



# Expanded Beam Xtreme®

The Expanded Beam Xtreme® is a ruggedized, high-performance non-contact fiber optic cable solution engineered for mission-critical applications in the harshest environments. Available in multiple channel counts and configurations, the system supports both single-mode and multimode fibers, offering flexibility for a wide range of bandwidth and distance requirements.



## Key Features

- **Patented Technology:**
  - Nortech's design expands and collimates the light beam at the connector interface, significantly reducing sensitivity to dust, debris, and misalignment. This innovation ensures consistent signal integrity even in dirty or high-vibration environments.
- **Built to Withstand Extreme Mechanical Stress:**
  - IP68-rated sealing for water and dust protection
  - High resistance to shock, vibration, and temperature fluctuations
- **Low Maintenance, High Reliability**
  - Unlike traditional physical contact connectors, the expanded beam interface is non-contact, minimizing wear and tear.

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## Why Choose Expanded Beam Xtreme®?

1. Field-Proven Durability:
  - Tested in real-world conditions to exceed MIL-STD and IEC standards.
1. Patent-Backed Innovation:
  - Nortech's expanded beam design is a leap forward in optical connectivity.
1. Reduced Downtime:
  - Easy cleaning and robust construction means fewer failures and faster redeployments.



# EBX Specifications

<b>Insertion Loss per Expanded</b>	-0.75 dB (Typical)
<b>Return Loss Per Expanded Beam</b>	-35 dB (Minimum)
<b>Ball Lens Outer Diameter</b>	2.0 mm and 3.0 mm
<b>Fiber Type</b>	Bend Insentive OM3, OM4, OM5
<b>Typical Wavelength</b>	850nm
<b>Typical Bandwidth</b>	10 Gbps @ 10 <sup>-12</sup> BER (Bit Error Rate)
<b>Endface Geometry Spec(s)</b>	IEC 61300-3-35
<b>Temperature</b>	-60°C to 85°C
<b>Temperature Humidity</b>	-10°C to 85°C and up to 98% Relative Humidity
<b>Flex Life</b>	125,000 cycles
<b>Mating Cycles</b>	125,000 cycles
<b>Cable Bend Radius</b>	Static 10x OD, Dynamic 20x OD
<b>Flame Rating</b>	Plenum (OFNP)
<b>Process Control</b>	IPC-640 Compliant
<b>RoHS Compliant</b>	RoHS 3 (2015/863/EU)

