



TRIO
DATA COM

SmartPath™ Technology

K-Series and J-Series Spread Spectrum Data Radio

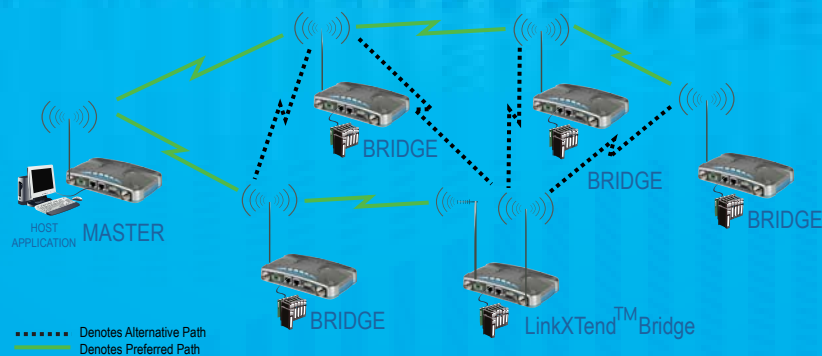
The advanced TRIO Datacom frequency hopping spread spectrum radios include a unique SmartPath™ feature to enhance connectivity and redundancy in both fixed and roaming applications.

SmartPath™ is a feature that allows these radios to identify and intelligently rectify a problem within a network with minimal interruption to the SCADA data flow. Where other Mesh applications constantly attempt to search for various paths (increasing bandwidth, latency and power consumption), SmartPath™ has been optimized to find an alternate path only when it is necessary to do so.

Optimized for SCADA and Telemetry systems, providing an ideal balance between connectivity, latency, bandwidth and system design effort.

Features:

- Enhances connectivity and redundancy in both fixed and roaming applications.
- Creates the ability for remotes (or bridges) to associate with multiple Access Points.
- Creates a MESH network topology with multiple radio link paths.
- Network topology re-configures only when required resulting in significantly lower network management overhead.
- Provides redundant 1+1 master (Access Point and Bridge) solutions.
- Requires little configuration.
- Full utilisation of all available over-the-air bandwidth.
- Optimizes radio path connectivity using a preferred/alternative arrangement.



The advanced technology behind the SmartPath™ feature provides a solution for a range of systems that include both fixed and roaming situations.

Point To MultiPoint systems

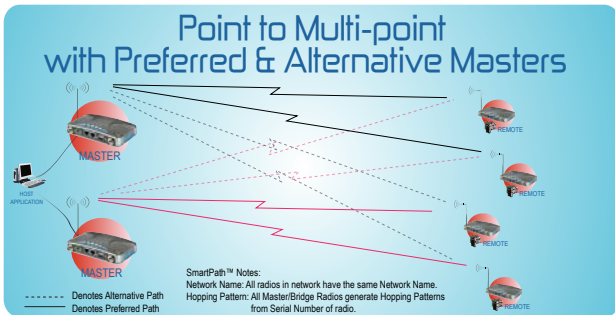
One Master (K Series) or Access Point (J Series) that communicates with several (many) remotes.

- Allows for the creation of redundant connection paths
- Ensures the network remains in the optimum or preferred topology.
- Reacquires alternative paths only when needed

SmartPath™ and Preferred/Alternative Masters

SmartPath™ allows system designers to create redundant connection paths that help to negate single point failures.

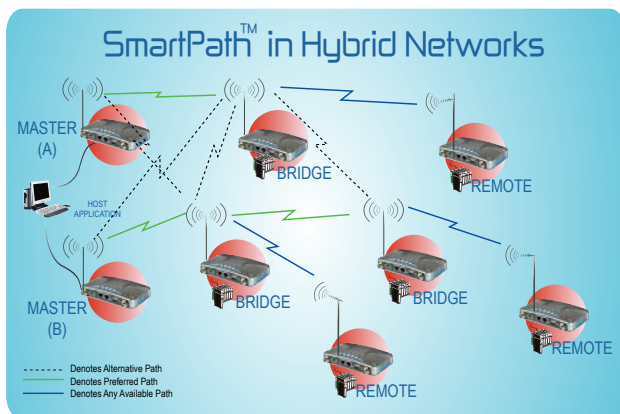
- Remote radios quickly re-synchronize to an alternative Master should the preferred Master no longer be accessible.
- When the preferred Master has been restored and is accessible, the network will resolve itself to match the preferred topology with a balance in the number of remotes associated with each Master.



SmartPath™ and Hybrid Networks

SmartPath™ allows the system designer additional flexibility to create a redundant backbone based on preferred and alternative paths while deploying remote radios where no configuration is required.

- Bridge radios are deployed to provide overlapping RF coverage which would allow a remote to have two possible paths to a Master.
- There is no limit to the number of possible Masters (or Bridges) a Remote radio can associate with.
- Remotes are Configurationless.



SmartPath™ and Roaming Remote

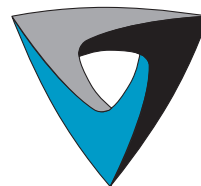
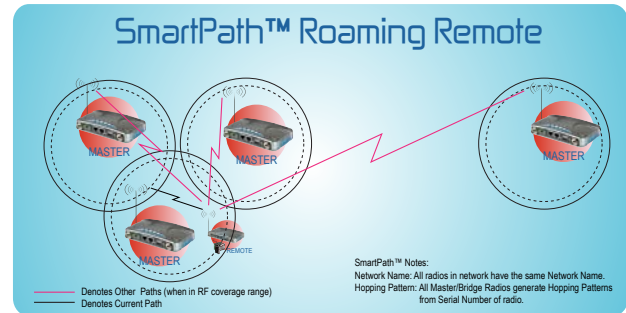
SmartPath™ allows for the design of networks that require roaming Remote radios.

- Remote is typically installed on a moving vehicle or object
- Master radios are installed at key locations
- Roaming remote radio will associate with any available Master it can find that has the appropriate network name.

RSSI Threshold and Roaming Remotes

SmartPath™ (RSSI) also includes a facility to qualify synchronisation to a master based on a user defined minimum received signal strength threshold.

- Prevents excessive Master hand-overs due to inadequate RF signal strength.
- Several Masters can be positioned together to provide overlapping coverage.
- Monitors the received RSSI from the currently synchronised Master.
- The Remote radio will drop synchronisation with the current Master and look for another Master.



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