SMALL CELL SOLUTIONS

Densification | Connectivity | Concealment

MEET THE CHALLENGES OF 5G NETWORKS TODAY & TOMORROW

RFI

Contents

ACHIEVE YOUR 5G DENSIFICATION GOALS
Add small cells to more locations

We provide everything you need to easily connect and conceal any small cell equipment on any pole, anywhere

CAPITALIZE ON 5G'S POTENTIAL
5G brings tremendous potential to connect the world around us — from smart lighting, parking and utility metering solutions to connected cars, electric vehicle charging stations and CCTV security cameras.

But providing the targeted small cell coverage needed to support these applications isn't easy. Urban areas are already crowded with telecom equipment, and aesthetics regulations for small cells limit deployment options.

SIMPLIFY SMALL CELL DEPLOYMENTS
RF Industries helps you overcome small cell deployment challenges to make 5G densification a reality in any environment, using any 5G frequency — low-band, mid-band (C-Band) or millimeter wave.

Our complete portfolio of passive small cell solutions simplifies every aspect of connecting and concealing small cell equipment indoors and outdoors, from pole-top to bottom. We offer:

- **Shrouds** that conceal small cell equipment at any height, on any pole, new or existing

- **Fiber optic trunk cables, jumpers and pigtail splice kits** that connect any small cell equipment indoors or outdoors

- **Coaxial cable and jumper assemblies** that maintain superior performance between small cell radios and antennas

- **Diplexers, triplexers, terminations, attenuators and splitters** that simplify even the most complex small cell connectivity requirements

- **Power distribution units (PDUs), power sleds and fans** that optimize power delivery and ventilation in any deployment location

TELL US WHAT YOU NEED AND WE'LL MAKE IT HAPPEN
In addition to our wide range of preconfigured small cell solutions, we can adapt and integrate our solutions to meet the most unique and specific requirements.
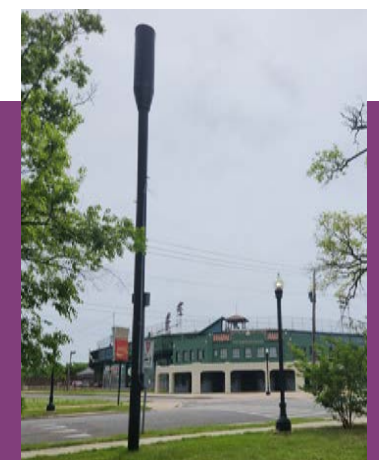
We're also happy to cut cables to the exact length you need. It's one of the key reasons our customers love working with us. And we can ship cables, jumpers, connectors and components to you in one week or less.

LEVERAGE OUR INNOVATIONS FOR MAXIMUM 5G PERFORMANCE
We're constantly innovating to ensure our small cell solutions go beyond competing offerings. Our TruField™ pole-top concealment shrouds are just one example. These patented hydrophobic shrouds enable true RF transparency for superior signal strength and overall RF coverage at any 5G frequency. TruField concealment shrouds are easy to install, available in a variety of sizes, and fully unzip to provide 360° access to the interior.

RF Industries helps you bring the benefits of 5G to more people, devices and applications in more locations. Our end-to-end portfolio of passive small cell solutions gives you new flexibility to expand small cell rollouts and more innovative ways to efficiently connect and conceal small cell equipment in plain sight.

A COMPLETE PASSIVE PRODUCT PORTFOLIO
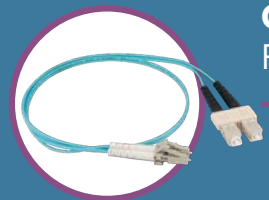## Your single source for small cell deployments

Concealment
Small Cell Shrouds

- TruField™ Pole-Top Shrouds
- Mid-Pole Shrouds
- Integrated Solutions
- Power Meter Tray & Disconnect
- Mounting Sleds

Connectivity
Passive Components

- Multiband Combiners
- Hybrid/Matrix Couplers
- Terminations
- Attenuators
- DC Block

Connectivity
Fiber Solutions

- Fiber Optic Trunk Cables
- Fiber Optic Jumpers
- Pigtail Splice Kits
- Multiport Service Terminals
- Category Cables

Connectivity
RF Cables & Jumpers

- Customized Jumpers
- Coax Cables
- Superflex Jumpers
- Connectors
- Adapters
- Weatherproofing

Connectivity
Powering & Ancillaries

- Power Cables
- Network Test Cables
- Adapters

Kitting
Bundled Solutions

- Line Power Kits
- Radio Equipment Kits
- Connectivity Kits
- RF & Fiber Jumper Kits
- Adapter Kits

GET THE PROJECT SUPPORT YOU NEED
Rely on our experts every step of the way

Our value-added services streamline small cell deployments and reduce risks to help you ensure every deployment is successful

1 SCOPING AND KITTING
Save time and effort, and eliminate the potential for mismatched components with our turnkey scoping solution and kitting services for the entire small cell or any subset of small cell components.

2 INTEGRATION
Reduce the time and risks associated with on-site integration by letting us pre-integrate critical small cell solution components right in our factory.

3 CUSTOM CABLE TESTING
Verify coaxial cable performance with testing that's tailored for your needs and uses standardized measurements, labeling and data delivery for consistency and meaningful comparisons.

4 DESIGN AUDIT AND CONSULTATION
Reduce costs and risks with expert reviews of deployment designs and product choices, cost-cutting suggestions and recommendations for futureproofing designs.

5 TECHNICAL SUPPORT AND TRAINING
Get the insight you need to efficiently and smoothly deploy and maintain our solutions with technical support and training services delivered by our experts.

USE OUR ONLINE PIM TRACKER™ TO INSTANTLY VERIFY CABLE PERFORMANCE

PIM Tracker makes it easy to see the latest PIM test data for our coaxial cable and jumper assemblies, from anywhere, at any time.

Simply go to our PIM Tracker web page and enter the serial number on the cable jacket. We'll take you right to the test results for the cable so you can view and download the test parameters used and verify the PIM performance meets your requirements.

To go to the PIM Tracker webpage:

PIM Tracker™
Serial Number

RFI

SMALL CELL CONCEALMENT
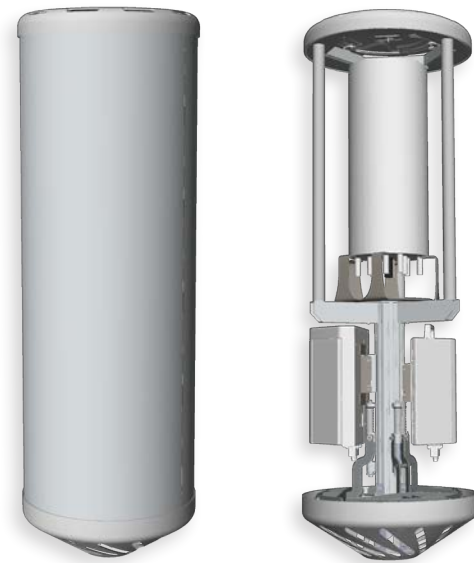## Pole Top and Mid Pole Solutions

Our portfolio of concealment solutions is designed to service carriers and integrators in the telecom industry. It includes a variety of preconfigured options as well as custom integrations to meet customer-specific applications.

INTRODUCING TRUFIELD™ TECHNOLOGY

Designed especially for 5G networks, our best-in-industry engineers have developed TruField™, a first-of-its-kind, patent-protected technology for RF Industries' concealment solutions. TruField has been tested by independent labs and wireless carriers to have far superior RF transparency qualities as compared to traditional concealment shrouds in the market today that degrade network performance and limit coverage.

TruField is band-agnostic and achieves true RF transparency with less than 0.2 dB loss at any angle of incidence up to 60° from low band, mid band (C-Band) to mmWave frequencies. TruField utilizes a proprietary outer shell material developed by Saint-Gobain, our exclusive strategic partner. The result? Clean RF transmission with superior signal strength and overall RF coverage.

TruField's unique, lightweight fabric is made of a self-cleaning, hydrophobic material that repels water, mold, and mildew which keeps the shroud virtually maintenance free. This means lower overall costs.

(Example typical configuration – other configurations available)

FEATURES & BENEFITS
- Band agnostic
- True RF transparency with less than 0.2 dB loss at any angle of incidence up to 60° from low band, mid band (C-Band) to mmWave frequencies
- Multi-carrier, multi-tenant ready
- Lightweight and easy to install with a variety of mounting options
- Unzips easily for full 360-degree access for quick radio or antenna upgrades – No tools required
- Climate resilient, durable construction, and extreme UV resistance
- Self-cleaning, hydrophobic material that naturally repels water – no cleaning or maintenance required
- Proprietary continuous air flow system
- Modular construction easily adapts to future configurations
- Colors - Grey, Black, Brown, Green, Beige (Other colors available upon request)

SMALL CELL INTEGRATED SOLUTIONS

Save time and cost on installation with our preconfigured radio equipment, connectivity, and line power kits.

For those instances where a custom solution is required, RF Industries engineers are able to quickly develop a customized solution to meet your unique specifications.

Our engineers have expertise in all four key engineering disciplines, including electrical, mechanical, thermal, and RF engineering; allowing us to optimize the most robust solution into the smallest footprint.

TRUFIELD™ POLE TOP SHROUD

Part Number	AF000380 Series
Dimension Range	60" to 90"H x 18" to 24"D
Weight Range (without radios)	45 to 75 lbs. (Up to 400 lbs max with radios)
Operating Temperature Range	Min -30° C to Max 46° C*
Storage Temperature Range	Min -40° C to Max 70° C

*Subject to radio specifications

TRUFIELD™ POLE TOP SHROUD RADIO EQUIPMENT KIT OPTIONS*
(Radios and Canister Antennas supplied by customer)

Any TruField concealment solution can be configured to fit any small cell or current mmWave radio on the market. Example radios that have been used include:

- Nokia Airscale micro radios
- Ericsson 220x or 440x series
- Nokia AEWE+AEWD
- Ericsson 6701
- Samsung AT1K0x

Depending on the final shroud system size, 3 to 12 small cell radios and/or 3 to 9 5G mmW radios or combination of both can be concealed in single or multi-carrier configurations.

MID POLE SHROUDS

Part Number	AF000344 Series	AF000361 Series	AF000141 Series
Radio Capacity	Houses up to 6 radios	Houses up to 4 radios	Houses up to 4 radios
Dimensions	42"H x 24"W x 14"D	38"H x 16"W x 14"D	35"H x 15.5"W x 9"D
Weight Range (without radios)	75 lbs.	75 lbs.	45 lbs.
Operating Temperature Range	Min -30° C to Max 45° C*	Min -30° C to Max 45° C*	Min -30° C to Max 46° C*
Storage Temperature Range	Min -40° C to Max 70° C	Min -40° C to Max 70° C	Min -40° C to Max 70° C

*Subject to radio specifications

TRUFIELD CASE STUDY: WILDWOOD NJ, USA

True RF transparency enables exceptional small cell performance with no visual clutter

Adding small cells is an ideal approach to expand 5G networks in densely populated communities. They must be strategically placed to increase wireless capacity and coverage in an effective, yet cost-efficient way. They also need to conceal the small cell equipment to meet aesthetic requirements while maintaining full RF performance.

READ THE FULL CASE STUDY:

When Munisite Networks was engaged by a Tier 1 wireless carrier looking to leverage its millimeter wave (mmWave) spectrum in the area, they chose RF Industries' TruField pole top shroud for the deployment.

Discover how Munisite Networks brought 5G to the Jersey shore with a futureproof, multi-tenant solution that was able to withstand the harsh seaside environment and improve wireless services without a proliferation of unsightly equipment.

SMALL CELL CONNECTIVITY
Passive Components

We bring you a complete portfolio of high-performance, future-ready passive components for indoor and outdoor small cell deployments, including Microlab components that are recognized globally for their unsurpassed quality, reliability and performance.

FUTUREPROOF SMALL CELL DEPLOYMENTS

Use our ultra-wideband, low-PIM passive components to efficiently combine and distribute signals across any spectrum from 600 MHz to 6 GHz. You have complete flexibility to take advantage of low-, mid- and high-band 5G spectrum, including BRS (2.5GHz), DoD(3.45GHz), C-Band, Citizens Broadband Radio Service (CBRS) and LTE Licensed Assisted Access (LAA) , to support small cell applications with high performance today and tomorrow.

Choose from our wide range of:

- Multiband Combiners
- Terminations and attenuators
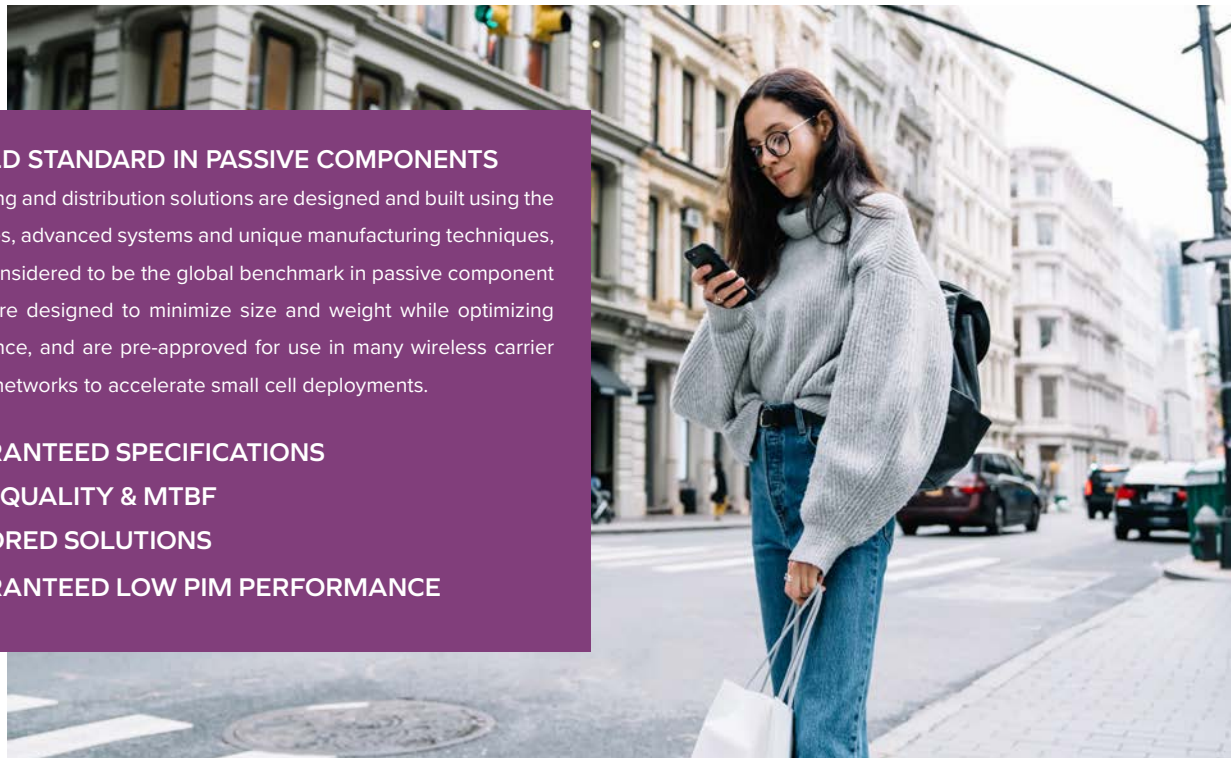- DC blocks
- Conversion jumpers

FEATURES & BENEFITS

- Ultra-wideband passive components support all frequencies from 600 MHz to 6 GHz
- Guaranteed low PIM ensures optimal system performance
- IP67- and IP68-rated components resist water and contaminant intrusion in outdoor deployments and harsh environments
- Small component size and low weight simplify concealment
- Low dissipative loss maximizes system capacity
- Pre-approved components streamline and accelerate small cell deployments
- Field-proven component quality, reliability and performance reduces risk
- Immediate component availability helps keep deployments on-schedule
- Support for all major connector interfaces increases flexibility

GET THE GOLD STANDARD IN PASSIVE COMPONENTS

Microlab combining and distribution solutions are designed and built using the latest technologies, advanced systems and unique manufacturing techniques, and are widely considered to be the global benchmark in passive component excellence. They're designed to minimize size and weight while optimizing system performance, and are pre-approved for use in many wireless carrier and neutral-host networks to accelerate small cell deployments.

1. GUARANTEED SPECIFICATIONS
2. HIGH QUALITY & MTBF
3. TAILORED SOLUTIONS
4. GUARANTEED LOW PIM PERFORMANCE

SMALL CELL CONNECTIVITY
Passive Components

Signal Combining

The increase in demand for mobile capacity will continue into the foreseeable future driven by many use cases. This trend is requiring mobile network operators (MNOs), Neutral Hosts (NH), and 3rd Party Network Owners (3PO) to find novel ways to efficiently combine the 4G/5G NR technologies to overlay 3G systems currently in operation. Microlab Signal Combiners will allow these technologies to co-inhabit without costly upgrades of existing hardware and real estate.

MULTIBAND COMBINERS

Our Microlab brand offers a broad range of signal combiners, including filters, multi-band combiners, or crossband couplers. The focus is to provide extremely high isolation with minimum loss and low PIM.

- Low loss combining of RRU/RRH with high isolation and low PIM.
- Ideal for multi-band LTE carrier aggregation and multi-Carrier neutral host deployments
- Options for 2x2/4x4 MIMO
- Twin diplexers feature an extremely compact form factor

PART NUMBER	FREQUENCY, MHZ	COMPONENT TYPE	CONNECTOR TYPE	PIM, DBC	POWER RATING, W	IP RATING
BK-2035T/TW	1695-2200/2496-2700	Twin Diplexer/ Quad Diplexer	NEX10®	-155	80	IP67
BK-2040T/G	1850-1995/1695-1780 & 2110-2700	Twin Diplexer	NEX10® 2.2-5			
BK-3104T/G	1850-1995/1695-1780 & 2110-2200 2305-2690 & 3300-4200 & 5150-5925	Twin Triplexer	NEX10® 2.2-5	-155	60	IP67
BK-3105T	1850-1995/1695-1780 & 2110-2200 2305-2690	Twin Triplexer	NEX10®			

HYBRID/MATRIX COUPLERS

Microlab Hybrid/Matrix Couplers are used to combine two or more signals without interaction regardless of how close the frequencies of the signals may be. Hybrid couplers are commonly referred to as hybrid combiners when one of the output ports is terminated.

- Combine/simulcast single RRU/RRHs to different antennas.
- UWB combining while balancing insertion loss and providing adequate isolation.
- Low PIM and excellent Return Loss, great way to combine signals.

PART NUMBER	FREQUENCY, MHZ	COMPONENT TYPE	CONNECTOR TYPE	PIM, DBC	POWER RATING, W	IP RATING
CA-141E	617-5925	2x2	4.3-10 (f)	-161	100	IP67
CM-680E		3x3			150	

SMALL CELL CONNECTIVITY
Passive Components

Signal Conditioning

Microlab signal conditioning allows for appropriate termination, attenuation and other signal conditioning applications such as DC Block lightning for Small Cells applications. Terminations are used to ensure proper system matching and for unwanted interference to be avoided. Attenuators are utilized to reduce the power due to FCC MPE and RF Safety regulations.

TERMINATIONS

Terminations or dummy loads are essential in small cell deployments to prevent signal reflection and maintain proper signal flow. Low PIM terminations are especially important when terminating radios and hybrid combiners to prevent interference, while resistive terminations can be used for terminating unused antenna ports.

- Guaranteed low PIM
- Convenient size for radio installation
- Small Cell power Levels
- Stable performance in wide temperatures

PRODUCT SERIES	FREQUENCY, MHZ	COMPONENT TYPE	CONNECTOR TYPE	PIM, DBC	POWER RATING (W)	IP RATING
TK-200 Series	350-2700	Low PIM Termination	NEX10®(m) (5,10W) 2.2-5(m) 4.3-10(m)	-161	5, 10, 25	IP67
TK-600 Series	350-5925	Low PIM Termination		-151	5, 10, 25	
TA-2xx Series	DC-6000	Resistive Termination	NEX10®(m), 2.2-5(m)	–	2	
TB-640ME	DC-6000	Resistive Termination	4.3-10(m)	–	40	

ATTENUATORS

Microlab's attenuators are used to reduce the power level of small cell signals in order to comply with FCC MPE rules, to prevent interference and damage, and to adjust signal strength and maintain signal quality. By using low PIM attenuators, RF power is absorbed without reflecting power or adding PIM to the signal.

- No added noise or interference
- Excellent VSWR performance
- Guaranteed Low PIM
- Suitable for sensitive equipment

PRODUCT SERIES	FREQUENCY, MHZ	ATTENUATION, DB	CONNECTOR TYPE	PIM, DBC	POWER RATING (W)	IP RATING
FY Series	617-2700	3, 6, 10, 15, 20	4.3-10(m-f)	-161	20, 25, 40	IP67
FZ Series		3, 6, 10, 15, 20, 30			80, 100, 110, 133	

SMALL CELL CONNECTIVITY
Passive Components

Signal Conditioning

DC BLOCKS

DC Blocks provide an essential layer of protection to ensure reliable operation of your system. They prevent the flow of direct current (DC) and low frequency current surges along the inner and/or the outer conductors of a transmission line, while permitting the unimpeded flow of RF signals.

- Blocks DC to tower-mounted amplifiers (TMAs)
- Minimal RF insertion loss
- Guaranteed low PIM

PRODUCT SERIES	FREQUENCY, MHZ	COMPONENT TYPE	CONNECTOR TYPE	PIM, DBC	POWER RATING (W)	IP RATING
HR-26E	250-6000	Surge Suppression	4.3-10 (m-f)	-161	500 / 3kV	IP65

Microlab's passive and active solutions have delivered consistent, reliable and high-performance wireless communications across the USA for decades.

- American Airlines Center, TX
- AT&T Park, CA
- Barclay Center, NJ
- Boeing Facility, WA
- Boston Convention Center, MA
- Boston Prudential Center, MA
- Brooklyn/MidtownTunnel, NY
- Cambridge Harvard Law Bldg, MA
- Century Links Stadium, WA
- Chicago Speedway, IL
- Cincinnati Children Hospital, OH
- City of Bellevue, WA
- Constitution Center, VA
- Cruise Ship, FL
- Deloitte, CA
- Department of Health &
- Dixie Medical Center, UT

- Facebook, CA
- Fenway Park, MA
- Google Campus, CA
- Google, IL
- Hartford County Emergency Firehouse, MD
- Hawthorne Woods Mall, IL
- Hewlett Packard, CA
- Hilton Hawaii, HI
- Hyatt Regancy, OH
- John Hancock Bldg, MA
- Kennedy Center, VA
- LAX Sunkist, CA
- MBTA Tunnels, MA
- Microsoft Campus, WA
- Midway Airport, IL
- Notre Dame, IN

- Ohio State University, OH
- Ronald Regan Airport, VA
- Sea Qwest Stadium, WA
- Soldier Field, IL
- Spectrum Campus, CA
- TD Garden, MA
- Texas Speedway, TX
- Trump Tower, IL
- United Center, IL
- University of Oregon, OR
- US Census HQ, VA
- US District Court, OH
- UTC Otis Elevator, CT
- UW Medical Center, WA
- Verizon Wireless Arena, NH
- Webster Bank Arena, CT
- Wrigley Field, IL

Visit our website for a complete list: MICROLAB DAS VENUE INSTALLATIONS

We design and manufacture RF jumpers and connectors to support any small cell deployment and meet the most specific performance requirements. With our large portfolio and full customization capabilities, we can deliver exactly what you need.

DON'T COMPROMISE ON CONNECTIVITY

Find robust RF connectivity solutions for even the most challenging indoor and outdoor small cell deployments. Our small cell connectivity portfolio includes a wide range of coaxial jumpers and the complete range of RF coax connectors required for small cell deployments. To ensure superior small cell performance, our RF connectivity portfolio features 1/4-, 1/2- and 3/8-inch Superflexible jumpers and low-PIM assemblies for connections to antennas.

CUSTOMIZE LENGTHS AND CONFIGURATIONS

We custom-cut jumpers to the inch, and we build custom jumper assemblies to meet your precise specifications, whether you need standard flexibility for lower losses, high flexibility for challenging locations or an outdoor-rated assembly with weatherproof boots. We can combine jumpers and connectors to meet any requirements, from flexibility, electric performance and fire retardance to low PIM and low loss.

All of our RF jumper assemblies are fully tested for quality and performance, and lead time for custom assemblies is days, not weeks.

FEATURES & BENEFITS

- 1/4-, 1/2- and 3/8-inch RF low-PIM outdoor jumpers in regular flex annular, Superflexible and braided models to support any small cell deployment

- Connectors for 8 major interfaces, including 4.3-10, 2.2-5, NEX10, 7/16 DIN, as well as right-angle connectors and pigtail assemblies with OEM-specific compression connectors and weatherproof boots to increase deployment flexibility

- IP68-rated weatherproof boots protect most connection types in harsh outdoor environments

- Custom jumper lengths to 1-inch increments eliminate the space consumption and connector strain issues that occur when jumpers are longer or shorter than optimal

- Custom jumper assemblies simplify complex and non-standard small cell deployments

- Fast lead times on custom orders help keep deployments on-schedule

- Low-PIM jumper assemblies ensure high-performance connections to canister antennas

- PIM testing on the full DC to 6 GHz frequency range confirms performance is maintained as system requirements evolve

- Cable sweeps ensure jumpers meet or exceed return loss requirements

- Bar code on all jumpers makes it easy to confirm performance in our online PIM Tracker

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RF COAX JUMPERS

The jumpers below are just a sample of some of our most popular configurations for small cells. Use the matrix below to combine jumpers and connectors to meet any requirement.

PART NUMBER	TYPE	SIZE	CONNECTOR 1	CONNECTOR 2	LENGTH (IN)
P2RFC-4347-36	Jumper	1/4" Corrugated	NEX10(m) w/Boot	NEX10(m) w/Boot	36
P2RFC-6288-36	Jumper	1/4" Corrugated	2.2-5(m) w/Boot	2.2-5(m) w/Boot	36
P2RFC-6289-36	Jumper	1/4" Corrugated	2.2-50(m) w/Boot	4.3-10(m) w/Boot	36
P2RFC-4326-36	Jumper	1/4" Corrugated	4.3-10(m) w/Boot	NEX10(m) w/Boot	36
P2RFC-2499-36	Jumper	1/4" Corrugated	4.3-10(m)	4.3-10(m)	36
P2RFC-4024-36	Jumper	1/4" Corrugated	4.3-10(m)	NEX10(m)	36
P2RFC-2840-360	Jumper	1/2" Superflex Corrugated	4.3-10(m)	4.3-1(m)	360
P2RFC-2840-480	Jumper	1/2" Superflex Corrugated	4.3-10(m)	4.3-1(m)	480
P2RFC-4326-480	Jumper	1/4" Corrugated	4.3-10(m) w/Boot	NEX10(m) w/Boot	480
P2RFC-6227-480	Jumper	1/2" Corrugated	4.3-10(m) w/Boot	4.3-10(f)	480
P2RFC-5300-480	Pigtail	1/4" Corrugated	4.3-10(m) Compression w/Boot&Ring	NEX10(m) w/Boot	480
P2RFC-5294-480	Pigtail	1/2" Corrugated	4.3-10(m) Compression w/Boot&Ring	4.3-10(f)	480
P2RFC-4933-360	Jumper	3/8" Corrugated	4.3-10(m) w/Boot	4.3-10(m) w/Boot	360
P2RFC-4933-480	Jumper	3/8" Corrugated	4.3-10(m) w/Boot	4.3-10(m) w/Boot	480

RF JUMPER MATRIX

RFI has many jumper configurations available in-stock and we can supply non-traditional lengths. They are fabricated in the USA using in-stock components for quick turnaround time.

SELECT CABLE TYPES	SELECT CONNECTOR TYPES	ADD WEATHERPROOF BOOTS
1/4" Superflex	4.3-10	4.3-10
3/8" Superflex	Nex10™	Nex10™
1/2" Superflex	2.2-5	2.2-5
1/2" Annular	7/16 DIN	7/16 DIN
	N Type	N Type
	QMA	Right Angles Available
	SMA	
	4.1-9.5	
	Right Angles Available	

SMALL CELL CONNECTIVITY
Fiber Solutions

Thanks to our exclusive licensing agreement with Corning Optical Communications, we're proud to offer a comprehensive range of Corning-compatible products with Quick Turn lead times. We ship high-quality fiber jumpers and assemblies in one week or less.

CUSTOM FIBER ASSEMBLIES FOR INDOOR & OUTDOOR USE

Our custom-built fiber assemblies help you meet rapidly increasing demands for high-speed, high-performance wireless communications, whether you need assemblies for harsh outdoor conditions or indoor environments:

- Outer cable jackets are UV-resistant and include water-blocking aramid yarns as strength members.
- Connectors exceed industry standards for mechanical performance, optical performance and reliability, and are ideal for use in small cell applications.

With our wide range of components, we can ensure compatibility with large-scale equipment manufacturers.

FEATURES & BENEFITS

- Fiber breakouts with outside plant furcation and an impact-resistant breakout knuckle provide a robust and rugged design
- Duplex LC, LC Uniboot, MTP®/MPO, SC and FullAXS™ compatible cable glands and IP-rated outdoor connectors increase design and deployment flexibility
- Dedicated fiber assembly facilities strategically located on the east and west coasts of the U.S. allow us to meet even the most challenging production demands and customer lead times
- Our Inventory Stocking Program ensures we always have the fiber, connectors and components needed to support our Quick Turn lead time service level agreements

FIBER MATRIX

RFI offers a wide variety of fiber configurations for your small cell deployments.

SELECT **CABLE** TYPES	SELECT **CONNECTOR** TYPES	SELECT **CUSTOM** OPTIONS
Loose Tube & Tight Buffer Indoor/C	SC-UPC & SC-APC	Custom Lengths
Loose Tube OSP	LC-UPC & LC-APC	Custom Breakouts
Armored and Non-Armored	Uniboot LC Duplex	Custom Labeling
Hybrid/Composite Fiber & Power	MPO/MTP	IP67 Weather Glands
Strand counts up to 144	OptiTap/HFOC SC/APC	Pull Grips
	OptiTip/HMFOC MPO/MTP	
	FullAXS	
	ODVA	
	IPFX	

IP67 OUTDOOR WATERPROOF FTTX CABLES

ODVA   OptiTap®   FullAxs   IPFX

SMALL CELL CONNECTIVITY
Fiber Solutions

FIBER OPTIC TRUNK CABLES AND JUMPERS

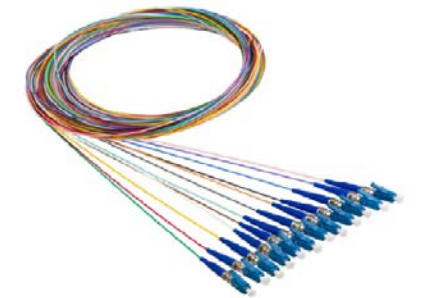Custom-built indoor and outdoor multi-fiber assemblies for radio connectivity.

- Fiber options: Single-mode fiber with 2, 4, 6, 12, 24 and higher strand counts
- Connector types: Duplex LC, LC Uniboot, MTP/MPO, SC and FullAXS compatible cable glands, IP-rated outdoor connectors and radio-specific connectors
- Available in custom lengths with custom breakout lengths
- 100% tested for optical performance, end-face criteria and cleanliness
- Optional rodent-resistant, bird-proof and specialty jackets available in armored and micro-armored models

FIBER OPTIC PIGTAIL SPLICE KITS

Color-coded 900µm pigtail splice kits used for fusion-splicing stub ends for outside plant and indoor deployments. All splice kits are custom manufactured to meet individual requirements.

- Available connectors: LC, SC, FC, ST
- Available pigtail quantities: 6, 12, 24
- Available fiber modes: Single-mode OM1, OM2, OM3, OM4
- 100% tested for optical performance, end-face criteria and cleanliness

MULTIPORT SERVICE TERMINAL

The RFI FTTx Multiport Service Terminal is designed for outside plant fiber optic cable installations, providing easy access and quick connection of subscriber drop cables. Available in 4-, 6-, 8- and 12-port configurations, the Multiport Service Terminal can be used for wall-mount, aerial, or pole-mounted installations requiring an IP67 environmental protection rating.

RFI offers a variety of customization and connector options with pre-terminated fiber optic trunk cables, dielectric and toneable drop cables and pigtails, all of which can be built to your exact length requirements with short lead times.

Dimensions with cover	375x142x120mm
UV Resistance	ISO 4892-3
PLC capacity	1 to 2 pcs
Fusion sleeve capacity	1 to 24 pcs
Protection Grade	IP67

CORNING GOLD

RF Industries' C Enterprises and Cables Unlimited divisions are part of an elite group of cable assembly houses (CAHs) that meet the high standards required by the Corning Cable Systems CAH Connections℠ Gold Program for optical patch cord manufacturers.

CORNING EXTENDED WARRANTY PROGRAM

As members of the CAH Connections Gold Program, RF Industries offers a Corning Cable Systems 25-year Extended Warranty℠ for single and two-fiber patch cords that are manufactured and installed by a certified Corning Network of Preferred Installers (NPI) member.

SMALL CELL CONNECTIVITY
Small Cell Powering and Ancillaries

POWER CABLES

RFI offers a wide range of outdoor DC power feeder cables.

- UL approved for direct burial or sunlight
- Tinned copper braid and aluminum tape with drain wire. Available in bulk packaging by the reel or by the foot.
- Custom terminations are available

NETWORK TEST CABLES AND ADAPTERS

These highly flexible industrial cables are assembled in the USA from high quality components. The cable jacket is CMX outdoor-rated with UV, weld splatter and oil resistance.

- Available connectors: 4.3-10, N
- Available lengths: 1 Meter, 1.5 Meter
- Low PIM: less than -165dBc
- Low PIM test Adapters
    - Connector interfaces: 4.3-10, 4.1-9.5 (Mini) Din, 7-16 DIN, N, SMA, 1.0-2.3, QMA
    - Male, female, straight and right-angle configurations

ADAPTER KITS

The RFI **Unidapt™** kit (**RFA-4024-DAS**) contains 2 each male and female 4.3-10, 4.1-9.5 (Mini) DIN, QMA, 7-16 DIN, N, SMA and reverse polarity SMA and TNC interfaces along with 6 universal adapters. The Unidapt™ components are housed in a convenient soft sided zippered case. The kit allows you to assemble up to 6 adapters using any combination of the included interfaces.

The 4.3-10, 4.1-9.5 (Mini) DIN and QMA interfaces exhibit low PIM performance of -155dBc @ 700Mhz & 1900Mhz IM3 only when used together. The new interfaces are manufactured with durable, non-tarnish tri-metal (white bronze) plated machined brass bodies, silver plated contacts with PTFE dielectric.

The RF Industries **4.3-10 Adapter Kit** (**RFA-4310-01**) features white bronze (tri-metal) plating and stainless steel hex nuts. It includes 7 pieces in a foam padded zipper case.

Contents:
- RFD-43M-FRA: 4.3-10 Male to 4.3-10 Female Right Angle Adapter
- RFD-1687-4: 4.3-10 Female to 7-16 DIN Male Adapter
- RFD-43F-F: 4.3-10 Female to 4.3-10 Female barrel Adapter
- RFD-43F-NF: 4.3-10 Female to N Female Adapter
- RFD-43F-NM: 4.3-10 Female to N Male Adapter
- RFD-43M-NF: 4.3-10 Male to N Female Adapter
- RFD-43M-NM: 4.3-10 Male to N Male Adapter

SMALL CELL CONNECTIVITY
Network Datacomm Cable Assemblies

CATEGORY CABLES

Hi-Flex industrial assemblies, assembled in the USA from high quality components. Cable jacket CMX Outdoor rated with UV, weld splatter and oil resistance.

- Cat 6/6A Hi-Flex industrial assemblies
- RJ45 to RJ45, 24 AWG stranded copper, 4 pair, SF/UTP, CMX outdoor
- Tested for Cat 6/6A compliance (continuity, shorts, wire mapping and overall integrity)
- Rated for 600 volts. Cable jacket options: outdoor or fire retardant

TRUST RF INDUSTRIES FOR FASTER, EASIER DEPLOYMENTS

DESIGN | PRODUCTION | INVENTORY
We have production and warehouse facilities on both coasts of the United States along with a network of distributors throughout North America and Europe to deliver finished products quickly.

QUALITY POLICY STATEMENT
We are committed to maintaining excellent product quality. It is our goal to continuously improve the quality of our products to better satisfy the needs and expectations of our customers. We are also committed to delivering products that completely suit customer requirements on time, every time, and defect-free.

SHIPPING
Our experienced staff employs best-practice packaging and shipping methods. We manage weight and dimensions to ensure the lowest shipping costs with our quick-ship capabilities.
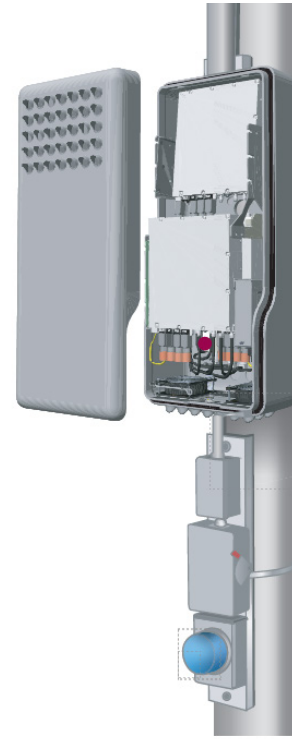
SMALL CELL CONNECTIVITY
Small Cell Installation Kits

Our portfolio of concealment solutions, designed to service carriers and integrators in the telecom industry, includes a variety of pre-configured options as well as custom integrations to meet customer specific applications.

SAVE TIME AND EFFORT; ELIMINATE THE POTENTIAL FOR MISMATCHED COMPONENTS

Save time and cost on installation with our preconfigured radio equipment kits, line power kits and connectivity kits. All kits are available either as individual components or as complete kitted solutions.

RADIO EQUIPMENT KITS

We have preconfigured radio equipment kits available for specific concealment shroud and radio combinations (see datasheet for details). On behalf of our customers, we can warehouse and inventory 4G/5G radios from leading OEM radio manufacturers including Nokia, Ericsson, and Samsung which enables us to pre-integrate radios into shrouds.

Radio Brackets	All brackets to mount equipment into shroud for a given set
Power Distribution Unit	PDU for this equipment set, including internal power wiring and switches
Internal RF Cabling	All internal RF cables for selected equipment if applicable
Internal Fiber Cables	All internal fiber cables for selected equipment if applicable
Cooling System	Internal cooling system (fans, temp. sensors, control) for selected equipment if applicable

Other configurations available upon request

LINE POWER KITS

Line power kits are available if needed to complete your deployment.

LP100

- Input Cables
- Output Cables
- Converter Cables
- Radio Power Cables

CONNECTIVITY KITS

RFI offers a choice of turnkey, preconfigured and custom connectivity kits to meet any RF, fiber, and power requirements. Our engineers will examine site specific construction drawings to determine requirements (e.g. length of cables and connector types). PIM test reports for cable assemblies are available on RFI's website.

SK100

- Power Meter Tray and Disconnect
- Power Wiring
- Mounting Sleds
- RF Cables
- Fiber Cables

SK101

- RF Cables
- Fiber Cables
- Mounting Sleds

About RF Industries

RF Industries (RFI) provides a portfolio of small cell concealment products, RF cables and jumpers, fiber solutions, passive components and integrated solutions to facilitate the rapid deployment of 4G and 5G infrastructure along with the flexibility and creativity to meet the most challenging small cell deployments.

Our high-touch customer approach allows us to be responsive, accessible and hands-on when needed, every step of the way. Unlike large organizations, you will always be our number one priority. Our end-to-end support promises personal attention, guidance, and partnership all the way through site deployment.

RFI's unique flexibility also gives us a competitive advantage. As an agile business, we are able to identify and react to challenges quickly and easily, resulting in a smoother overall customer experience.

RFI

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