 vs PAR6
6GHz Band H-Co



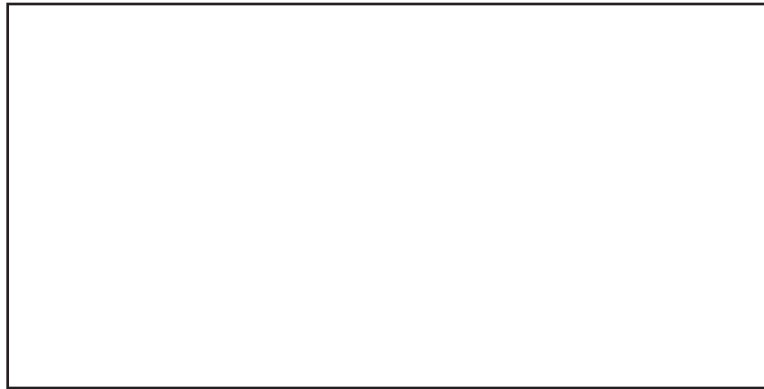
Pattern Comparison VHLPX6 vs PARX6
6GHz Band H-Co



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Henrich Corporation Ethernet Networking Products



Primus Electronics is pleased to announce a new partnership with the Henrich Corporation. Henrich offers rugged and secured Ethernet Networking Products in various industries, such as power utilities, transportation, oil and gas, factory automation, and remote monitoring. Henrich's can provide a wide range of industrial Ethernet products ranging from unmanaged Plug-N-Play switches, layer 3 managed switches, up to all gigabit fiber port layer 3 switches to cover a wide range of applications in different industries:

- Train Control and Other On-Board Data Communications
- Utilities
- Solar and Wind Systems Communications
- Intelligent Cities
- Intelligent Transportation Systems
- Water Treatment
- Chemical/Petroleum Processing
- Mining
- Industrial Automation
- Laboratory Testing
- Security Access Systems
- Machinery and Robotics Communications