# EURO CABLE 1







DEVELOPMENT AND PRODUCTION OF OPTICAL COMMUNICATION CABLES AND SPECIAL CONSTRUCTIONS



The company "Eurocable 1" is located on the two production sites: in Shchelkovo, Moscow region and the town of Gus Crystal Vladimir region.

The land area of the enterprise in Shchelkovo - 3 hectares. Manufacturing located in three production buildings with total area - 8500 m<sup>2</sup>.

The land area of the enterprise in the Gus-Crystal-3 hectares. Manufacturing located in three production buildings with total area -  $5000\,\mathrm{m}^2$ .

The company has the following

equipment:

the color line - Medek & Schorner etc.; extrusion lines - Rosendahl, Dunst, etc.; line SZ-stranding - Rosendahl, Dunst; cable line reinforcement - Mali, Smarter; line wire drawing - Samp, Team.

The company has a mechanical workshop for the manufacture of the necessary equipment and technological tools, as well as repair and maintenance of equipment.

Production capacity at full load - 6000-10000 km cable per month.

The company has a test laboratory equipped with equipment and devices for the complete cycle of the cable tests - environmental testing - resistance to temperature - low and high temperature, cyclic temperature changes, resistance to mechanical stress - tension, crushing, twisting of the cable, resistance to bending and impact, test cable leaks, electrical tests - insulation resistance, the impact of high voltage test burning cable - single and group, test smoke. Measurements of optical fibers are made by OTDR.





When the cable production made functional inspection of geometric and optical parameters of semi-finished products, which ensures the quality of produced cable length of each of the finished cable runs necessary to control the output. Incoming materials are incoming inspection

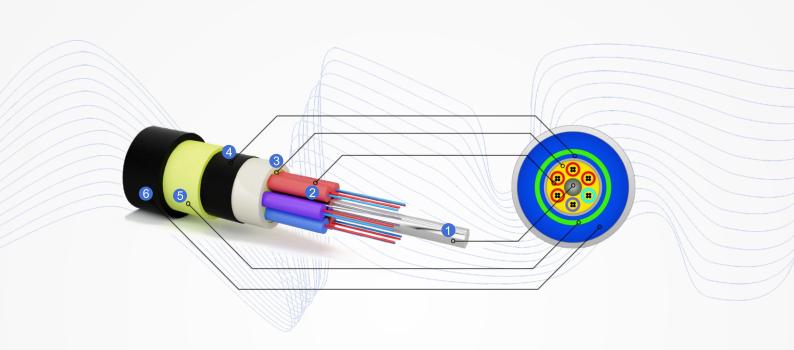
The company has warehouse facilities and premises for the storage of finished products and materials, constructed in accordance with the storage of finished products and materials.



# Applied for aerial installation on distribution and high voltage power lines, as well as railway catenary

Optical cable brand: OSD





- 1 CENTRAL STRENGTH MEMBER: FIBERGLASS RODS
- 2 PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL
- **3** WATER-SWELLABLE GEL

- 4 POLYETHYLENE INNER SHEATH
- REINFORCING ELEMENT ARAMID YARNS OR GLASS YARNS
- **6** POLYETHYLENE OUTER SHEATH

Number of optical fibers from 1 to 288

Resistance to static tensile force of 3,5 kN to 45 kN

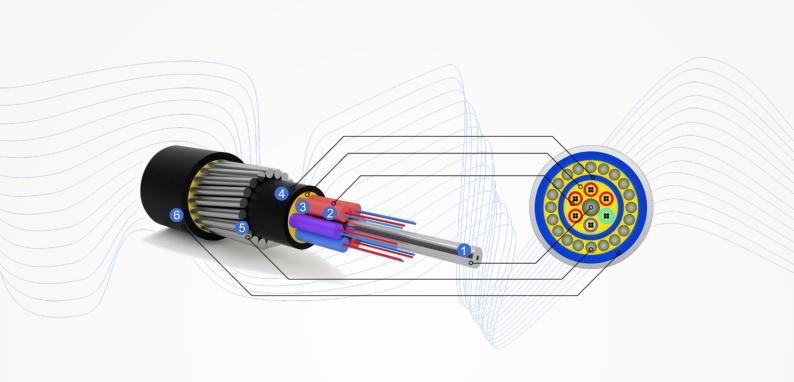
Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm



### Applied in harsh environments with potential mechanical impact: in grounds of all the groups, bogs, unnavigable rivers

Optical cable brand: OGD, OGDN, OGM, OGMN



- 1 CENTRAL STRENGTH MEMBER: FIBERGLASS RODS
- PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL
- **3** WATER-SWELLABLE GEL

- 4 POLYETHYLENE INNER SHEATH
- 5 ARMOR OF ZINC-COATED STEEL WIRES
- 6 POLYETHYLENE OUTER SHEATH/HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 288

Resistance to static tensile force of 7.0 kN to 80 kN

Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm

Resistance to a single shock with an initial energy of 20 Joules

Insulation resistance of the outer layer of not less than 2000 MOm\*km

Insulation chains "metallic central strength member - zinc-coated" and "zinc-coated - ground (water)" withstand voltage 20 kV DC and 10 kV AC at 50 Hz for 5 seconds

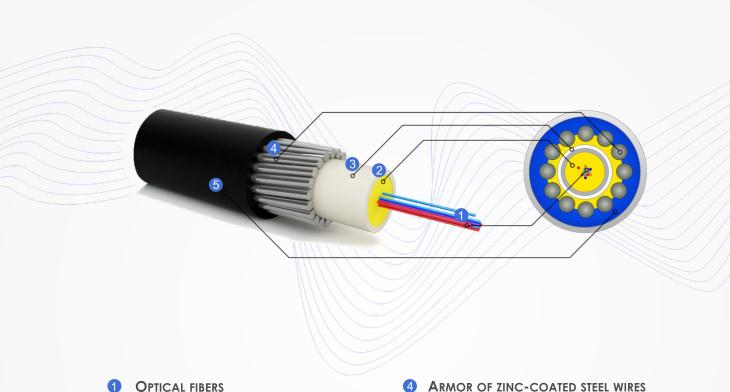


5 POLYETHYLENE OUTER SHEATH/HALOGEN FREE

FLAME-RETARDANT MATERIAL

### Applied in harsh environments with potential mechanical impact: in grounds of all the groups, bogs, unnavigable rivers

Optical cable brand: OGC, OGCN



Number of optical fibers from 1 to 32

WATER-SWELLABLE GEL

3 CENTRAL OPTICAL MODULE

Resistance to static tensile force of 4.0 kN to 25 kN

Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm

Resistance to a single shock with an initial energy of 20 Joules

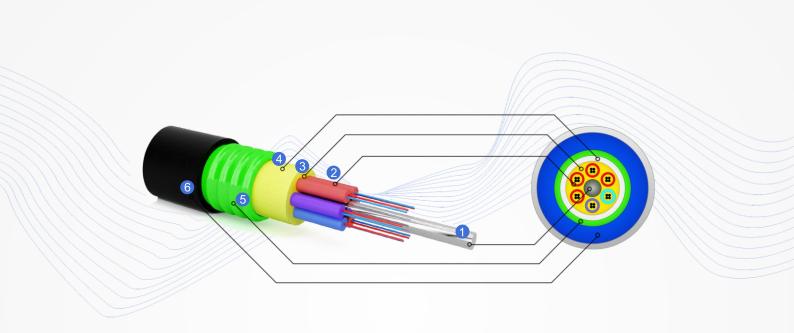
Insulation resistance of the outer layer of not less than 2000 MOm\*km

Insulation chains "metallic central strength member - zinc-coated" and "zinc-coated - ground (water)" withstand voltage 20 kV DC and 10 kV AC at 50 Hz for 5 seconds



#### Applied in ducts, trays, blocks, tunnels, collecting channels

Optical cable brand: OKD, OKDN, OKM, OKMN



- CENTRAL STRENGTH MEMBER: FIBERGLASS RODS
- REINFORCING ELEMENT ARAMID YARNS OR GLASS YARNS
- PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL 6
  - CORRUGATED STEEL TAPE ARMOUR.

3 WATER-SWELLABLE GEL

6 POLYETHYLENE OUTER SHEATH/HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 288

Resistance to static tensile force of 2,7 kN

Resistance cables to dynamic tensile forces by 15% compared to static

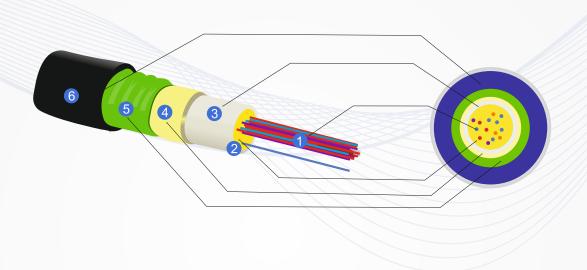
Resistance to crushing of at least 0.5 kN/cm



#### Applied in ducts, trays, blocks, tunnels, collecting channels

Optical cable brand: OKC, OKCN





- 1 OPTICAL FIBERS
- 2 WATER-SWELLABLE GEL
- 3 CENTRAL OPTICAL MODULE
- 4 REINFORCING ELEMENT ARAMID YARNS OR GLASS YARNS
- **6** CORRUGATED STEEL TAPE ARMOUR.
- 6 POLYETHYLENE OUTER SHEATH/HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 32

Resistance to static tensile force of 2,7 kN

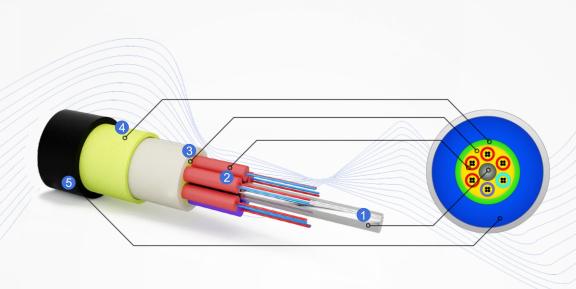
Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm



### Designed for duct installations Applied in duct, trays, blocks, tunnels, collecting channels, with no risk of rodents' attacks

Optical cable brand: OTD, OTDN, OTM, OTMN



- CENTRAL STRENGTH MEMBER: FIBERGLASS RODS/STEEL WIRES
- 2 PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL
- **3** WATER-SWELLABLE GEL

- REINFORCING ELEMENT ARAMID YARNS OR GLASS YARNS
- 5 POLYETHYLENE OUTER SHEATH/HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 288

Resistance to static tensile force of 1.5 kN to 2.7 kN

Resistance cables to dynamic tensile forces by 15% compared to static

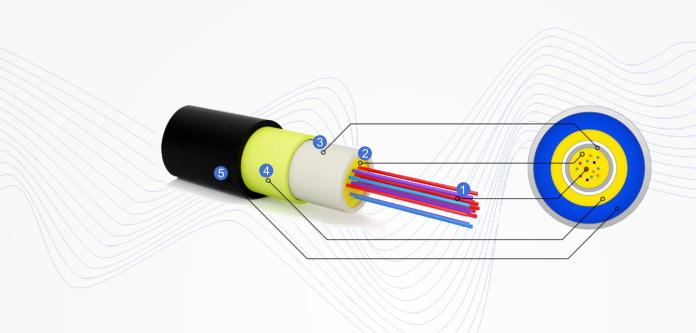
Resistance to crushing of at least 0.5 kN/cm



Designed for duct installations Applied in duct, trays, blocks, tunnels, collecting channels, with no risk of rodents' attacks

Optical cable brand: OTC, OTCN





- 1 OPTICAL FIBERS
- WATER-SWELLABLE GEL
- 3 CENTRAL OPTICAL MODULE

- 4 REINFORCING ELEMENT ARAMID YARNS OR GLASS YARNS
- 6 POLYETHYLENE OUTER SHEATH/HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 32

Resistance to static tensile force of 1.5 kN to 2.7 kN

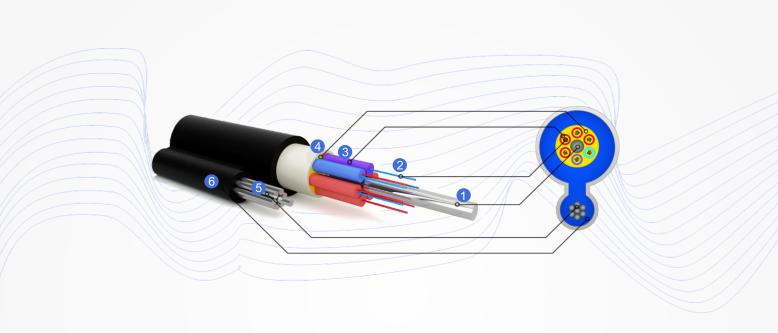
Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm



Applied for aerial installations: on power lines, lamp posts, between buildings and constructions. Suitable for aerial installation on transmission equipment and power facilities in dielectric package

Optical cable brand: OPD



- 1 CENTRAL STRENGTH MEMBER: FIBERGLASS RODS
- 2 OPTICAL FIBERS
- 3 PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL
- 4 WATER-SWELLABLE GEL
- 5 EXTERNAL STRENGTH MEMBER STEEL WIRES/ FIBERGLASS RODS
- 6 POLYETHYLENE OUTER SHEATH

Number of optical fibers from 1 to 288

Resistance to static tensile force of 4.0 kN to 12 kN

Resistance cables to dynamic tensile forces by 15% compared to static

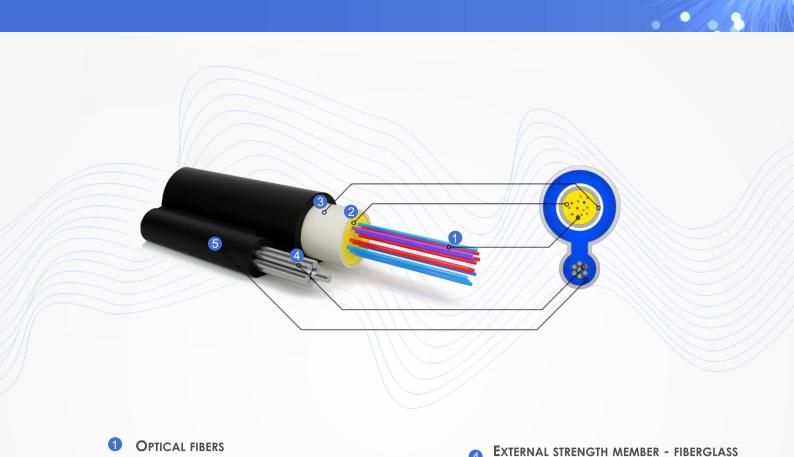
Resistance to crushing of at least 0.5 kN/cm



**RODS/STEEL WIRES** 

**6** POLYETHYLENE OUTER SHEATH

Applied for aerial installations: on power lines, lamp posts, between buildings and constructions. Suitable for aerial installation on transmission equipment and power facilities in dielectric package Optical cable brand: OPC



Number of optical fibers from 1 to 32

WATER-SWELLABLE GEL

3 CENTRAL OPTICAL MODULE

Resistance to static tensile force of 4.0 kN to 12 kN

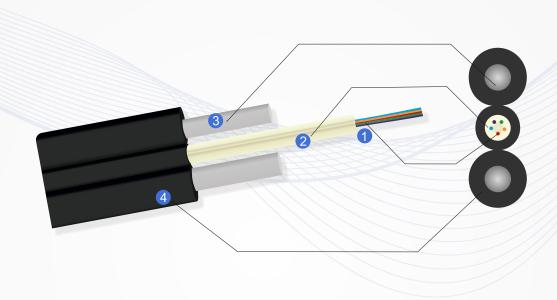
Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.5 kN/cm



## Applied for aerial installation on transmission towers, lamp posts, between buildings and constructions

Optical cable brand: OPC-D2



- 1 OPTICAL FIBERS
- PBT LOOSE TUBE FILLED WATER-SWELLABLE GEL
- 3 STRENGTH MEMBER: FIBERGLASS RODS
- 4 POLYETHYLENE OUTER SHEATH

Number of optical fibers from 1 to 32

Resistance to static tensile force of 6 kN

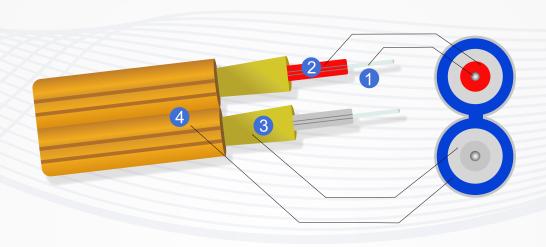
Resistance cables to dynamic tensile forces by 15% compared to static

Resistance to crushing of at least 0.25 kN/cm



Optical cable brand: OVND (Duplex)





- 1 OPTICAL FIBERS
- 2 TIGHT-BUFFER

- 3 ARAMID YARNS
- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers 2

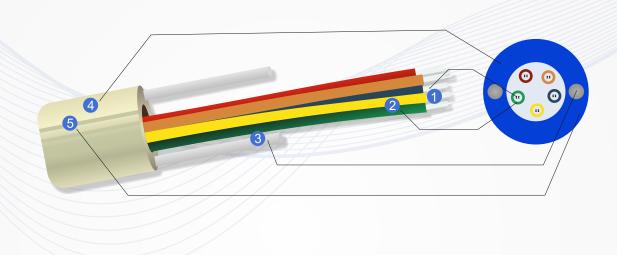
Resistance to static tensile force of 0.4 kN to 0.8 kN

Resistance to crushing of at least 0.05 kN/cm



Applied inside buildings (including vertical runs), in trays, channels, on outer sides of buildings, as well as in duct, in tubes and blocks. Suitable for blowing-in into protecting polyethylene tubes

Optical cable brand: OVNV (Tight-Buffered Riser Cable)



- 1 OPTICAL FIBERS
- 2 TIGHT-BUFFER
- 3 FIBERGLASS RODS

- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL
- **6** MATCH MARKS (MATERIAL OPENING MARKING)

Number of optical fibers from 1 to 24

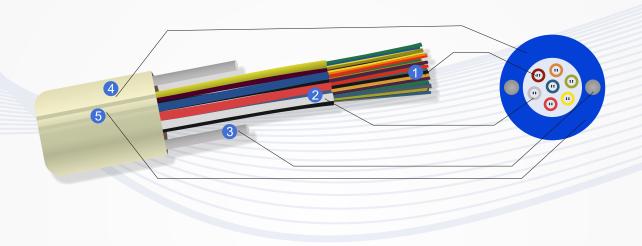
Resistance to crushing from 0.08 kN/cm to 0.2 kN/cm

Resistance to static tensile force of 0,4 kN



Applied inside buildings (including vertical runs), in trays, channels, on outer sides of buildings, as well as in duct, in tubes and blocks. Suitable for blowing-in into protecting polyethylene tubes Optical cable brand: OVNV (Riser Cable with Micro Tubes)





- 1 OPTICAL FIBERS
- MICRO TUBES
- 3 FIBERGLASS RODS

- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL
- 5 MATCH MARKS (MATERIAL OPENING MARKING)

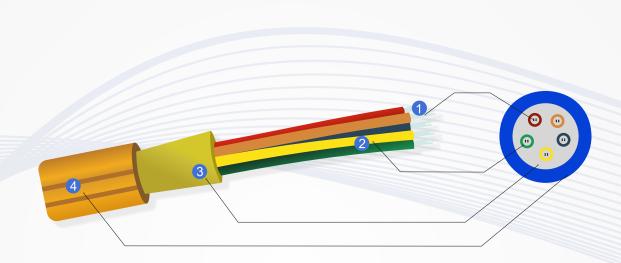
Number of optical fibers from 1 to 288

Resistance to crushing from 0.08 kN/cm to 0.2 kN/cm

Resistance to static tensile force of 0,4 kN



Optical cable brand: OVNR (Distrubution)



- 1 OPTICAL FIBERS
- 2 TIGHT-BUFFER (MICRO TUBES)
- 3 ARAMID YARNS
- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers from 1 to 24

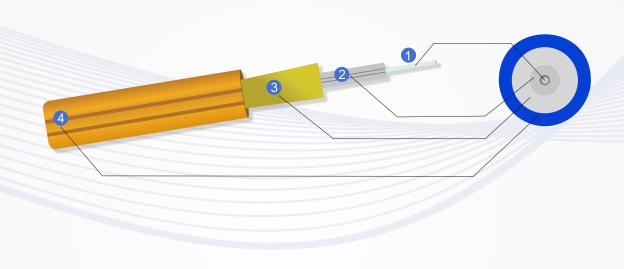
Resistance to crushing of at least 0.2 kN/cm

Resistance to static tensile force of 1 kN to 2 kN



Optical cable brand: OVNC (Simplex)





- 1 OPTICAL FIBERS
- 2 TIGHT-BUFFER

- ARAMID YARNS
- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL

Number of optical fibers 1

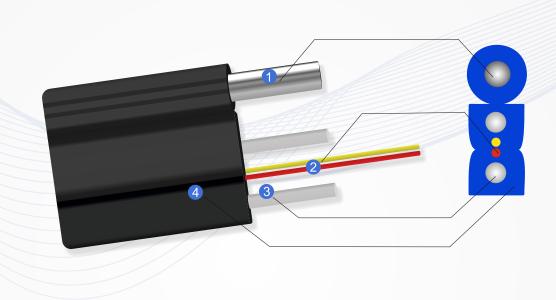
Resistance to crushing from 0.05 kN/cm

Resistance to static tensile force of 0.2 kN to 0.4 kN



### Applied for aerial installation: lamp posts, between buildings and constructions

Optical cable brand: OPNP (FTTx with messenger wire)



1 OPTICAL FIBERS

- 3 STRENGTH MEMBER: FIBERGLASS RODS/ARAMID YARNS
- 2 STRENGTH MEMBER STEEL WIRE
- 4 HALOGEN FREE FLAME-RETARDANT MATERIAL

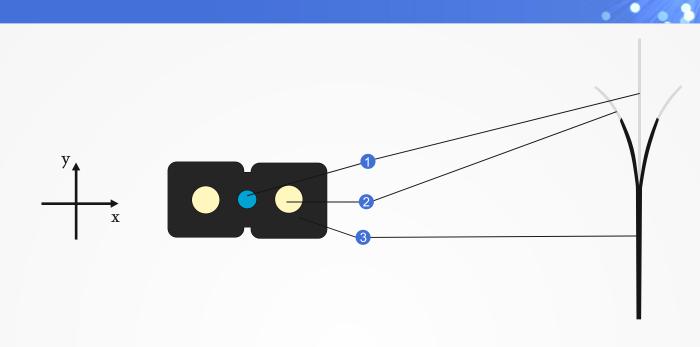
Number of optical fibers from 1 to 8

Resistance to crushing of at least 0.25 kN/cm

Resistance to static tensile forces up to 1 kN



Optical cable brand: OVNP ("Butterfly")



1 OPTICAL FIBERS

- 3 HALOGEN FREE FLAME-RETARDANT MATERIAL
- 2 STRENGTH MEMBER: FIBERGLASS

Number of optical fibers from 1 to 8
Resistance to crushing of at least 0.25 kN/cm

Resistance to static tensile forces up to 0.4 kN



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