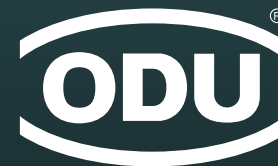


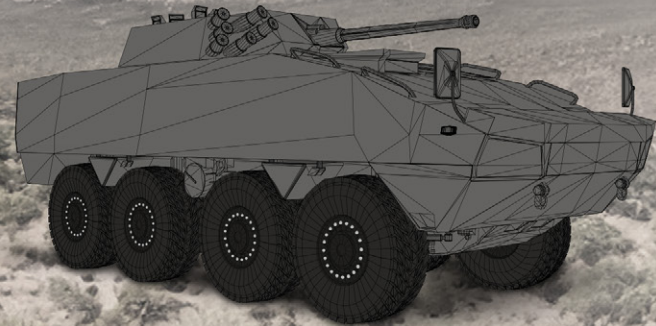
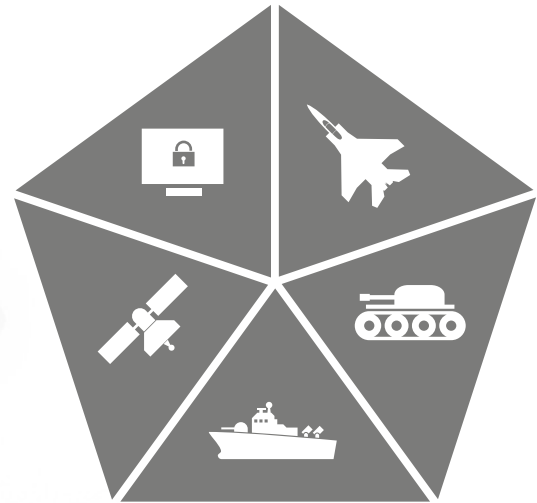
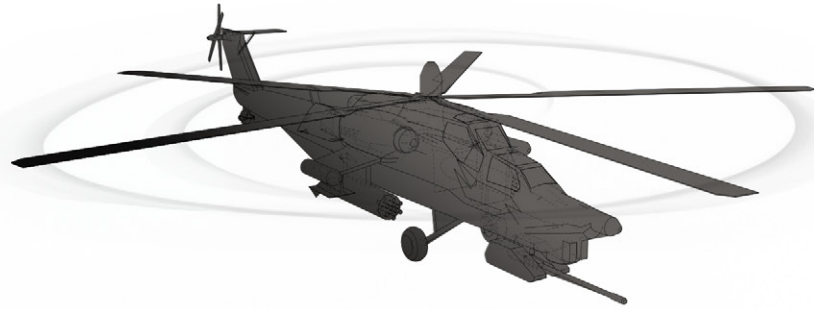
CONNECTOR SOLUTIONS

Military Applications



ODU CONNECTOR APPLICABILITY

EXTREME ENVIRONMENTAL CONDITIONS



The contact arrangement of an ODU data transmission connector differs from a standard data transmission connector due to the robust ODU specific design. However, the ODU design meets the electrical specifications that are derived from the respective standard data transmission protocol.

SOLDIER COMMUNICATION SYSTEMS

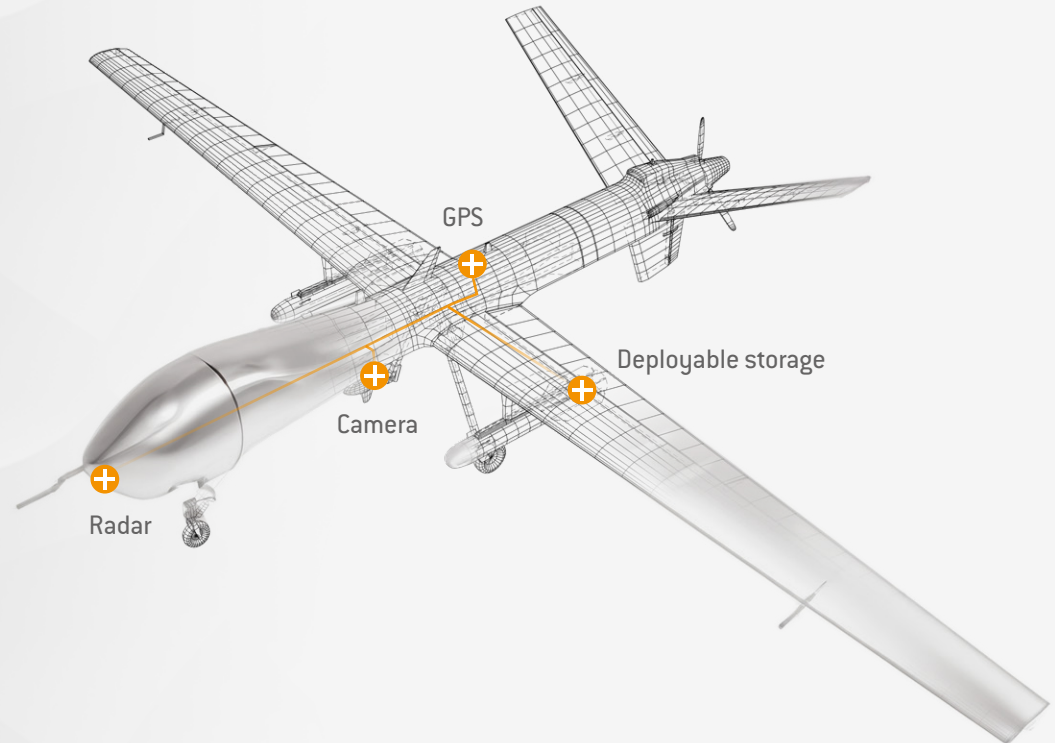
- 70 % weight and size reduction
- Up to IP6K9K
- High signal integrity 360° shielding
- NATO STANAG 4695, Nett Warrior and GOSSRA
- Environmental tested MIL-STD-810
- High-speed data transfer including:
USB® 3.2 Gen 1×1, 10 Gbit/s Ethernet and HDMI®



UNMANNED SYSTEMS: UAV / UGV / UAS

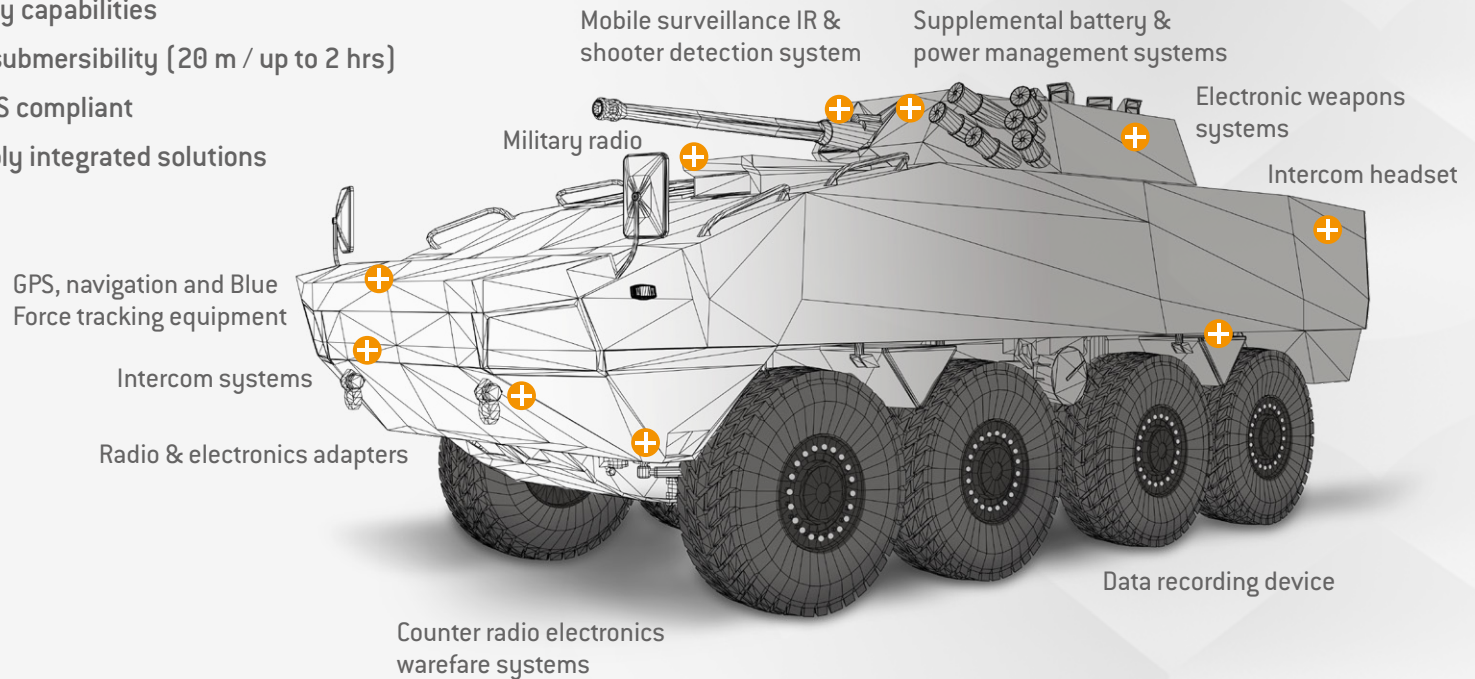
CUSTOMIZED CONNECTIVITY

- Rugged and reliable optical connectivity solutions
- Various locking systems
- Lightweight & space saving design
- High vibration and shock resistant
- Video and signal transmission
- Interference-free fiber optic transmission



MILITARY VEHICLES

- Miniaturized 38999 type
- Shock and vibration resistant
- Ergonomic shape and rapid mate/demate capable
- 3 on 1 locking option
- MIL-STD-1472 and MIL-STD-810
- Field assembly capabilities
- IP6K9K with submersibility (20 m / up to 2 hrs)
- REACH & RoHS compliant
- Cable assembly integrated solutions





ODU MILITARY CONNECTORS

| | Keying | Sizes | No. of possible mechanical keyings | Diameter plug (mm) | Max. cable diameter (mm) | Max. no. of contacts | Solder | Crimp | Print |
|---|----------------|-------|------------------------------------|--------------------|--------------------------|----------------------|--------|-------|-------|
| ODU AMC® High-Density Break-Away <ul style="list-style-type: none"> • 70 % weight and size reduction • Cable assembly solutions • USB® 3.2 Gen 1x1 + USB® 2.0 + HDMI® + Ethernet  | Pin and groove | 00 | 4 | 9.8 | 5.0 | 7 | ● | – | ● |
| | | 0 | | 12.8 | 7.0 | 16 | | | |
| | | 1 | | 14.8 | 8.5 | 27 | | | |
| ODU AMC® High-Density Screw-Lock <ul style="list-style-type: none"> • High vibration resistance • High-speed data transfer • High contact density: 2–27 contacts / 3 sizes  | Pin and groove | 00 | 4 | 9.8 | 5.0 | 7 | ● | – | ● |
| | | 0 | | 12.8 | 7.0 | 16 | | | |
| | | 1 | | 15.2 | 8.0 | 27 | | | |
| ODU AMC® Threaded <ul style="list-style-type: none"> • High shock and vibration resistance • High-speed data transfer • Interference-free data transmission • 360° shielding  | Pin and groove | 1.5 | 2 | 17.5 | 8.5 | 19 | ● | – | ● |
| | | 3 | | 29.4 | 12.8 | 26 | | | |
| ODU AMC® Series T <ul style="list-style-type: none"> • Miniturized 38999 connector • Three locking types to 1 receptacle • High vibration resistance • Suitable for MIL 38999 backshells  | Pin and groove | 9 | 4 | 18.4 | 7.6 | 20 | ● | ● | ● |
| | | | | 18.5 | | | | | |
| | | | | 21 | | | | | |
| | | 12 | | 24.2 | 14.6 | 22 | | | |
| | | 24.9 | | | | | | | |
| 26 | | | | | | | | | |

Buy online

| | IP Class in mated condition | IP Class in unmated condition | Shell material | RoHS compliant | Operating temperature range | Advanced plating technologies for corrosion resistance | Coax transmission | Rapid cable assembly manufacturing | USB® 3.2 Gen 1x1 | USB® 2.0 | HDMI® | Ethernet CAT 5 & 10 GBit Ethernet | DisplayPort® |
|----------------------------------|-----------------------------|-------------------------------|----------------|----------------|--------------------------------------|--|-------------------|---|------------------|----------|-------|-----------------------------------|--------------|
| ODU AMC® High-Density Break-Away | Up to IP6K9K | IP68 | Brass | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | ● | ● | ● | ● | ● | ● | - |
| ODU AMC® High-Density Screw-Lock | Up to IP6K9K | IP68 | Brass | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | ● | ● | ● | ● | ● | ● | - |
| ODU AMC® Threaded | Up to IP6K8 | IP68 | Aluminum | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | - | ● | - | - | - | ● | - |
| ODU AMC® Series T | Up to IP6K9K | IP68 | Aluminum | ● | -65 °C (-85 °F) to +175 °C (+347 °F) | ● | - | Backshell version & standard cable assemblies | - | - | ● | ● | ● |

ODU MILITARY CONNECTORS

| | Keying | Sizes | No. of possible mechanical keyings | Diameter plug (mm) | Max. cable diameter (mm) | Max. no. of contacts | Solder | Crimp | Print |
|--|----------------|-------|------------------------------------|--------------------|--------------------------|----------------------|--------|-------|-------|
| ODU AMC® Push-Pull <ul style="list-style-type: none"> > 5,000 mating cycles High-speed data technology Quick and easy mating and locking  | Pin and groove | 0 | 4 | 14.0 | 5.5 | 10 | ● | - | ● |
| | | 1 | | 15.9 | 6.5 | 16 | | | |
| | | 1.5 | | 16.5 | 8.0 | 19 | | | |
| | | 2 | | 19.6 | 10.0 | 26 | | | |
| | | 3 | | 23.9 | 11.5 | 37 | | | |
| | | 4.5 | | 33.0 | 17.5 | 55 | | | |
| ODU AMC® Break-Away <ul style="list-style-type: none"> > 5,000 mating cycles High-speed data technology Quick and easy demating and locking  | Pin and groove | 0 | 4 | 11.9 | 5.5 | 10 | ● | - | ● |
| | | 1 | | 13.9 | 6.5 | 16 | | | |
| | | 1.5 | | 15.9 | 8.0 | 19 | | | |
| | | 2 | | 17.6 | 10.0 | 26 | | | |
| | | 3 | | 21.9 | 11.5 | 37 | | | |
| ODU AMC® NP <ul style="list-style-type: none"> Current rating up to 5 A per contact >2,000 mating cycles Break-away function  | Pin and groove | 6 | 11 | 12.4 | 6.65 | 7 | ● | - | ● |
| ODU AMC® Easy-Clean <ul style="list-style-type: none"> Fast and easy cleaning Break-away function > 5,000 mating cycles Contact inserts with pogo pins  | Pin and groove | 0 | 4 | 11.9 | 5.5 | 7 | ● | - | ● |
| | | 1 | | 13.9 | 6.5 | 16 | | | |
| | | 1.5 | | 15.9 | 8.0 | 19 | | | |

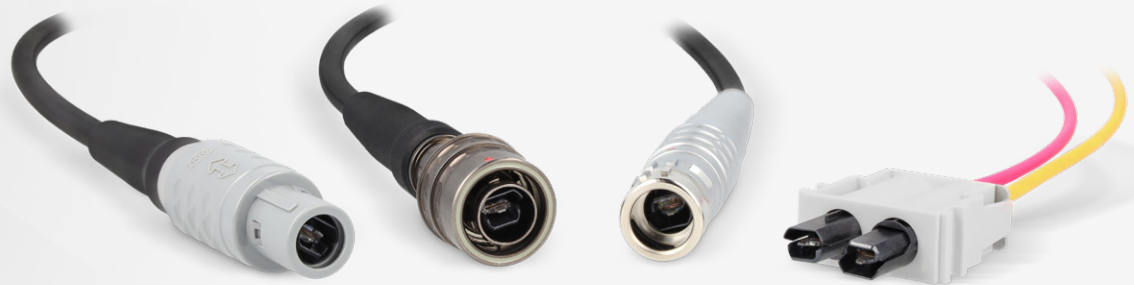
| | IP class in mated condition | IP class in unmated condition | Shell material | RoHS compliant | Operating temperature range | Advanced plating technologies for corrosion resistance | Coax transmission | Rapid cable assembly manufacturing | USB® 3.2 Gen 1x1 | USB® 2.0 | HDMI® | Ethernet CAT 5 & 10 GBit Ethernet | DisplayPort® |
|---------------------|-------------------------------|-------------------------------|----------------|----------------|--|--|-------------------|------------------------------------|------------------|----------|-------|-----------------------------------|--------------|
| ODU AMC® Push-Pull | Up to IP6K9K | IP68 | Aluminum | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | ● | ● | ● | ● | ● | ● | ● |
| ODU AMC® Break-Away | Up to IP6K9K | IP68 | Aluminum | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | ● | ● | ● | ● | ● | ● | ● |
| ODU AMC® NP | IP68 20 meters for 2 hours | IP68 20 meters for 2 hours | Aluminum | ● | -18 °C (-0.4 °F) to +71 °C (+159.8 °F) | ● | ● | ● | - | ● | - | - | - |
| ODU AMC® Easy-Clean | Up to IP6K9K | IP6K8 | Aluminum | ● | -51 °C (-60 °F) to +125 °C (+257 °F) | ● | ● | ● | - | - | - | - | - |

ODU FIBER OPTIC

EXPANDED BEAM PERFORMANCE

is an advanced fiber optic solution available in a variety of connector series to meet the full range of application requirements.

- + Minimum maintenance necessary
- + Durable contact technology
- + Excellent optical performance under every condition



CONTACT TECHNOLOGY (EBP)

- 50,000 mating cycles
- No cleaning, only if necessary
- -65 °C to +105 °C
- Insertion loss*
SM: < 0,35 dB (typical) / < 0.7 dB (max.)
MM: < 0,15 dB (typical) / < 0.3 dB (max.)
- Return loss*
SM: > 60 dB (typical) / ≥ 55 dB (min.)
MM: > 45 dB (typical) / ≥ 35 dB (min.)

* Values are defined per contact side

| | ODU MEDI-SNAP® | ODU AMC® Series T | ODU MINI-SNAP® Series K | ODU-MAC® White-Line / Silver-Line |
|------------------|---|------------------------------------|---|---|
| Special feature | Light weight / non-magnetic | Ruggedized | Smallest footprint (OD 16.2 mm) | Automatic docking / Manual mating / Hybrid / Non-magnetic |
| Mating cycles | 2,000 | 5,000 | 5,000 | 50,000 |
| IP rating | IP64 | IP6K9K | IP68 | IP50 to IP67 |
| Temperature | -40 °C to +85 °C DIN EN IEC 61300-2-47 | -40 °C to +85 °C TIA/EIA-455-4C | -40 °C to +85 °C DIN EN IEC 61300-2-47 | -40 °C to +85 °C DIN EN IEC 61300-2-47 |
| Locking system | Push-Pull | Push-Pull / Threaded | Push-Pull | Spindle / Transverse / Lever |
| Housing material | Plastic | Metal | Metal | Metal / Plastic |

SYSTEM SOLUTIONS

Even under environmental stress, the Expanded Beam Technology maintains high performance for up to 100,000 mating cycles while being easy to clean.

THE ODU FIBER OPTIC PORTFOLIO

also includes reliable physical contact and cost effective polymer optical-fiber system solutions, all available for circular and modular connectors.

Modular
fiber optic
solutions

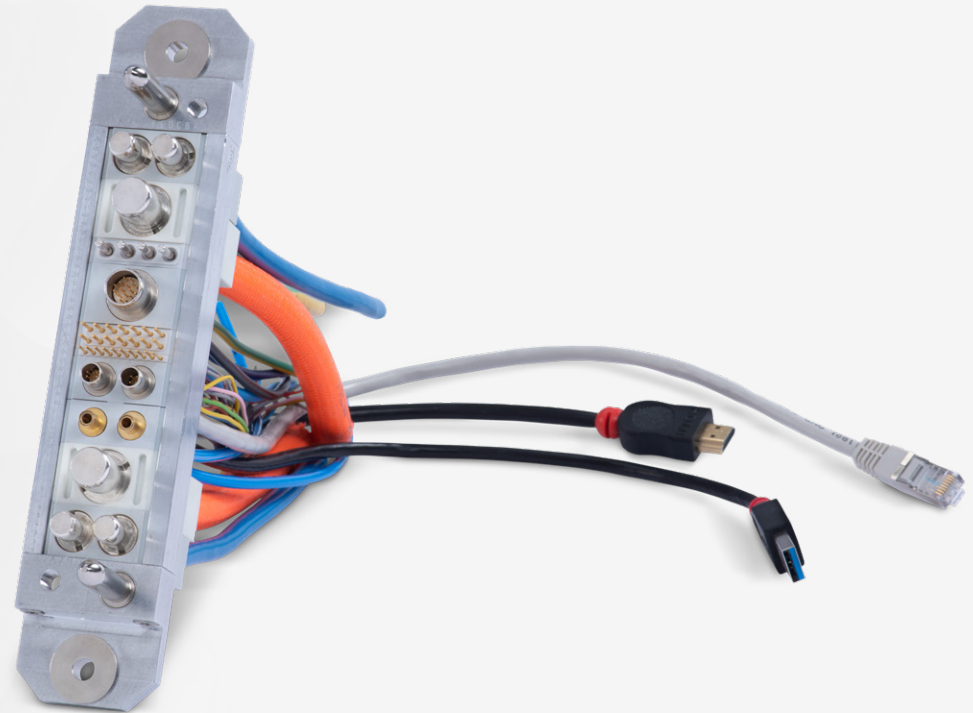


- + GOF (multimode / singlemode) and POF system solutions
- + Fiber-only and hybrid systems
- + High number of mating cycles
- + Available as fully assembled solutions

MODULAR / RECTANGULAR TECHNOLOGY

Customizable hybrid interconnectivity solution

- + Rapid turnaround for low volumes
- + Tailor-made solution for your application including cable assembly
- + Fail-safe and reliable



ODU-MAC® /white-Line/

- High vibration resistance & manual mating
- > 100,000 mating cycles
- Self-cleaning contacts
- > 30 high-speed data inserts
- Low contact resistance
- Various locking options (e. g., snap-in, spindle, lever)
- EMC shielded housings on request



ODU-MAC® /Blue-Line/

- Easy one-handed operation
- Up to 70 signal contacts and power, coax, air, fluid, data rates
- > 5,000 mating cycles
- IP67
- Up to 6 mechanical keying options

ODU-MAC® /Silver-Line/

- Advanced docking
- High vibration resistance
- > 100,000 mating cycles
- Self-cleaning contacts
- > 30 different high-speed data inserts
- 7 docking frame options
- Suitable for blind mating

ELECTRICAL CONTACT TECHNOLOGY



ODU LAMTAC®

ODU SPRINGTAC®

| | | |
|------------------------------------|---|--------------------------------------|
| Primary attribute | High temperature & current | High mating cycles |
| Contact technology | Lamella technology | Springwire technology |
| Contacting | 19 lamella louvres with 2 contact points each (size Ø 6 mm) | 44 wire springs (size Ø 6 mm) |
| Nominal current | 115 A (size Ø 6 mm) | 110 A (size Ø 6 mm) |
| Angular misalignment | ± 1° | ± 1° |
| Mating cycles | > 10,000 | > 100,000 |
| Temperature range standard version | -40 °C [-40 °F] to +150 °C [+302 °F] | -40 °C [-40 °F] to +125 °C [+257 °F] |
| Contact size* | from Ø 1.5 mm | from Ø 0.76 mm |
| Standard plating | Ag / Au | Ag / Au |
| Crimp termination | ● | ● |
| Screw termination | ● | ● |
| For busbars (through-hole design) | ● | ● |

- Versatile contact technologies
- Outstanding reliability and durability with up to 1 million mating cycles
- Current-carrying capacity of up to 2,400 amperes and more
- Robust and universal contact systems
- Stamping technology for customer-specific high volume solutions
- High vibration and shock resistance
- Low, stable contact resistance

* Other sizes on request

CABLE ASSEMBLY SOLUTIONS



All dimensions are in mm.

Some figures are for illustrative purposes only. Subject to change without notice. Errors and omissions excepted. We reserve the right to change our products and their technical specifications at any time in the interest of technical improvement. This publication supersedes all prior publications.

ODU MILITARY APPLICATIONS / B / 0924 / EN

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