SDM-6000 & SDM-8000 Compatibility with Redundancy Switches

COMTECH EF DATA™

Application Note

Overview

The SDM-6000 Satellite Modem is a low-cost alternative to the SDM-8000 Satellite Modem. The SDM-8000 supports additional remote control parameters and higher data rates than the SDM-6000; therefore, the SDM-6000 is not a replacement for the SDM-8000.

Minor complications can occur in establishing a redundant switch system when the Prime and Backup modems are not the same model number and equal in capability. The Comtech EFData redundancy switches, such as the SMS-658, SMS-758, and SMS-7000, use the remote control parameters in each of the Prime and Backup modems for controlling the Backup modem in the event of a Prime modem failure. Prior to the Backup modem being placed 'ON-LINE' for a failed Prime modem, the switch will verify the backup modem can fully protect the failed Prime modem. If there is a failure to communicate with the Backup modem, or the capability of the Backup modem does not equal or exceed that of the Prime, the switch will declare an alarm and not switch the Backup modem 'ON-LINE'.

Since the initial release of the SDM-8000, Comtech EFData has created additional tools within the 'UTILITY - MODEM TYPE' menu in most of the modem products that will allow various combinations of modems to be mixed within a redundancy switch system. These tools include:

- The REV EMULATION menu – used by any new Prime modems to emulate previous firmware revisions so that the operating parameters of the Backup modem can be matched. This is helpful because the operator can add to an existing redundancy system without disrupting the current setup.

- The MODEM TYPE COMPATIBILITY menu – used to add, for example, an SDM-8000 as a Prime modem into a redundant switch system with an SDM-308 or -309 serving as Backup modem. Care must be taken in this situation, because not all of the SDM-308 and -309 versions are supported. In the modem installation and operation manual, refer to the Configuration chapter and the Modem Emulation section for information on the specific versions of each product that the MODEM TYPE COMPATIBILITY function will support.

Comtech EFData Recommendations

As stated above, the SDM-8000 supports additional remote control parameters and higher data rates than the SDM-6000. In a redundancy switch system with a mix of SDM-6000 and -8000 modems, the SDM-8000 must be installed as the Backup modem. Additionally, compatibility between the various modems' software versions must be evaluated. Use the following chart to assist in evaluating the modem software versions:

Compatibility Chart

SDM-8000 Backup	SDM-6000 Prime	Compatibility
9.x.x and below	All versions	Not compatible.
10.x.x	All versions	Will not support ASYNC. Will not support D&I or IBS unless the backup has an Interface Relay Card installed.
11.x.x and 12.x.x	All versions	Will not support D&I or IBS unless the backup has an Interface Relay Card installed.
13.x.x and above	2.x.x and above	Compatible.

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