



RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments. It was developed to reduce installation complexity and costs at Cellular sites.

HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

FEATURES / BENEFITS

- Aluminum corrugated armor with outstanding bending characteristics – Minimizes installation time and enables mechanical protection and shielding
- Armored fiber optic breakout – Preserves the integrity of the fiber and provides mechanical/environmental protection
- Same accessories as 7/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor, black PE jacket – Ensures long-lasting cable protection
- Shielded DC wire – Jacketed and braided cable provides grounding and EMI protection
- **Maximum robustness – Fully armored cable includes riser and breakout**



6x12 HYBRIFLEX Pictured

Technical features

STRUCTURE

Cable Type		HYBRIFLEX®
Size		7/8
Length	m (ft)	30 (98)

MECHANICAL SPECIFICATIONS

Outer Diameter Nominal	mm (in)	28.6 (1.13)
Cable Weight	kg/m (lb/ft)	1.03 (0.7)
Minimum Bending Radius, (Operating)	mm (in)	125 (5)
Minimum Bending Radius, (Installation)	mm (in)	254 (10)
Recommended / Maximum Clamp Spacing	m (ft)	1 / 1.2 (3.25 / 4)



DC POWER CABLE SPECIFICATIONS

Number of DC Pairs		6
Maximum DC-Resistance Power Cable	Ω/km (Ω/kft)	3.41 (1.04)
Cross Section of Power Cable	mm ² (AWG)	5.3 (10)
DC Wire Jacket Material		PVC
DC Cable Single Bending Radius	mm (in)	137 (5.4)
DC Cable Diameter	mm (in)	4.06 (0.16)
DC Cable Jacket		PVC
DC Standards (Meets or Exceeds)		For use in UL 2822, PVC Nylon, RoHS/REACH Compliant
Break-out length (Top)	mm(in)	4000 (157)
Break-out length (Bottom)	mm(in)	150 (6)
DC Cable sealing method		Semi-rigid flame-retarded polyolefin, with hot melt adhesive

CABLE JACKET

UV-Protection Individual and External Jacket		Yes
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ARMOR SPECIFICATIONS

Armor Type		Corrugated Aluminum
Maximum DC-Resistance of Armor	Ω/km (Ω/kft)	1.05 (0.32)
Diameter Corrugated Armor	mm (in)	25.4 (0.99)

F/O CABLE SPECIFICATIONS

F/O Cable Type		Single-mode
Number of F/O Pairs		12
Core/Clad	μm	9 /125
Single Bending Radius	mm (in)	137 (5.4)
F/O Standards (Meets or Exceeds)		UL Listed Type OFNR (UL1666), RoHS Compliant
Optical Loss	dB/Km	0.5 @ 1310 nm 0.5 @ 1550 nm
Fiber Termination End 1		ODC plug
Fiber Termination End 2		LC
FO Break-out length (Top)	mm(in)	4000 (157)
FO Break-out length (Bottom)	mm(in)	150 (6)
Cable sealing method		Semi-rigid flame-retarded polyolefin, with hot melt adhesive

TESTING AND ENVIRONMENTAL

Storage Temperature	°C (°F)	-40 to 70 (-40 to 158)
Operation Temperature	°C (°F)	-40 to 65 (-40 to 149)
Installation Temperature	°C (°F)	-20 to 65 (-4 to 149)

ASSEMBLY LOSS

Optical Insertion Loss	Assembly or Jumper	0.4 dB (typ)/0.95dB (max) @1310/1550
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SYSTEM LOSS

Optical Insertion Loss	Total Path	0.8dB (typ)/1.9dB (max) @1310/1550
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External Document Links

[Installation Guidelines](#)

[Pre-packed HYBRIFLEX Kits and Accessories](#)

[View Factory Test Results On-line](#)

[HYBRIFLEX Armor Removal Video](#)

Notes