Volition™ 10 Gigabit cables are specially designed to ensure total immunity to alien crosstalk to 500 MHz. They were developed to exceed the requirements of the 6 around 1 test, that is, the Powersum of ANEXT effects generated by 6 cables (or 24 pairs) on one pair of an adjacent cable.

All constructions of 10 Gigabit Volition™ cables have general shielding and/or shielding by pair. Volition™ 10 Gigabit cables have unequalled immunity against AXTLK.

Volition™ 10 Gigabit cables allow easy installation, with no particular precautions, thanks to their round shape. Connection to Volition™ OCK10S8 jack remains simple and natural. Cable laying is easy thanks to the external diameter of the cable, which is the same as the Volition™ Category 6/Class E 250MHz cable. Volition™ 10 Gigabit cables are available in LSOH versions.

**Features**
- Screening by pair in aluminium/polyester
- Length printed on the cable sheath
- LSOH sheath, IEC 60332-1 Category C2 type
- Round shape

**Benefits**
- Alien crosstalk immunity certified up to 500MHz
- Simplified installation
- Complies with public building requirements
- Easy to connect on RJ45 OCK10S8

**Standards**

**Applications**
- Ethernet IEEE 802.3
- FDDI
- ATM
- RNIS
- EEE 802.5

**Cabling standards**
- EN 50173
- ISO/IEC 11801
- TIA/EIA 568
- EN 50188-10 (draft)
- IEC 61156-5 Ed 2 (draft)

**Environmental standards**
- Fire resistance IEC 60332-1 Cat. C2
- Low smoke emission IEC 61034
- Toxicity/Corrosion IEC 60754-1/-2

**Technology built for business**
## Specification

### Electrical characteristics at 20°C:
- **Conductor resistance (max.):** $\leq 146.4 \, \Omega / \text{km}$
- **Insulation resistance (min.):** $\geq 5000 \, \text{M}\Omega / \text{km}$
- **Dielectric strength at 50Hz:** 1 kV / 1 min
- **Unbalanced capacitance - pair to ground (max):** $\leq 1600 \, \text{pF} / 500 \, \text{km}$
- **Propagation velocity (NVP):** 78%
- **Characteristic impedance at 100 MHz:** $100 \pm 5 \, \Omega$

### Mechanical installation characteristics
- **Minimum bend radius at installation:** $\geq 65 \, \text{mm}$
- **Minimum bend radius once installed:** $\geq 35 \, \text{mm}$
- **Maximum pulling tension:** 156 (2x4p)
- **Nominal weight:** 51 kg/km
- **Temperature characteristics (°C):**
  - Transport / storage: 0 to +50°C
  - Operating temperature: -20 to +60°C

### Electrical performance

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>4</th>
<th>10</th>
<th>20</th>
<th>62.5</th>
<th>100</th>
<th>250</th>
<th>500</th>
<th>550**</th>
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</thead>
<tbody>
<tr>
<td><strong>Attenuation (max) (dB/100 m)</strong></td>
<td>Typical value</td>
<td>3.6</td>
<td>5.6</td>
<td>8</td>
<td>14.2</td>
<td>18.1</td>
<td>28.9</td>
<td>41.2</td>
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<td>Cat 6A* (min.)</td>
<td>3.8</td>
<td>5.9</td>
<td>8.4</td>
<td>15</td>
<td>19.1</td>
<td>31.1</td>
<td>45.3</td>
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<tr>
<td><strong>NEXT (dB)</strong></td>
<td>Typical value</td>
<td>90</td>
<td>90</td>
<td>82</td>
<td>75</td>
<td>72</td>
<td>65</td>
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<td>Cat 6A* (min.)</td>
<td>65.3</td>
<td>59.3</td>
<td>54.8</td>
<td>47.4</td>
<td>44.3</td>
<td>38.3</td>
<td>33.8</td>
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<td><strong>PSNEXT (dB)</strong></td>
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<td>87</td>
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<td>57.3</td>
<td>52.8</td>
<td>45.4</td>
<td>42.3</td>
<td>36.3</td>
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<td><strong>ELFEXT (dB)</strong></td>
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<td>80</td>
<td>77</td>
<td>71</td>
<td>67</td>
<td>52</td>
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<td>Cat 6A* (min.)</td>
<td>58</td>
<td>50</td>
<td>44</td>
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<tr>
<td><strong>PS ELFEXT (dB)</strong></td>
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<td>77</td>
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<td><strong>Return Loss (dB)</strong></td>
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<td><strong>PS ANEXT (dB)</strong></td>
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<td>Cat 6A* (min.)</td>
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<td>64.5</td>
<td>62.5</td>
<td>56.5</td>
<td>52</td>
<td>–</td>
</tr>
</tbody>
</table>

* Category 6A acc. Draft IEC 61156-5 Ed.2  ** Only for information

### Ordering Information

**Ref. No.**

**Volition™ Category 6A U/FTP 100 Ohms LSOH**
- 4 pairs  
- Length: 1000 m  
- Unit: 1 drum  
- Weight: 63 Kg  
- Vol6AUF41000

**Volition™ Category 6A U/FTP 100 Ohm LSOH**
- 2x4 pairs  
- Length: 500 m  
- Unit: 1 drum  
- Weight: 63 Kg  
- Vol6AUF8500