

Network Redundancy

STP/RSTP/Turbo Ring



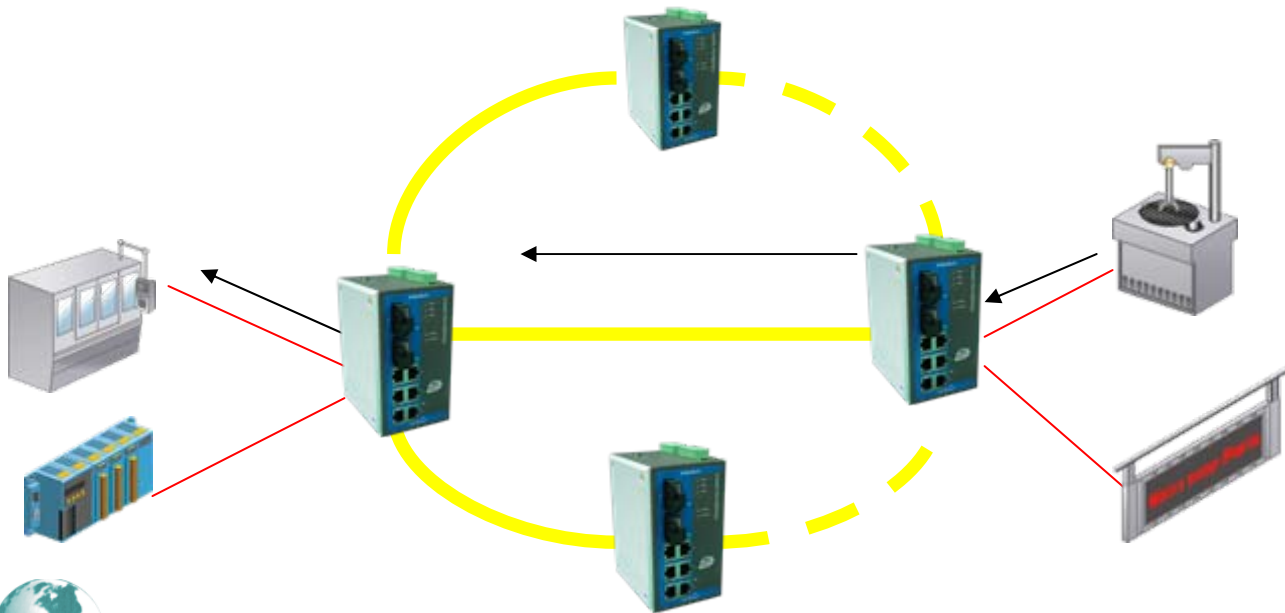
Topics covered in this paper:

- What Is Network Redundancy?
- What Benefits Does Turbo Ring Provide?
- Application Story



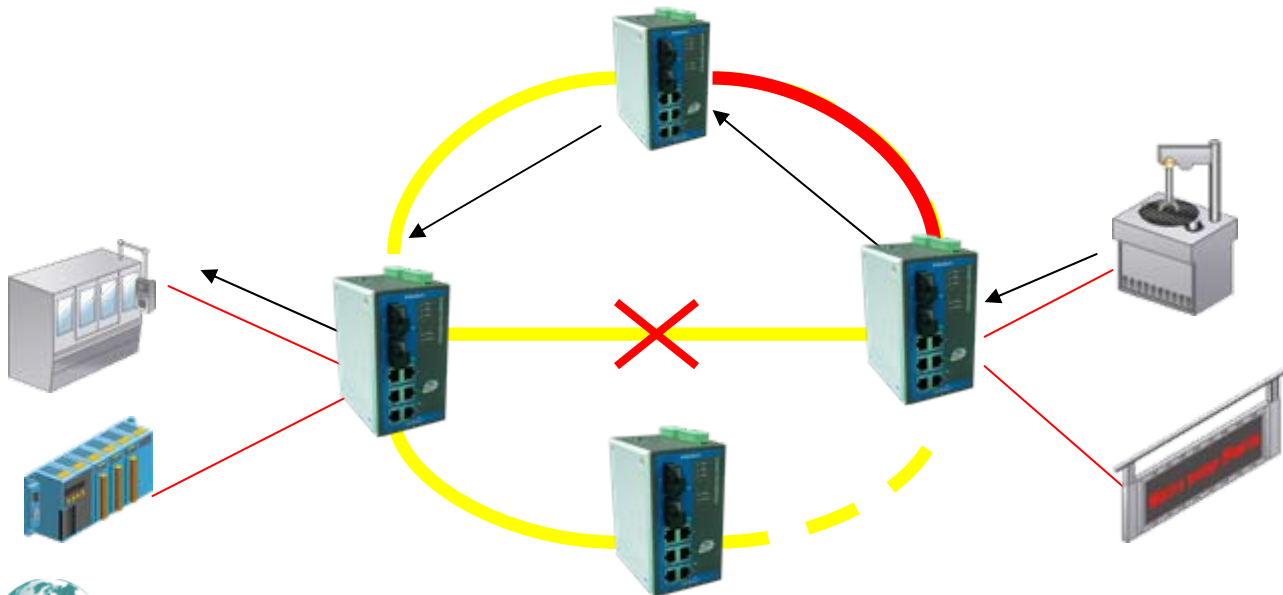
Spanning Tree Protocol (802.1D)

- An Ethernet standard that can solve network loops to provide redundant backup paths.
- Flexible Topology, recovery time > 30 sec.



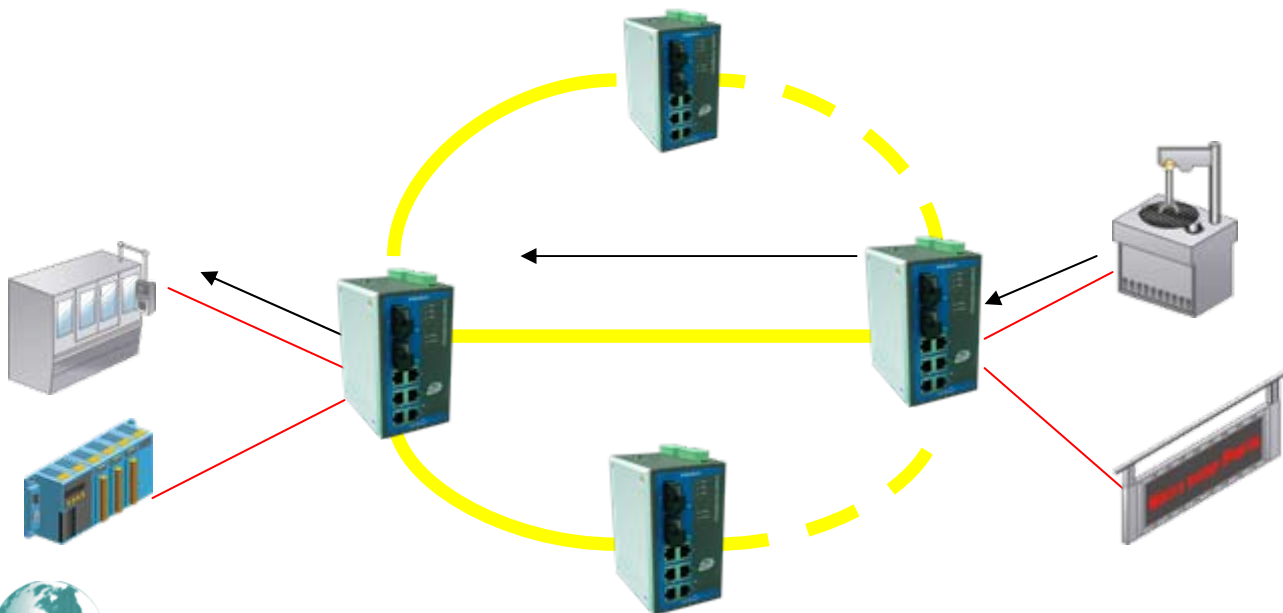
Spanning Tree Protocol (802.1D)

- If the primary path gets disconnected, a backup path is established.



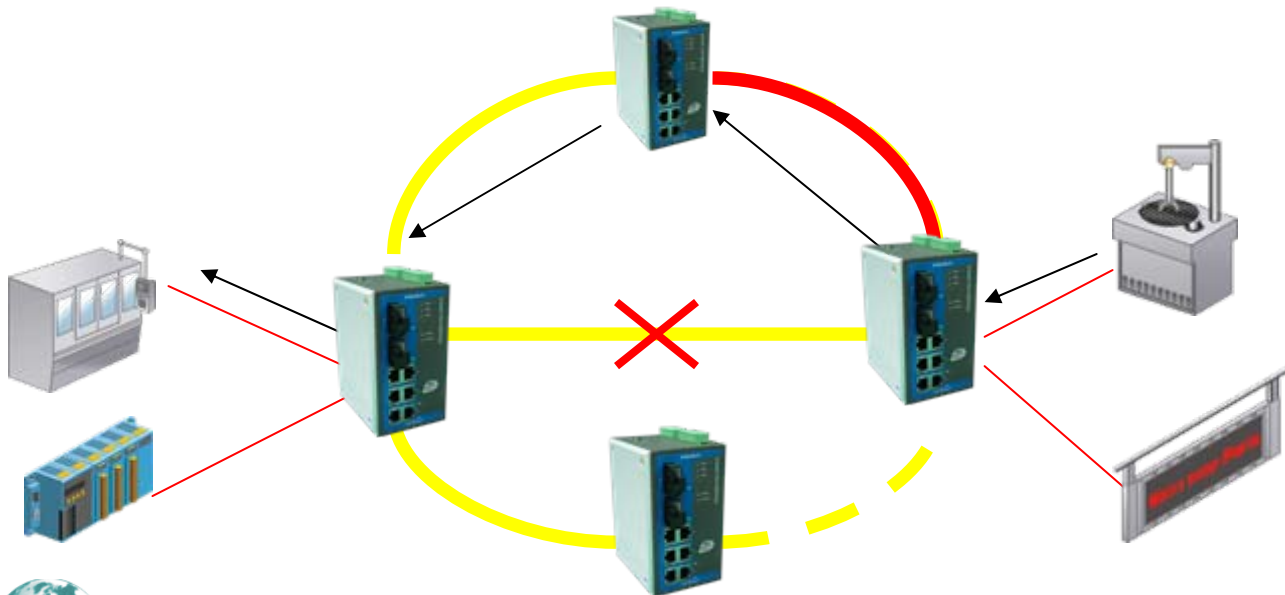
Rapid Spanning Tree Protocol (802.1w)

- An Ethernet standard that can solve network loops to provide redundant backup paths.
- Flexible Topology, recovery time > 5 sec.



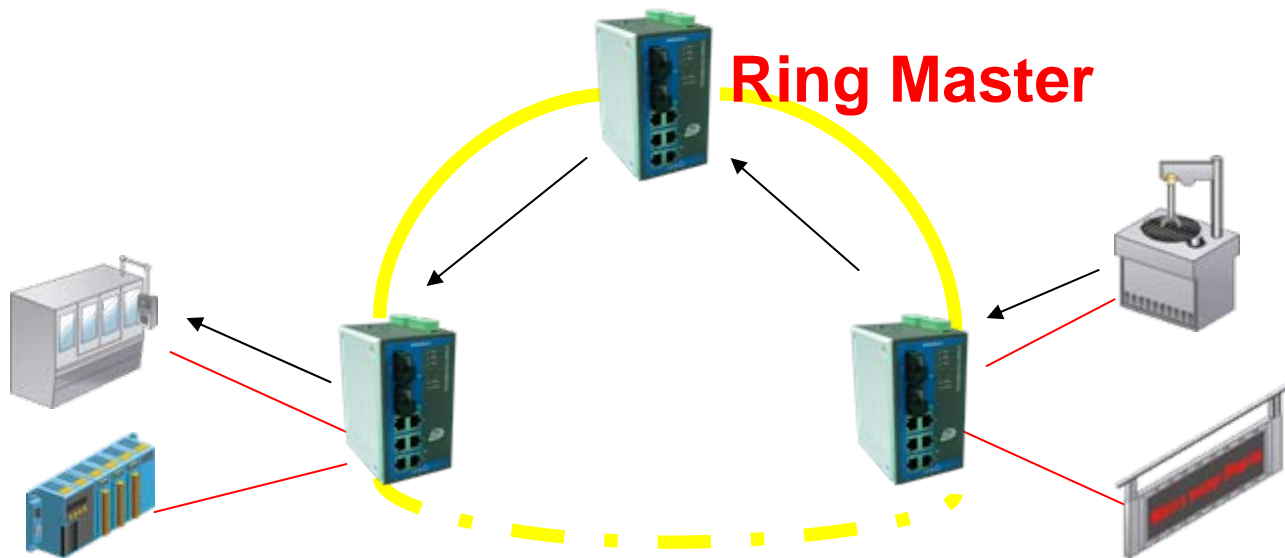
Rapid Spanning Tree Protocol (802.1w)

- If the primary path gets disconnected, a backup path is established.



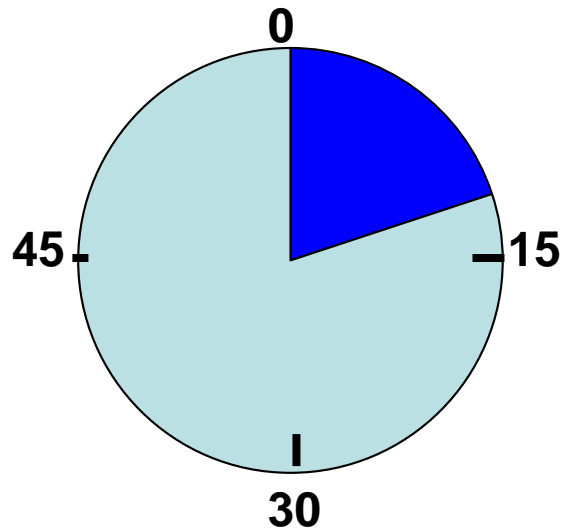
Turbo Ring

- Recovery time < 300 ms, to help control applications run without risk of media single-point-failure.
- Simple layout (ring topology), and one step set-up for very easy installation.



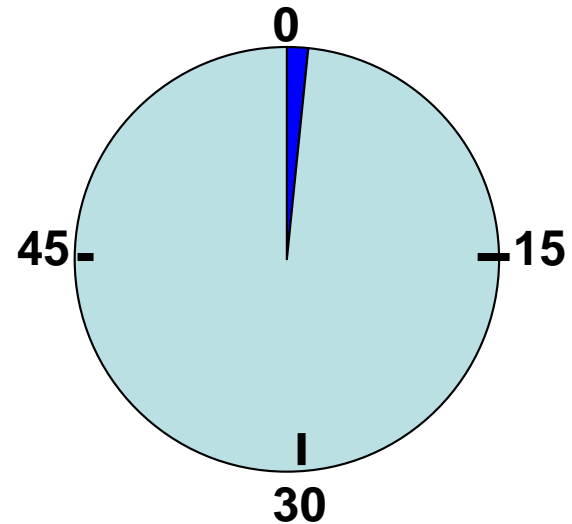
IEEE Standard Cannot Meet Mission Critical & High Speed Data Acquisition Applications

**Spanning Tree Algorithms
(802.1D / 802.1W)**



**Network Recovery
> 5 sec.**

**Fast Redundant Ring
(Moxa Turbo Ring)**



**Network Recovery
< 0.3 sec.**

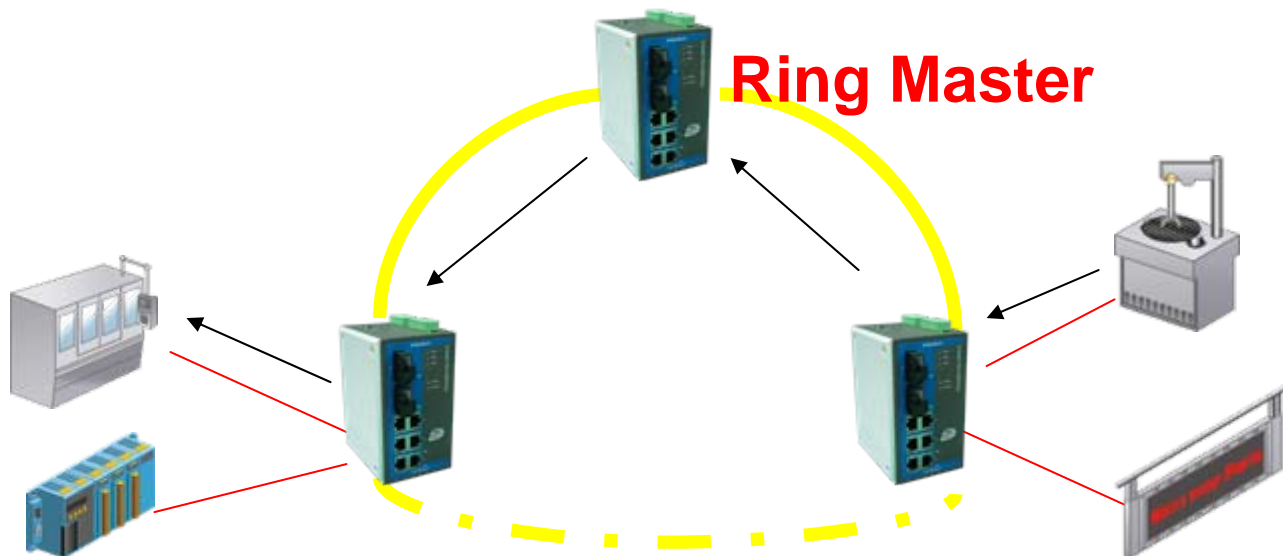


Moxa Redundant Solutions



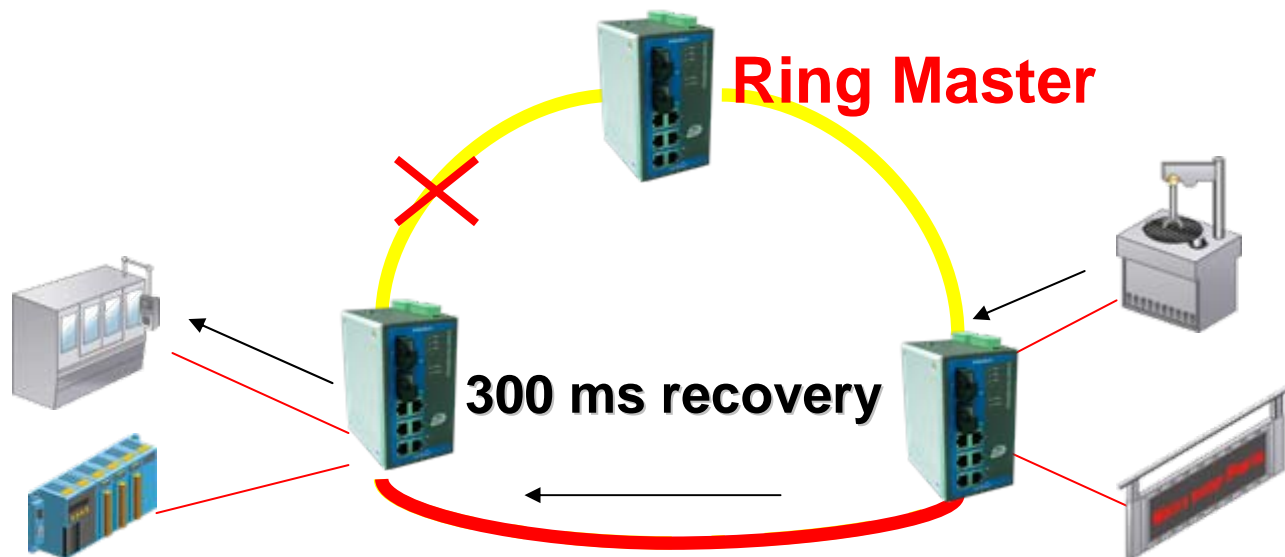
Turbo Ring Reduces Downtime

- Recovery time < 300 ms to help control applications run without risk of media single-point-failure



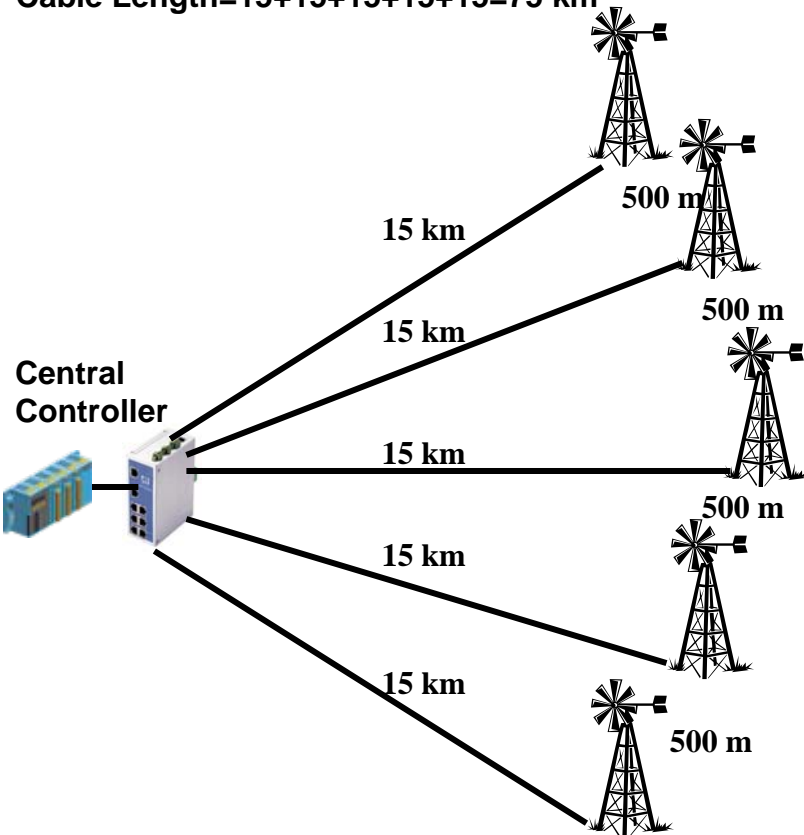
Turbo Ring Reduces Downtime

- Time is money!



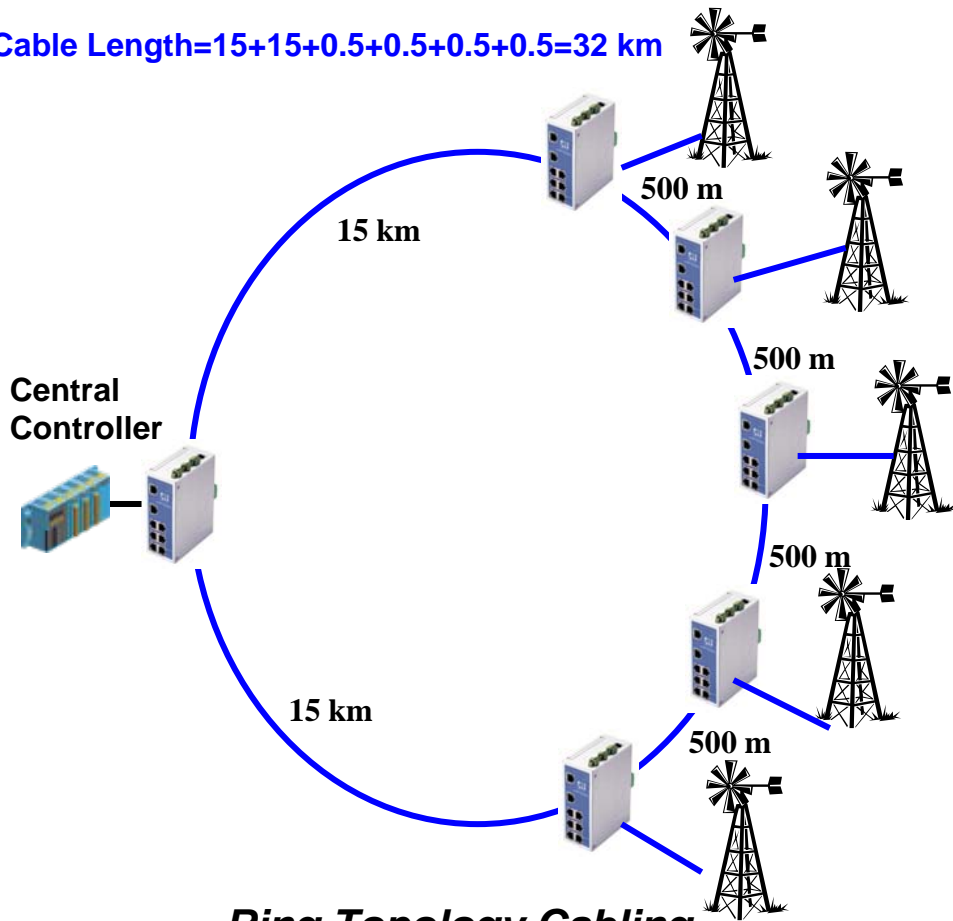
Turbo Ring Reduces Long Distance Cabling Cost

Cable Length=15+15+15+15+15=75 km



Star Topology Cabling

Cable Length=15+15+0.5+0.5+0.5+0.5=32 km



Ring Topology Cabling

