

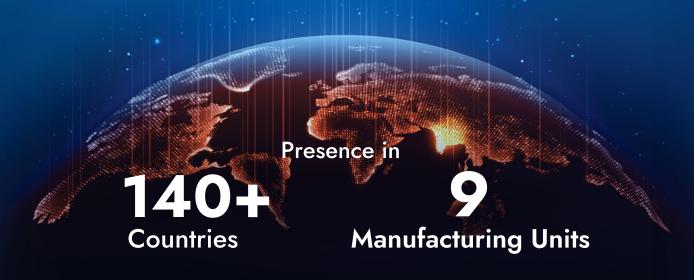
DIVERSE RANGE OF TELECOM CABLE SOLUTIONS



OFC | HYBRID | LAN | SPECIALITY

PRODUCT CATALOGUE

APAR EMPOWERING A SMARTER WORLD SINCE 1958





#1
Largest global
aluminium & alloy
conductor manufacturer



#3
Largest global
manufacturer of
Transformer oils



#1
Largest manufacturer of Renewable & Speciality Cables in India



Manufacturer of OFC & Hybrid Cables

65+ YEARS of Manufacturing

Experience

\$1.8
BILLION
FY24 Consolidated
Revenue

19.3% CAGR Last 5 Years

49% EXPORT REVENUES



TELECOM SOLUTIONS

OVERVIEW

APAR is a leading Global Telecom Solutions company focusing on innovative solutions for global markets. The uniqueness lies in its design and manufacturing capabilities supported by backward integration. The wide range of tele-communication Optical Fibre Cable and Hybrid Cable products have been carved out from its rich experience across Telecom, Defense, Power and Transport industries over the years. APAR Telecom services has capability and potential to create digital networks, passive infrastructure gateways and network densification for Urban (Mobility Networks and FTTx, broadband Networks), Rural (Middle Mile and Last mile connectivity), Defense MHA (Border & Cantonment Fortification) and Enterprise Connectivity (across multiple Industries).

APAR's Telecom Solutions is driven by Innovation, customer-centricity and sustainability.

WORLD CLASS

PRODUCTION FACILITIES

APAR offers an extensive range of fibre optic cables for outdoor, indoor and speciality applications, ranging from 1F to 864F, and up to 1152F in ribbon design, with an installed capacity of 200,000 km of cable per annum. We are also capable of manufacturing and delivering customised cables for special applications, such as specific diameter micro cables for FTTX, drop cables with G 657 bend insensitive fibre for last-mile connectivity, and long span ADSS (All Dielectric Self-supporting) aerial cables designed to be strung alongside power lines.

Our state-of-the-art machinery enables us to manufacture all types of fibre optic cables along with highly equipped quality system, accredited with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 27001:2013 & TL9000 from BSI and IRCLASS. Over the past 25 years, we have supplied wide range of Fibre Optic Cables across various sectors.













World Class Fibre Optic Cable Manufacturing Facilities.



APAR TELECOM SOLUTIONS

OFC - OPTICAL FIBRE CABLES

APAR Telecom tailors high-capacity cable solutions for data centers, ISPs, telcos, and worldwide internet companies. APAR Fibre optic cables surpass copper lines in both capacity and transmission distance, enhancing internet speed upto 100 Gbps. APAR offers a comprehensive range of fibre optic cables for different communication needs, including aerial, underground, microduct, ribbon, IO, and indoor cables meeting international standards in a contemporary manufacturing facility certified with ISO, OHSAS, and TL9000. APAR's commitment to quality ensures that cables are manufactured to global standards and customer specifications.

APAR Telecom, a Global Telecom Solutions Leader, offers innovative connectivity solutions for:

Urbanisation: Mobility Networks across 4G/5G/6G and FTTx broadband Networks.

Rural Connectivity: Bridging the digital gap of fibre across rural regions.

Border Fortefication: Defence & MHA with border communication solutions.

Enterprise: Data centers, Railways & Metro's, Airports, Power Utilities, Renewable Solar & Wind Solutions,

Oil & Gas, Mining, Space and many more.

HYBRID CABLES - GIGAVOLT

The Giga-Volt hybrid solution incorporates both fibre and copper conductors in one cable that deliver power and data to a remote device through copper and fibre medium. As the connectivity needs converges, APAR hybrid cables will assist builders to meet their demand with this unique cable designs across multiple use cases across 5G, Wi-fi, DAS, IOT & M2M

Reduced Environmental Impact: Giga-Volt combines power and data transmission into a single cable, eliminating the need for separate cables and reducing overall material usage.

Cost-Effective Installation: By deploying a single Giga-Volt cable instead of separate power and data cables, service providers save time, space, and capital during installation.

Faster Network Rollout: Giga-Volt acts as a unified solution, streamlining network infrastructure and facilitating faster deployment of advanced networks like 5G.

Simplified Cable Management: Using a single Giga-Volt cable reduces complexity by eliminating the need to manage multiple cables at the field level.

Lower Total Cost of Ownership (TCO): Giga-Volt offers a slim design and supports all network topologies, potentially leading to a lower overall cost of ownership for the network.

LAN CABLES - TARANG SHAKTI

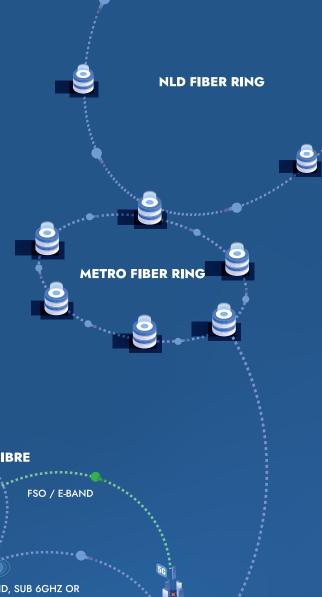
High-performance connectivity meets personalized solutions at APAR While known for superior materials and global standards (ANSI/TIA, ISO/IEC, EN, UL/ETL/TUV), APAR goes beyond LAN cables. We distinguish ourselves by:

Customised Solutions: Avoid off-the-shelf. Our skilled team creates LAN cable and optical fibre solutions for your specific needs, maximizing efficiency and exceeding expectations.

Engine of Innovation: We invest extensively in R&D, pushing technology forward. Access innovative solutions to meet rising bandwidth, speed, and reliability needs. We set industry standards, not merely meet them.

Devoted Partnerships: We value long-term connections over transactions. Our attentive crew ensures a smooth and worry-free experience from initial consultations to post-installation support.

SOLUTIONS FOR TELECOM NETWORK





APAR TELECOM SOLUTIONS

DUCTOFIB	Underground Fibre Optic Cables Duct Armoured Cables Micro
AERIOFIB	Aerial Fibre Optic Cables ADSS DROP FTTH
GIGA-VOLT	Fibre Optic Hybrid Cables (Copper+Fibre)
LMCONNECT	Wireless Connectivity Small Cell FSOC WiFi

OFC ORDERING GUIDE



OPTICAL FIBRE COLOUR CODING

OPTICAL FIBRE AND OPTICAL FIBRE LOOSE TUBES

COLOUR CODING AS PER EIA/TIA 598 INTERNATIONAL STANDARD



CATALOGUE CABLE CODING SYSTEM

1	2	3	4	5	6	7	8	9	10
D	X	N	L	012	1	W	X	0	144

1 Installation

- A = Aerial Self Support
- B = Direct Buried
- D = Duct
- M = Figure8
- P = Drop/Rise

2 | Fire Rating

- R = Flame Retardant
- S = Fire Survival
- X = No Fire Rating

3 | Construction

- M = Metallic
- N = Non-metallic

4 | Buffer Type

- L = Loose Tube
- R = Ribbon Tube
- T = Tight Buffer
- M = Micro Module

6 | Number Of Jackets

- 0 = No Jacket
- 1 = Single Jacket
- 2 = Double lacket
- 3 = Triple Jacket

7 | Water Protect Type

- W = Wet Tube Wet Core
- R = Wet Tube Dry Core
- Y = Dry Tube Dry Core

8 | Type Of Armour

- C = Glass Yarn
- F = Steel Tape
- W = Steel Wire
- P = FRP
- A = Aluminum Tape
- X = No Armour
- B = Wire Braided
- U = ACSR Wire
- M = Copper Wire

9 | Fibre Type

- 0 = G652D
- 1 = G654
- 2 = G655
- 3 = G656
- 4 = G657A1
- 5 = G657A2
- 6 = G657B1
- 7 = G657B2
- 9 = G657B3
- 10 = OM1
- 11 = OM2
- 12 = OM3
- 13 = OM4

10 | Fibre Count

0001 to 1152

Example: Standard 44F Duct cable

Code = DXNL0121YX0144

5 | Fibre/Tube Or Buffer

001 to 144



OPTICAL FIBRE CABLES

DuctoFib Product: Duct Fibre Optic Cables

APAR's DuctoFib Duct Fibre Optic Cable provides robust durability and reliability for outside plant (OSP) applications. Available in both Mono-Tube and Multi-Tube designs. These cables are suitable for various environmental conditions, whether dry or wet. Supporting all fibre types up to 1152F, they are ideal for blowing applications across diverse use cases that require connectivity via ducts. Setting up networks in extreme conditions and varied climatic circumstances for reliable connectivity, APAR's Duct Fibre Optic Cable delivers a dependable solution.



Unitube Single Jacket Dielectric Cable

Range: 1F-48F



Loose Tube Single Jacket Dielectric Cable

Range: 1F-864F



Loose Tube Double Jacket Cable

Range: 1F-864F



Loose Tube Ribbon Fibre Single/Double Jacket Cable

Range: 48F-1152F

PRODUCT FEATURES

- Small size, lightweight, flexible and easy to install in ducts
- High Tensile and crush resistance, UV protection
- Available in wide range of 1F-48F (Unitube) & 6F-1152F (Loose Tube) in both single-mode and multi-mode fibre variants
- Available with UL and CPR Ratings
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- These cables can be installed in ducts with either pulling or blowing techniques
- Also with lashing technique products can be installed for aerial use.

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20

















Duct Laying

Better Flexibility Water Resistant UV Protected Flame Retardant

Scan to download the complete range of **DuctoFib Cables** Catalogue





ArmoFib Product: Armoured Fibre Optic Cables

APAR's ArmoFib cables shield data in harsh environments. Ruggedised metal armor ensures durability in underground enviornment. Choose from ECCS, stainless steel, or aluminum options to suit your armouring needs. ArmoFib provides unmatched durability making cable crush-resistant and rodent-proof. Supports all fibre types, upto 1152F in uni-tube & multi-tube designs to build reliable networks in extreme conditions.



Unitube Single Jacket Steel Tape Armoured Cable

Range: 1F-48F



Unitube Double lacket Steel Wire Armoured Cable

Range: 1F-48F



Unitube Ribbon Fibre Double lacket Steel Tape Armoured Cable

Range: 48F-144F



Loose Tube Single Jacket Steel Tape Armoured Cable

Range: 12F-864F



Loose Tube Double Jacket Steel Tape Armoured Cable

Range: 12F-864F



Loose Tube Double Jacket Steel Wire Armoured Cable

Range: 12F-576F



Loose Tube Double Jacket Braided Armoured Cable

Range: 12F-576F



Loose Tube Ribbon Fibre Single Jacket Steel Tape, Cable

Range: 48F-1152F

PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F (Unitube) & (Loose Tube) 6F-1152F in both single-mode and multi-mode fibre variants
- High Tensile and crush resistance, UV protection
- Rodent and Termite resistant
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- ◆ Long haul underground/direct burial communication system
- ◆ |unction communication system
- Inter-office connections for video/data transmission
- LAN/WAN/SCADA/telemetry systems

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications











Underground

Rodent Resistant Water Resistant

UV Protected







AerioFib Product: Aerial Fibre Optic Cables

APAR's AerioFib is a range of all-dielectric and self-supporting (ADSS) fibre optic cables. These aerial cables are specifically designed for easy and economical installation where metallic messengers can't be used like power lines, street furniture. AerioFib includes versatile range of fibre counts—from 1F to 432F for in Unitube, Loose Tube, and ribbon configurations. APAR Aeriofib also include metallic Fig 8 range for harsh long distance robust network. AerioFib delivers a dependable solutions for all weather conditions via faster mode of installation.



Short Span Unitube Single Jacket ADSS Cable

Range: 1F-48F



Medium Span Loose Tube Single Jacket ADSS Cable

Range: 12F-432F



Medium & Long Span Loose Tube Double Jacket ADSS Cable

Range: 12F-432F



Loose Tube Ribbon Fibre Single Jacket ADSS Cable

Range: 48F-432F



Unitube Single Jacket, Fig 8, Aerial Cable

Range: 1F-48F



Loose Tube Single/Double Jacket Fig 8, Aerial Cable Cable

Range: 12F-288F

PRODUCT FEATURES

- Available in wide range of 1F-432F, in both single-mode and multi-mode fibre variants
- Available for light, medium and high loading conditions
- Lightweight, flexible and easy to install
- Available with Anti-tracking material for installation along high tension lines
- Fig 8 cable facilitates longer & reliable installation in non-dielectric conditions
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- Long/Medium/Short span aerial installations
- Last mile communication system
- Installation with high voltage power lines (ADSS)
- Subscriber network system

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000











Aerial Cable

Better Flexibility

Water Resistant

UV Protected







MicroFib Product: Microduct Fibre Optic Cables

APAR's MicroFib fibre optic cable is designed for specific installations in microducts. The cables are typically deployed in contemporary urban optical networks, particularly in metropolitan regions, where service providers have space constraints or want to use the pre-installed ducts with cables. They provide quick, uninterrupted connection by effectively utilising micro-duct systems and available from 1-288F in Uni-tube and Multi Tube constructions. MicroFib is an excellent solution for both upgrading existing networks and installing new ones.



Unitube Airblown Cable Range: 1F-24F



Microduct Cable
Range: 12F-288F

PRODUCT FEATURES

- Multiple designs with lowest diameters for optimum duct sizes
- Higher blowing performance with low friction jacketing materials
- Available up to 288 fibre count in either single-mode or multi-mode optical fibres with PE / Nylon Outer Jacket
- Tested and proven for blowing performances
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- The cable is designed for blowing in new or existing microducts for long distances
- Cables can be installed in dense and congested areas for narrow trenching

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000



Microduct Laying



UV Protected



Better Flexibility



Water Resistant



Scan to download the complete range of **MicroFib Cables** Catalogue





Accessofast Product: A

Product: Micromodule Fibre Optic Cables

Revolutionize your connectivity with APAR's Accessofast cables, redefining the standard for compactness, flexiblity and reliability. These ultra-compact marvels are more flexible than conventional cables, simplifying installation in space-constrained environments. Enjoy faster deployment, reduced costs, and seamless communication with our broad range (12F to 288F) of micromodule cables across trunk lines, access networks, FTTH deployments, and data centers. With our meticulously crafted Accessofast cables, boast superior environmental protection for long-lasting, reliable performance, even in demanding conditions.



Single Jacket Micro Module Cable (Aerial/Duct)

Range: 12F-288F



Double Jacket Armoured Micro Module Cable

Range: 12F-288F

PRODUCT FEATURES

- Available in wide range of 12F-288F, in both single-mode and multi-mode fibre variants
- Excellent design for rapid midspan access
- High flexiblity and easy to install in ducts
- Easy Midspan access for faster installation
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- Long haul communication system with higher mid span access capability
- Available for duct, burial & aerial installation

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Duct Laying



Better Flexibility



Water Resistant



UV Protected



Easy Strippable









Fireoproof Product: Fire Resistant/Flame Retardant Fibre Optic Cables

APAR's Fireoproof Fibre Optic Cables are specially designed cables for complying specific fire standards. Fireoprof cables are suitable for communication networks across all emergency systems and other key equipment's where the fire safety is of utmost importance and are available in customized designs to meet specific needs.



Unitube Single Jacket Indoor Dielectric Fire Resistant Cable (850°C - 180 mins)

ISP Range 1F-24F



Loose Tube Double Jacket Steel Wire Cable (750°C - 120 mins)

OSP Range 12F-96F



Loose Tube Double Jacket Braided Cable (750°C - 120 mins)

OSP Range: 12F-96F



Loose Tube Triple Jacket All Dielectric Cable (850°C - 120 mins)

OSP Range: 12F-96F



Tight Buffered Triple Jacket All Dielectric Cable (750°C - 120 mins)

ISP Range: 1F-24F



Loose Tube Double lacket All Dielectric Cable (750°C - 120 mins)

OSP Range: 8F-48F

PRODUCT FEATURES

- Available in wide range of 1F-96F, in both single-mode and multi-mode fibre variants
- Excellent mechanical and fire survival protection
- Meeting international fire standards
- Available with extended fire resistance upto 180 Minutes at 850° C

PRODUCT APPLICATION

 Fire resistant design is typical installed across public buildings, Tunnels, Metro lines, Airports, Oil & Gas, Critical systems, signaling applications, Warning systems for mine sites, Fire prone areas and other places where very high degree of fire safety and support for critical communication is required

COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EC 60331-25 / AS/NZS 60331-25 ,IEC 60332, AS/NZS 1660-5-2, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000















Flame Retardant Fire Resistant

Low Smoke

Water Resistant

Scan to download the complete range of Fireoproof Cables Catalogue





LMConnect Product: FTTx Cables

Enhance your internet experience with APAR's LMConnect range that provides high-speed last mile connectivity directly to residential and enterprise locations, offering exceptional speed, uninterrupted access, and unparallel reliability. LMConnect range includes fibre optic cable solutions from 1F-24F, catering the demands of single-family units, multi-dwelling units and businesses. LMConnect eliminates the limitations of copper networks with the forthcoming era of Gbps fibre connectivity.



PRODUCT FEATURES

- Available in wide range of 1F-24F, in both single-mode and multi-mode fibre variants
- Lightweight, flexible and easy to install
- Available with bend insensitive fibres for indoor and outdoor applications
- Riser and plenum solutions available with UL ratings
- Connectorised solutions availble for specific usecases
- ◆ Operational Temperature -40°C to +70°C

PRODUCT APPLICATION

- ◆ FTTx communication system
- ◆ Last mile connectivity
- Inter-office connections for video/data/internet transmission

COMPLIANCE STANDARDS

IEC 60793, IEC 60332, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000



COLOCO











Easy Strippable

Better Flexibility

Water Resistant

UV Protected

Scan to download the complete range of **LMConnect Cables** Catalogue



APAR GIGA-VOLT HYBRID CABLE

Enabling Smart Connectivity



RoHS

apar.com



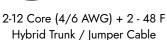
GIGAVOLT HYBRID CABLES

GigaVolt

The Giga-Volt hybrid solution incorporates both fibre and copper conductors in one cable that deliver power and data to a remote device through copper and fibre medium. As the connectivity needs converges, APAR hybrid cables will assist builders to meet their demand with this unique cable designs across multiple use cases across 5G, Wi-fi, DAS, IOT & M2M

APAR's Core (AWG) + Fibre Hybrid cables consist of desired number of power cores and optical fibre/'s subunits. These opto electrical units are bunched together with high precision as hybrid unit and covered with corrugated armour or peripheral strength members and high performance UL/CPR listed polymers suitable for outdoor/indoor application. The multiple combination of power and optical fibres are available based on application and requirements.







3 Core X (4-14 AWG) + 2 - 4 F IoT - Hybrid Cable



2 Core X 1.0 Sq.mm +1 - 24 F Aerial Hybrid Mini Cable



2-4 Core X 1.0 Sq.mm +1 - 48 F Microduct Hybrid Cable

PRODUCT FEATURES

- Power and Fibre Optic Combination in an Compact Design
- High Tensile Strength
- Optimum Bending Radius
- ◆ Operational Temperature -40°C to +70°C
- UL / CPR Listed Product

PRODUCT APPLICATION

- Remote Radio Heads
- Small Cell Towers for Various Spaces
- Power and Data System for IP Devices
- DAS Systems
- Telecommunication Rooms

COMPLIANCE STANDARDS

IEC 60332, IEC 60754, IEC 61034, EN 50575: 2014, IEC 60331, UL 1277, ICEA S-119-741-2021, Telcordia GR-20-CORE Issue 4, ICEA S-104-696-2019, UL 83, UL 1651

















Duct Laying Flame Retardant Fire Resistant

Low Smoke

UV Protected

Scan to download the complete range of GigaVolt Cables Catalogue



WHERE DATA MEETS EFFICIENCY



APAR's TARANG Shakti Solutions Seamlessly Integrate Data Centers for High Speed Internet Access

APAR LAN Cables, designed for high-speed network access, feature four twisted copper wire pairs to prevent interference, are flexible, and provide reliable signal transmission, with CAT 6 (With Separator) cables optimized for high-performance data transmission with low Bit Error Rate.

A multi-pair performance cable that consists of twisted pair conductors, used mainly for data transmission. Category 6 is recommended for all new installations, supports a frequency range of up to 250MHz and is designed for transmission speeds of up to 1 gigabit per second (Gigabit Ethernet).



TARANG SHAKTI - LAN CABLES

!! TARANG SHAKTI

Apar LAN cables provide enhanced performance for transmission of high speed data, digital and analog voice & video signals on Local Area Networks. Our product range supports gigabit ethernet standards(1000bT). Tarangshakti is our brand label in FTP, STP, UTP,SFTP variants with LSZH & Fr PVC jackets for different enterprise & industrial applications.







PRODUCT FEATURES

- Multiple bandwidth options
- Supports gigabit ethernet (1000bT) standard
- Compatible with all systems according to ANSI/TIA 568-2D
- Support power over ethernet (PoE)

PRODUCT APPLICATION

- High speed data transmission
- Digital and analog voice & video are consistently met
- Widely used in office networks, data centres, educational institutions & residential setups

COMPLIANCE STANDARDS

Compatible with all common systems according to ANSI/TIA-568.2-D and ISO/IEC 11801









Flame Retardant

Low Smoke

UV Protected

Scan to download the complete range of Tarang Shakti Cables Catalogue





SPECIALITY CABLES

Speciality

APAR is one of the few companies globally offering super speciality cables designed and developed for extreme conditions. APAR portfolio includes Heavy and Light Tow Cables, Umbilical Cables, ROV Cables, Tether Cables, Tactical Cables, Torpedo Cables, Composite Cables, Airfield Lighting Cables, Radiation Resistant Cables and many more customised products.

Tactical Cables

Military radars, military radio communication, intercom systems

APAR's Tactical cable solution is deployable in unstable and severe environmental conditions for radars, intercom systems, military radio communication and many other applications. In battlefield/war zones the tactical cables solution withstand tough and harsh conditions, where in the military vehicles such as tanks and heavy military units can drive over the cables without harming them.

Tether Cables

Airborne surveillance system cable

APAR's Tether cables are specially crafted for surveillance and communication & aerostat system. Tether cables are electro-optical mechanical cables which hold balloons at the airborne end, and are connected to winch and mooring systems on the ground. The Tether is strong enough to hold the balloon, and establish electrical and optical connectivity from the ground end.

Under Water Cables

Navy Sonar surveillance system

TApar has both HTC and LTC tow cable for sonar systems for towing the linear array and underwater towed body behind the ship. The tow cables used in the marine environment transmit power to the underwater equipment and carry signals for underwater communication. In addition, these cables are capable of withstanding hydrodynamic forces in the ocean environment caused by waves, currents or towing loads.

Festoon Cables

Power & control cables for cranes, hoists & monorails

Designed for flexible overhead applications, APAR's Festoon specialty cables keep cranes, hoists, and monorails run reliable operation over extended service life. These cables excel in flexible environments, featuring robust construction to withstand flexibility at extreme temperatures, and chemical exposure.

COMPLIANCE STANDARDS

Manufactured to MIL spec and other specialised standards.

APAR POWERS THE POWERFUL SOLUTIONS FOR DEFENCE



APAR Tactical Cables are designed for the army to withstand tough environments. They are plug and play solutions with ruggedised jackets and connectors shielded from abrasion, sunlight solvents, extreme temperatures and more.

FEATURES

- Fast and trouble-free integration in the field
- Easy-to-use and reusable
- Extremely high mating durability
- Less sensitivity to pollution, dirt and dust
- Ruggedized connection with high resistance to crushing and shock
- High tensile strength





