

# SYSTIMAX GigaSPEED XL Performance Comparison Guide

## Guaranteed / Warranted Margins - 4 Connector Channels

Specification	GigaSPEED XL7	Cat 6 Standard	Advantage XL7 (dB)	Advantage XL7 (%)
Insertion Loss	5.0%	0.0%	Frequency Dependent	5.0%
Pr-Pr NEXT	6.0	0.0	6	298%
PSNEXT	7.5	0.0	7.5	462%
Pr-Pr ELFEXT	6.0	0.0	6	298%
PSELFEXT	8.0	0.0	8	531%
Return Loss	4.0	0.0	4	151%
ACR Margin @ 100MHz	7.1	0.0	7.1	409%
ACR Margin @ 250MHz	7.8	0.0	7.8	502%
PSACR Margin@100MHz	8.6	0.0	8.6	619%
PSACR Margin@250MHz	9.3	0.0	9.3	750%

## Guaranteed / Warranted Margins - 4 Connector Channels

Specification	GigaSPEED XL8	Cat 6 Standard	Advantage XL8 (dB)	Advantage XL8 (%)
Insertion Loss	7.5%	0.0%	Frequency Dependent	7.5%
Pr-Pr NEXT	7.0	0.0	7	401%
PSNEXT	8.5	0.0	8.5	608%
Pr-Pr ELFEXT	8.0	0.0	8	531%
PSELFEXT	10.0	0.0	10	900%
Return Loss	4.0	0.0	4	151%
ACR Margin @ 100MHz	8.6	0.0	8.6	624%
ACR Margin @ 250MHz	9.7	0.0	9.7	832%
PSACR Margin@100MHz	10.1	0.0	10.1	923%
PSACR Margin@250MHz	11.2	0.0	11.2	1216%

**Guaranteed Claims** The GigaSPEED XL7 Solution outperforms the Category 6 NEXT requirement by a factor of 4, and the GigaSPEED XL8 Solution outperforms it by a factor of 5. This and the many other electrical parameters and number of connection claims of the GigaSPEED XL Solution are SYSTIMAX SCS guaranteed performance statements and covered by the SYSTIMAX SCS 20-year extended product and applications assurance warranty. **Why is this important?** Many companies just claim typical or average values in their performance data. Some make claims based on only selected frequencies. This is very important to understand as it can lead to ambiguity or misinterpretation of system performance. The SYSTIMAX SCS tradition is for clear guaranteed performance statements. SYSTIMAX SCS statements always relate to worst-case data, and across the full, relevant, frequency range. Typical, nominal or average readings may be useful for statistical purposes, but are not sufficient to guarantee compliance to a specification. Averages or "average worst case" are dependant on the product samples being measured, and the number of samples, and thus provide less than a 100% confidence factor.