DYNETCOM

Mark II Dynaswitch®-HSB

MK II Dynaswitch® - HSB

- ***Automatic Redundancy Sparing—Full Redundancy of all Ports***
- ***Independent Lead Status Detection***
- ***Full Lead Status Visibility, Local or Remote***
- ***Manual Control Override***
- ***Rotating Spare—Facilitate Line Management***
- ***Full Reporting to DCC of Alarm and Switching Detection***
- ***Backup Router Instantly and Transparently Assumes the Load of Main Router***

Redundant Router Application

Provides full port by port redundancy utilizing Dynetcom's in-house fallback switching technology, the Dynaswitch—HSB and the Dynetcom Control Console (DCC) Controller or IP Management (with the Marc 12).

Integral detection circuitry identifies faulty ports based upon user predefined alarm conditions, including line activity/inactivity, or external watch dog input from the router.

Front panel LEDs on, Dynaswitch®—HSB complement, the status indicators of the router by providing additional lead status information for V.24, V.35, and X.21 interfaces. Lead status can be viewed from the front panel locally or remotely through the Dynetcom Control Console (DCC) or IP management screen remotely.

Hot Spare Redundancy

The type of redundancy being discussed here is hot spare redundancy where there is a 1:1 provision of spare router to main router. In this situation only one router will be attached to the Ethernet backbone at any given time thus both of the routers must have identical MAC and IP addresses as well as port configurations. In the event of failure of the primary unit, the spare unit will be switched on-line replacing both the WAN and LAN connections. The identical MAC addresses allows a completely transparent switch from primary to space and thus minimize any impact on the end user.

If the space router is connected permanently to the Ethernet backbone it would have a different MAC address. When a switchover occurs all LAN attached devices continue to associate the remote IP addresses with the MAC address of the primary router. This continues until the internal ARP table in each LAN device expires at which point each device would correctly resolve the IP address with the MAC address of the spare unit using the ARP protocol. Consequently, in hot sparing applications it is preferable to have identical MAC addresses, which permit fast and transparent switchover from primary to spare.

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Switchover

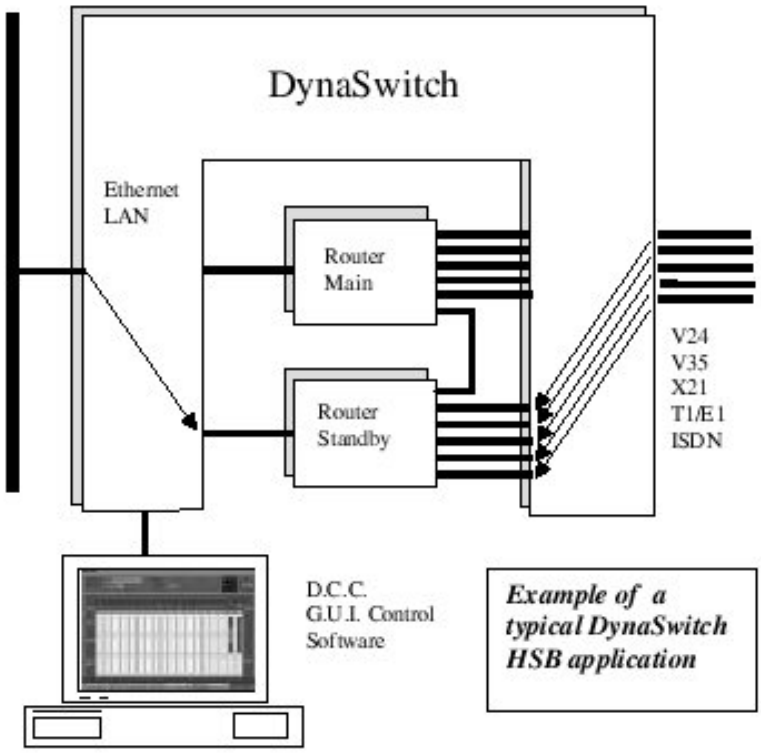
DCC and the Marc 12 have the facility to cause a command to switch upon detection of a predefined alarm condition. For example, this alarm can comprise lack of transmit data on any line such as permanent mark or space. Since the WAN from a communications processor is likely to be X.25, Frame Relay or synchronous PPP, there would either be data or for idle line condition there would be flag (hex 7E). The absence of either would suggest a fault condition in the router. Additionally, the absence of DTR from the router would also serve as further evidence of failure. If the router also has a watch dog output, as present in some routers, this can also be used to regard on router as main and the other as standby. The can be used on a rotating spare basis. Upon detection of the alarm condition and automatic switchover, the alarm condition will be reported to the DCC or the user will receive an email alert (Marc 12), alerting the operator that a switchover has taken place.

Specifications

Power:
85-250 VAC RMS at 50-60 Hz
Typically 40 watts 85 BTU/Hr

Physical:
19" (485 mm) W x 5.25" (133 mm) H x 9.5" (241 mm) D
Weight: 11 Kg (full rack)

Connectors:
Control—D37F DynaBuss chain, DB25F MARC 10/11 input
Alarm—1 x DB25F 1 x DB25M (option)
MCI—DB25F (option)
Channel Cards—DCE=DB25M DTE=DB25F



Example of a typical DynaSwitch HSB application

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Specifications subject to change without notice