

Fiber Optic Cable Solutions



▲ AGENCY
RADIOCOMM



Acentury Radiocomm – trusted globally

Radiocomm, the network components division of Acentury Inc., was launched in 2013 and developed a reputation for its superior technical performance, reliability, and customization services. We pride ourselves in creating a unique customer experience from product development to on-time product delivery. We help service providers, infrastructure equipment manufacturers, educational institutions, government agency departments, and system integrators meet their complex and dynamic requirements.



Adaptors



Attenuators



Filters



Combiners



Tappers



Coaxial Cable



Fiber Cable



Couplers



Splitters



Terminators

Low PIM everything.

Radiocomm Fiber Optic Cables

Radiocomm offers a wide range of fiber cable solutions using G.652D, G.654, or G.657 fiber to meet the telecommunications industry requirements. Radiocomm also offers customized solutions with fast quote and delivery lead times that are cost-competitive and tailored to our customer's needs.

Fiber Cable Categories

- Aerial Fiber Cable
- Airblown Fiber Cable
- In-building/Indoor Fiber Cable
- Toneable Fiber Cable
- Submarine Fiber Cable
- Ribbon Fiber Cable
- Hybrid Cable
- Flat Drop Fiber Cable
- Duct or Direct Bury Fiber Cable



Why Radiocomm?



Ultra-low loss and large effective area optical fiber

Comprehensive solutions for submarine, long-haul and Metro Networks



Fast turnaround and delivery

Fast turnaround times and delivery for samples and production volumes



A full line of products and solutions

From land to sea, long-haul trunk lines, FTTH and data centers.



We stand by our products

Durable, high-quality construction with flexible options and competitive pricing.



"Your team is innovative, customer first and very responsive."

- Rated by our Tier 1 Carrier Customers

Fiber Cable Categories



Aerial Fiber Cable

Aerial fiber optic cables are usually used for installing outside the pole. It is specially designed to protect against natural or man-made damage/theft.

- Aerial Self-Support Fiber Cable
- Total Dry Self-Support Double Jacket Fiber Cable



Airblown Fiber Cable

Compressed air is used to blow lightweight optical fiber cables through tubing, eliminating potential damage to fibers during installation.

- Central Tube Airblown Fiber Cable
- Microduct Airblown Fiber Cable



In-building/Indoor Fiber Cable

- Single Sheath Dry Core Inter/Intrabuilding Fiber Cable
- Distribution Multi-Fiber Cable
- FT6 Rated Indoor Fiber Cable



Toneable Fiber Cable

Recommended for duct installation.

- Toneable Armored Fiber Cable
- Toneable Fiber Cable



Submarine Fiber Cable

Recommended for use under rivers, seas, and lakes. Different fiber cables would be used for different depths.



Ribbon Fiber Cable

Constructed as a ribbon of optical fibers formed into a flat strip that helps save space, time, and money.

- Single Jacket Ribbon Fiber Cable with Armor
- Central Tube Totally Dry Ribbon Fiber Cable with Armor
- All Dielectric Single Jacket Ribbon Fiber Cable



Hybrid Cable

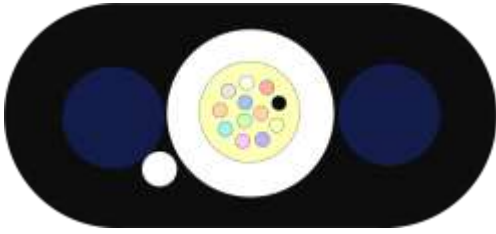
The combination of power and fiber cables for hybrid usage especially for cellular/5G applications.

- 12 AWG Hybrid Cable
- 14 AWG Hybrid Cable
- 16 AWG Hybrid Cable



Duct or Direct Bury Fiber Cable

- Single Jacket Fiber Cable
- Single Jacket with Armor Fiber Cable
- Double Jacket Dielectric Fiber Cable
- Double Jacket with Armor Fiber Cable
- Triple Jacket Double Armor Fiber Cable



Flat Drop Fiber Cable

Used for last-mile FTTH applications.

- Non-Toneable Flat Drop Fiber Cable
- Toneable Flat Drop Fiber Cable
- Self-support Flat Drop Non-Toneable Ribbon Fiber Cable

CUSTOMER SUCCESS STORY

How We Delivered 192km of Fiber for A Major Telco in Just 3 Weeks During the COVID Holiday Season



The Customer Challenge

Acentury works hard to help our global partners and clients. Read on to see how we were able to help a major South American telecommunication service provider to expand and improve their broadband internet service by rolling out fiber to the homes (FTTH) in a large swath of the country.

Telecommunication service providers require supplier partners who can deliver an end-to-end customer experience. Procuring high quality products covers only one facet of their needs. Fast and reliable service with timely delivery of product samples and production volumes are just as important. Here are a few real-world examples of how we helped a major telecom provider in South America with their dynamic needs during the 2020 COVID year:

In mid-August 2020, we were asked for a sample of Acentury Radiocomm's GJYXFCH Self-Supporting Bow-Type Drop Fiber Cable. We supplied and delivered a 500-meter fiber cable sample from the United States to South America in just 3 weeks.

As per the customer's request, we shipped it in the regular-size drum so they could get a feel of how the fiber cable rolled out of the drum.

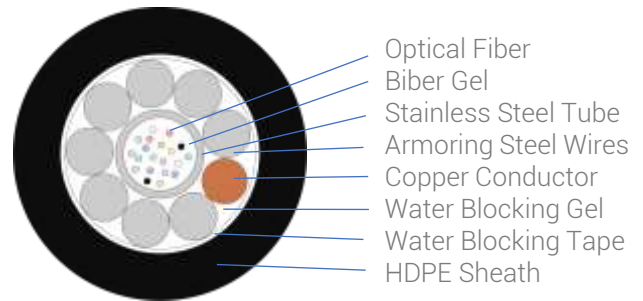
In mid-October 2020, we provided a competitively priced quote for 600km of FTTH fiber cable with a fast lead time of 10-12 weeks, which was fast compared to quotes from other fiber providers.

In late December 2020, while this order was being produced, the same customer sent a separate order for fiber cables to be delivered as soon as possible. Despite the COVID holiday season, we pushed for production in less than 3 weeks and shipped 200km of fiber cable via air. The FTTH fiber cables were delivered in South America on time and as promised.

The FTTH fiber cables were used in the customer's FTTH project, and they are very happy with the product quality.

CUSTOMER SUCCESS STORY

Overcoming Brutal and Freezing Arctic Conditions



Acentury is always innovating to help our global partners and clients. Read on to see how we overcame brutal and freezing conditions to help an Alaskan telecommunication service provider expand and improve their broadband internet service in the Arctic Region.

The Alaskan environment presented several challenges. For one, the government would not allow construction for fiber cable deployment in certain areas. As a result, fiber cables were directly dropped into water or placed on the surface without any protection. The cable would be exposed to many different dangers: stretching and bending due to freeze/thaw cycles, crushing risk from rocks, ice or vehicles, and even damage from wildlife.

The region experiences huge swings in temperature – as low as -60°C during the winter, but also as high as $+70^{\circ}\text{C}$ in the summer due to solar heat load.

To address the extreme cold weather challenge, the engineering team devised a special solution that extends the fiber cable's operating temperature range from -40°C to $+70^{\circ}\text{C}$ to the required -60°C to $+70^{\circ}\text{C}$.

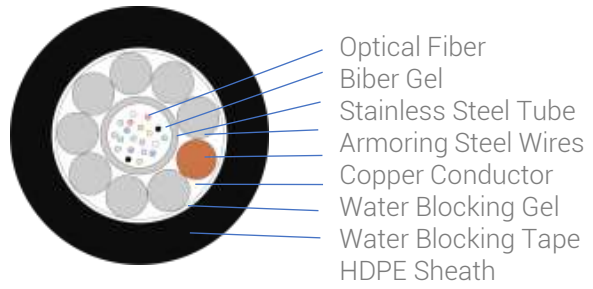
To address the risk from freezing and thawing and damage due to ice, rocks and wildlife, the team designed a rugged fiber cable with strong breaking loads (tensile strength) and crush loads (pressure and squeeze). Steel armor was added for protection.

Considering the cable would be deployed both on land and in water, the team designed the fiber cable to be water resistant.

Although we were competing with another well-known European-based global submarine fiber cable manufacturer, the Alaskan telecom finally chose Acentury Radiocomm's UOC-LW-30kN-48G.652.D (30kN Cable Breaking Load and 5kN Crush Load) Cold-Weather Inshore Fiber Cable Solution.

FEATURED PRODUCT

Cold-Weather Optical Fiber Cable (UOC-LW-30kN-48G.652.D)



Optical Fiber Specs

| Category | Description | Specification |
|------------------------------|---|---|
| Application | Operation temperature | -60 °C~+70 °C |
| | Installation temperature | -60 °C~+45 °C |
| | Storage temperature | 60 °C~+70 °C |
| | Water depth (max.) | 1000m |
| Geometric Characteristics | Cladding diameter | 125.0 ± 0.7 μm |
| | Cladding non-circularity | ≤ 1% |
| | Core-cladding concentricity error | ≤ 0.6 μm |
| | Coating diameter (uncoloured) | 235 to 255 μm |
| | Coating diameter (coloured) | 235 to 265 μm |
| | Coating-cladding concentricity error | ≤ 12 μm |
| Transmission Characteristics | Attenuation coefficient at 1310 nm | ≤ 0.350 dB/km (Avg ≤0.340dB/km) |
| | Attenuation coefficient at 1550 nm | ≤ 0.220 dB/km (Avg ≤0.210dB/km) |
| | Mode-filled diameter @1310nm | 9.0 ±0.4 μm |
| | Cable cutoff wavelength (λ _{cc}) | ≤ 1260 nm |
| | MAC @1310nm | ≤ 7.3 |
| | Zero Dispersion Wavelength (λ ₀) | 1300 ≤ λ ₀ ≤ 1324 nm |
| | Zero Dispersion Slope (S ₀) at λ ₀ | 0.073 to 0.092 ps/(nm ² .km) |
| | Dispersion coefficient at 1550 nm | 13.3 to 18.6 ps/(nm.km) |
| | Dispersion coefficient at 1625 nm | 17.2 to 23.7 ps/(nm.km) |
| | Maximum individual fiber PMD | ≤ 0.1 ps/√km |
| | Link design value, PMDQ (Q=0.01%, N=20) | ≤ 0.08 ps/√km |
| | Macrobending loss (100 turns, 30mm radius) | ≤ 0.1 dB at 1625 nm |

| Category | Description | Specification |
|-----------------------------|---|-------------------------------------|
| Environment Characteristics | Damp heat | ≤ 0.05 dB/km @1550 and 1625nm |
| | Dry heat | ≤ 0.05 dB/km @1550 and 1625nm |
| | Change of temperature | ≤ 0.05 dB/km @1550 and 1625nm |
| | Water immersion | ≤ 0.05 dB/km @1550 and 1625nm |
| Mechanical Characteristics | Proof stress level | ≥ 200kpsi (1.38Gpa) |
| | Coating strip force | 1.0N≤ Fave≤5.0N and 1.0N≤Fpeak≤8.9N |
| | Tensile strength (median) for 0,5 m specimen length | F50% ≥ 3.8Gpa |
| | Stress corrosion susceptibility parameter(nd) | ≥ 20 |
| | Fiber curl radius | ≥ 2 m |

Dimensions and Descriptions

| Item | Unit | Nominal Value |
|---|----------|------------------|
| Fiber core number | / | 48 |
| Thickness of stainless steel loose tube | mm | 0.25±0.05 |
| Outer diameter of stainless steel loose tube | mm | 4.25±0.1 |
| Armor - Galvanized steel wire structure | mm x No. | Φ (1.78±0.05) ×9 |
| Copper conductor structure | mm x No. | Φ (1.78±0.05) ×1 |
| Thickness of HDPE sheath | mm | 2.6 |
| Outer diameter of finished optical cable | mm | 13.6±1.5 |
| Approximate weight of optical cable in air | kg/km | 333 |
| Approximate weight of optical cable in seawater | kg/km | 187 |

Main Mechanical And Electrical Performance

| Item | Unit | Nominal Value |
|---|----------|---------------|
| The cable breaking load (CBL) | kN | 30 |
| The nominal transient tensile strength (NTTS) | kN | 20 |
| The nominal operating tensile strength (NOTS) | kN | 10 |
| Impact | J | 100 |
| Crush | kN/100mm | 5 |
| Conductor DC resistance (20°C) | Ω/km | ≤7 |
| Insulation resistance | GΩ·km | ≥10 |
| Approximate weight of optical cable in air | kg/km | 333 |
| Minimum bending radius (Tension-free) | mm | 500 |

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