

Application Note

Line Redundancy Boosts Reliability and Survivability of Intraplex T1 and E1 Systems

Diverse routing

An effective method of ensuring network survivability is to provide two physically separate paths for the traffic so that if one path fails, the other path is still available and working.

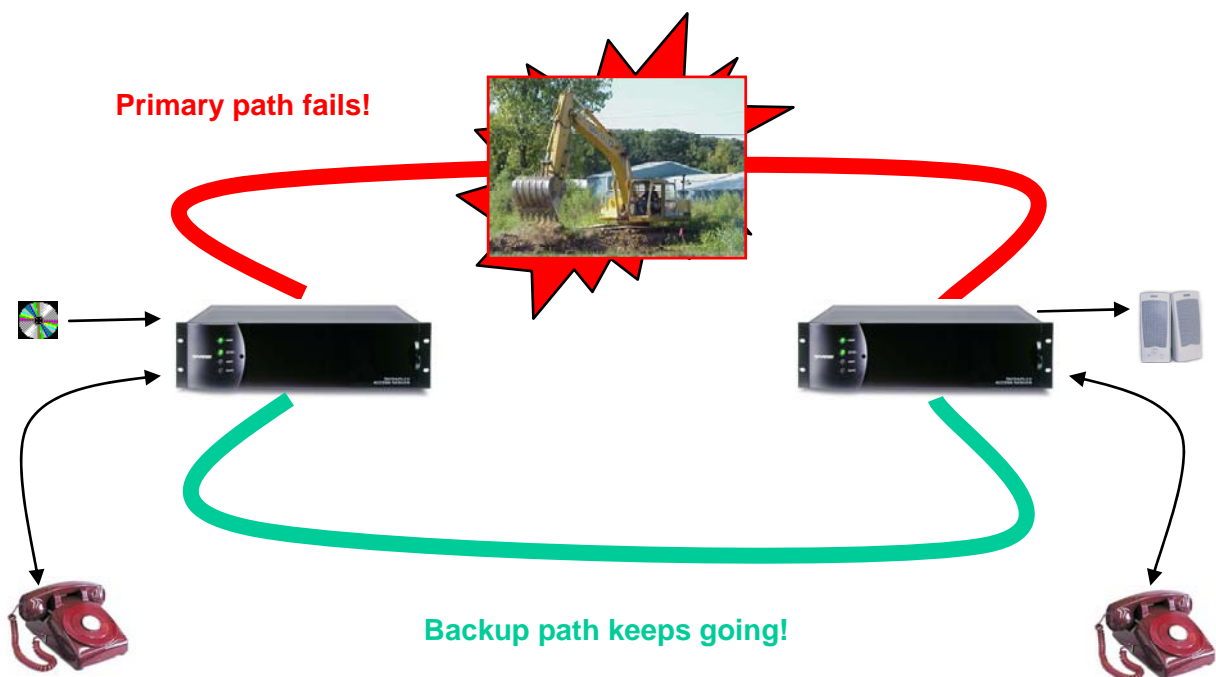
These two paths can simply be two T1 or E1 lines routed on different networks, or they can use entirely different transport technologies like copper, microwave, spread spectrum radio or optical fiber.

Line Redundancy

System reliability soars with the addition of a redundant T1 or E1 link. In the event of a T1 or E1 path failure, the backup path ensures that your traffic gets where it needs to go. The system stays up and alerts operators that corrective measures are needed.

Module Redundancy

A pair of fully redundant Common Modules and Module Adapters further assures the safety of your connections. In the unlikely event of a module failure, the backup module automatically takes over.



Product spotlight

Providing line redundancy with traditional multiplexers used to require buying and installing external line protection switching devices.

With the Intraplex CM-5RB (T1) or CM-7RB (E1) Common Modules and their Module Adapters, line and module redundancy can be implemented in Intraplex systems with plug-in ease.

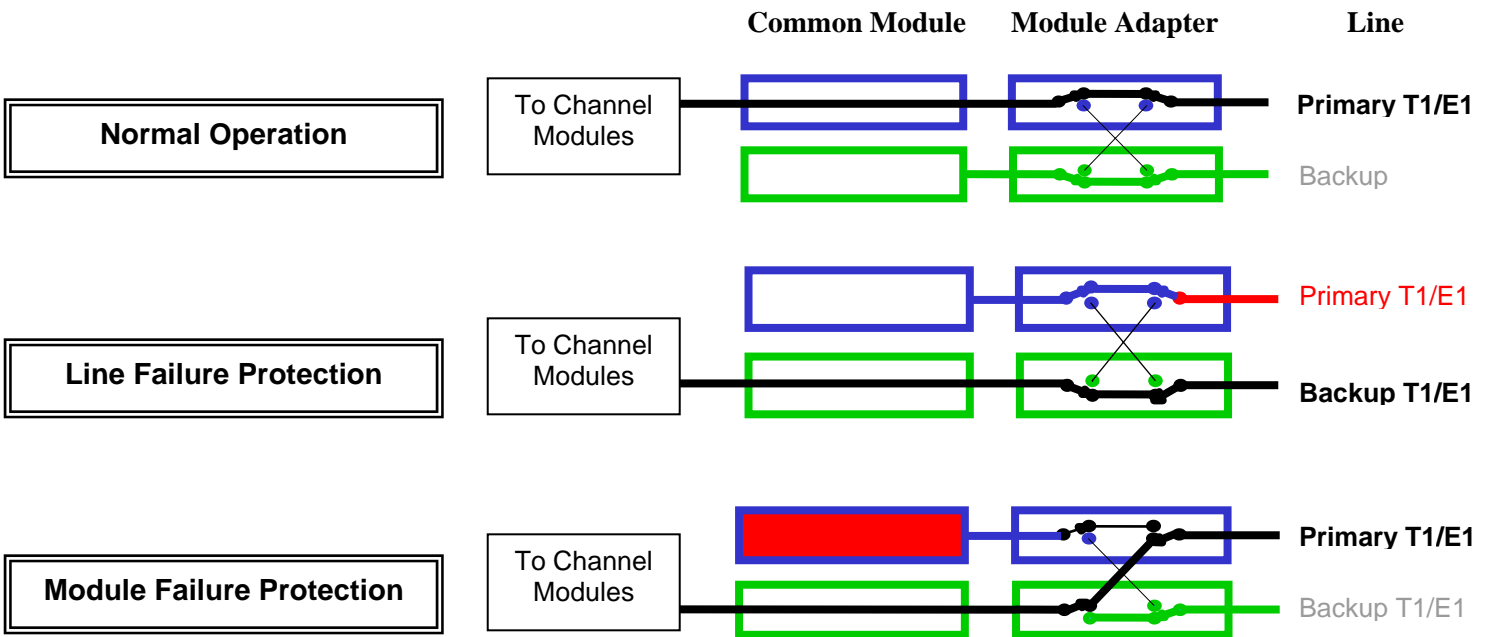
Redundancy modules are available for Intraplex Access Server, STL PLUS, AudioLink PLUS and STL HD systems.

Each T1 or E1 line in a redundant system is constantly monitored. If an event occurs causing the backup line to be in better condition than the primary line, a shelf alert is generated and a switch is made from the primary to the backup line after a user-definable delay. Switching only occurs if the backup line is in better condition than the primary line. A line switch can be manually forced either via the front panel switches or remotely.

The condition of each Common Module is also continually monitored. If one should fail, the backup module is immediately put into service and a shelf alert is issued.

Protection against failure of a Module Adapter is also provided, which operates in the same manner as line failure protection.

Operation can be configured for revertive or non-revertive switching. This can be set separately for line and for module redundancy. If revertive switching is selected for line redundancy, operation will return to the primary line after a user-programmable delay following the clearing of the failure condition. If non-revertive switching is selected no further switching is performed automatically until a subsequent failure occurs.



Upgrading an existing Intraplex system

To upgrade an existing Intraplex system for line redundancy, a pair of new CM-5RB Common Modules (for T1 systems) or CM-7RB Common Modules (for E1 systems), an MA-235-1 Module Adapter for the Primary line, an MA-235-2 Module Adapter for the Backup line and a CA-202 Module Adapter Interconnect Cable are needed.

Specifications are subject to change without notice. For a complete listing of the most current specifications, visit our Website at www.broadcast.harris.com.

