

# Pathway

## Pathway

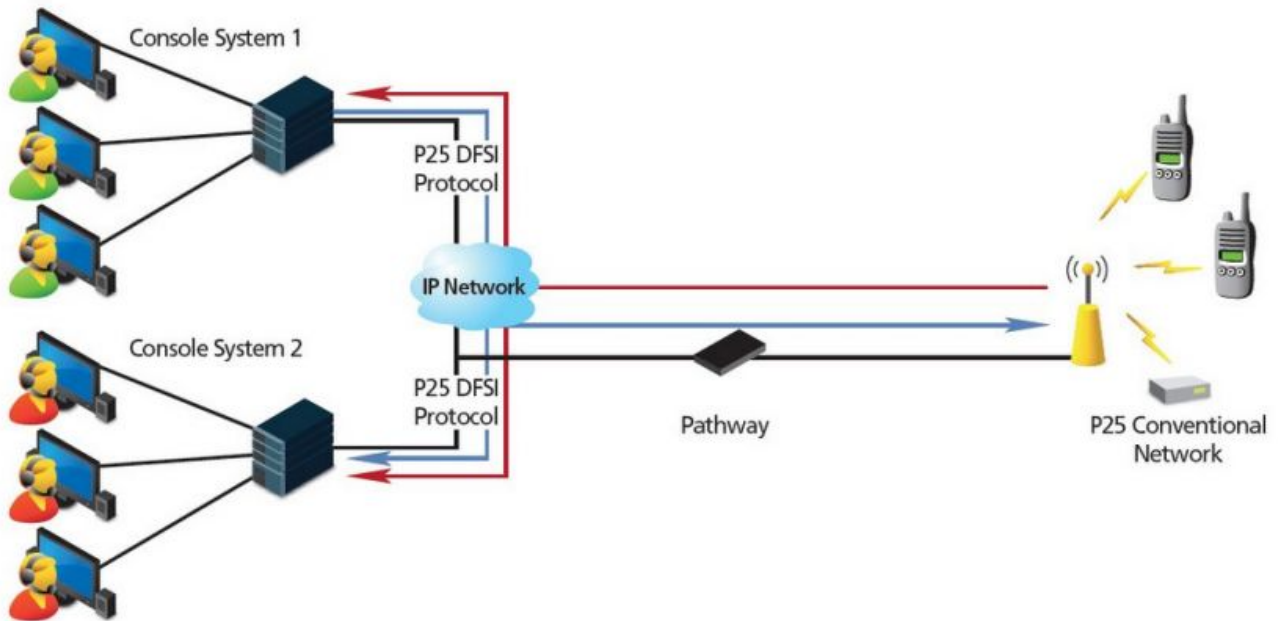


The Pathway product has been designed to allow connection of up to four control stations or console systems to a single Pathway device using the TIA P25 Digital Fixed Station Interface (DFSI) protocol. Pathway in turn connects to a single DFSI capable base station allowing each controlling station or console system to be able to use this single fixed station the same time. Pathway acts as a DFSI proxy in this instance directing appropriate messages and handling message conflicts. All normal voice and data call functions are possible using Pathway. Pathway also provides the ability to pass state information back to each controller if one of these were to change the state of the fixed station. This is handy for functions such as Channel Change, Squelch Enable and Repeat mode functions where there would normally only be an acknowledgement response back to the requesting party and thus allowing the other controllers to effectively remain synchronised with the state of the fixed station. Pathway achieves this by introducing a manufacturer specific message using the portion of the DFSI protocol assigned to such messages. This allows the unit to maintain a standards based interface approach and still provide the necessary state information that the controllers may require. Pathway provides three LAN interfaces, one dedicated to the fixed station interface and the other two available for additional network resilience when connecting up to any number of the four available controller stations/console systems.

### Product Features and Configuration

- ✓ Allows up to four DFSI enabled controllers/console systems to communicate to a single DFSI base station
- ✓ Uses standards based TIA P25 Digital Fixed Station Interface protocol for normal operation
- ✓ Works with any manufacturer's dispatch console that is compliant with the TIA P25 DFSI open standard
- ✓ Has the capability to send updated state information to the controller/console systems whenever one of those systems changes the fixed station state
- ✓ Easy to use web based configuration

### SYSTEM DIAGRAM



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### SPECIFICATIONS

Physical Dimensions		Network Requirements	
Rackmount:	Height 1.75 inches (44.4 mm), 1 rack unit Width 19 inches (482.6 mm) Depth 10 inches (254 mm)	Device Payload:	1 Kbps idle, 130 Kbps active
Stand-alone:	Height 1.25 inches (31.75 mm) Width 7.5 inches (190.5 mm) Depth 10 inches (254 mm)	Payload to Bandwidth ratio:	< 40% (< 30% mission critical). Bandwidth Ratio of IP bearer should be 2 to 3 times actual payload to ensure optimum voice quality
		Packet Loss:	< 5% (<0.1% mission critical)
Power and Environmental Characteristics	Power Input: +13.5Vdc (+10.5 to +16Vdc) Max. Power Draw: 500mA at 10.5Vdc Operating Temp.: 5° to 55°C (41°-131°F)	Packet Delay:	< 500 ms (< 40 ms mission critical)
		Packet Jitter:	< 1000 ms (< 20 ms mission critical)
		Network Type:	Fully switched Ethernet, full-duplex, capable of passing unicast UDP. Sharing the network with other IP traffic may negatively impact voice quality and therefore should not be considered for mission-critical applications

### Pathway - Digital Fixed Station Interface