

MTM4 Communications to shore reliability for diagnostics and position data

Failure mode	Baseline system design	Second Globalstar on secondary MMC RFIO
Globalstar hardware failure	Comms fail	Comms switch over and OK
Globalstar cable failure	Comms fail	Comms switch over and OK
RFIO card failure	Comms fail	Comms switch over and OK
Power supply 12 Volt converter failure	Comms, MMC fail	Comms, MMC fail
Primary MMC 5V supply failure	Comms, MMC fail	Comms switch over and OK
Primary SideARM hardware failure	Comms, MMC fail	Comms switch over and OK
Primary SideARM software failure	Comms, MMC fail	Comms switch over and OK
Primary node Medusa failure	Comms OK, lose all other nodes	Comms OK, lose all subsea nodes
Secondary node Medusa failure	Comms OK, lose secondary node, diagnose thru secondary console port?	Comms OK, might be able to diagnose problem

Failure mode	System Response
Globalstar hardware failure	Secondary communications routine, dials portal and establishes a terminal connection.
Globalstar cable failure	Secondary communications routine, dials portal and establishes a terminal connection.
RFIO card failure	Secondary communications routine, dials portal and establishes a terminal connection.
Power supply 12 Volt converter failure	Comms, MMC fail
Primary MMC 5V supply failure	Secondary communications routine, dials portal and establishes a terminal connection.
Primary SideARM hardware failure	Secondary communications routine, dials portal and establishes a terminal connection.
Primary SideARM software failure	Secondary communications routine, dials portal and establishes a terminal connection.
Primary node Medusa failure	Comms OK, lose all subsea nodes
Secondary node Medusa failure	Comms OK, might be able to diagnose problem through console port.