



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

HYBRIFLEX™ cabling solutions allows mobile operators deploying RRU architecture to standardized installation process and eliminates the need and the cost for an internal grounding wire.

The HYBRIFLEX™ cable is part of a site installation kit. It consists of an armored bundle of 3 shielded DC cables, 3 F/O distribution cables and a rip cord to adjust the breakout part of the cable.

### Features / Benefits

- A corrugated armor with excellent bending characteristics minimizes installation time and enables mechanical protection and EMC shielding
- Outer conductor grounding eliminates typical additional grounding requirement and saves on installation costs
- Lightweight solution and compact design decreases tower loads
- Robust cabling eliminates need for expensive cable trays and conduits
- Installation of stripped fiber optic cable pairs directly to RRH reduces CAPEX and wind load by eliminating need for junction boxes
- F/O and DC housed in single corrugated cable saves CAPEX by standardizing RRH cable installation and reducing installation equipments

## Technical Features

### STRUCTURE

|                    |                             |
|--------------------|-----------------------------|
| Cable Type         | 3 RRU HYBRIFLEX™ Direct LTE |
| Size               | 7/8                         |
| Fire Performance   | Flame Retardant, LSZH       |
| Number of DC Pairs | 3                           |
| Jacket Material    | UV stable black PE          |

### MECHANICAL SPECIFICATIONS

|                                     |                      |
|-------------------------------------|----------------------|
| Outer Diameter Nominal              | 27.8mm (1.09in)      |
| Cable Weight                        | 0.79kg/m (0.53lb/ft) |
| Minimum Bending Radius              | 120mm (4.7in)        |
| Minimum Bending Radius              | 250mm (9.8in)        |
| Tensile Strength                    | 700N (157lb)         |
| Recommended / Maximum Clamp Spacing | 0.8 / 1 (2.75 / 3.3) |
| Jacket Material                     | UV stable black PE   |

**DC POWER CABLE SPECIFICATIONS**

|                                           |                                          |
|-------------------------------------------|------------------------------------------|
| Maximum&nbsp;DC-Resistance<br>Power Cable | 4.95Ω/km (1.51Ω/kft)                     |
| Cross Section of Power Cable              | 4 mm <sup>2</sup> (12 AWG)               |
| Shielding                                 | braid                                    |
| DC Wire Jacket Material                   | Polyethylene, PE, Metalhydroxite Filling |
| DC Wire Jacket Thickness                  | 0.5mm (0.02in)                           |
| DC Cable Single Bending Radius            | 100mm (3.94in)                           |
| DC Cable Diameter                         | 9.9mm (0.39in)                           |
| DC Cable Jacket                           | UV stable black PE                       |
| DC Standards (Meets or Exceeds)           | IEC 60232                                |

**ARMOR SPECIFICATIONS**

|                                             |                          |
|---------------------------------------------|--------------------------|
| Armor Type                                  | Corrugated Aluminum tube |
| Maximum DC-Resistance of<br>Armor           | 1.21Ω/km (0.37Ω/kft)     |
| Copper Equivalent Cross Section<br>of Armor | 16 (5)                   |
| Diameter Corrugated Armor                   | 25.2mm (0.99in)          |

**F/O CABLE SPECIFICATIONS**

|                                  |                          |
|----------------------------------|--------------------------|
| F/O Cable Type                   | Tight-Buffer, Singlemode |
| Number of F/O Pairs              | 6                        |
| Core/Clad                        | 9 /125                   |
| Secondary Protection Nominal     | 900μm (0.035in)          |
| Single Bending Radius            | 50mm (1.97in)            |
| Cable Diameter mm (in)           | 4.8mm (0.19in)           |
| F/O Cable Jacket                 | UV stable black PE       |
| F/O Standards (Meets or Exceeds) | ITU G 657.A2             |

**TESTING AND ENVIRONMENTAL**

|                          |                                |                  |
|--------------------------|--------------------------------|------------------|
| Storage Temperature      | -40°C to 85°C (-40°F to 185°F) |                  |
| Operation Temperature    | -40°C to 85°C (-40°F to 185°F) |                  |
| Installation Temperature | -20°C to 50°C (-4°F to 122°F)  |                  |
| Jacket Specifications    | IEC 60332-3-24                 | UL 1581.sec.1080 |
| LSZH Specification       | IEC 60754-1 / 2, IEC 61034-1/2 |                  |

*Product Detail***Related Documents**



**HB078-1-04S3-S6F**

HYBRIFLEX™ Direct LTE, Cabling Solution for 3 RRU



**Handling Instruction.pdf**  
Installation Instructions



**Ordering\_code.pdf**  
Other Documents



**Solution Overview\_1.pdf**  
Other Documents



**Solution Overview\_3.pdf**  
Other Documents