

Application Brief

V.34 Dial Backup

Dial Backup for Mission Critical Network Connections

Dial Backup is a mandatory requirement in many applications. GDC's SpectraComm V.34 DBU (SC V34 DBU) provides Dial Backup and Dial Restoral for the SpectraComm 521A and SpectraComm 500A DSUs, as well as for the SpectraComm 202 or other private line modems equipped with an RS-232 interface.

Highlights:

- NEBS Level III Compliant
- Provides DBU of point-to-point and multipoint circuits
- Supports both manual and automatic operation
- External, Hot Swappable Unit
- Data Rates to 128 kbps async and 64 kbps sync
- Auto Dialing: TIA/EIA 602 Standard AT and ITU-T V.25bis commands
- Steadfast Security®
- Synchronous Data Compression
- Error Correction and Compression: V.42, V.42bis, MNP 1-5, MNP-10 for cellular operations

The Advantages of External Vs. Integral Modems

Many manufacturer's build DBU functionality directly into their DSUs. Although this reduces the cost per installation, it creates a major disadvantage when the DSU fails, the entire unit becomes a single point of failure and must be removed for repair or replacement.

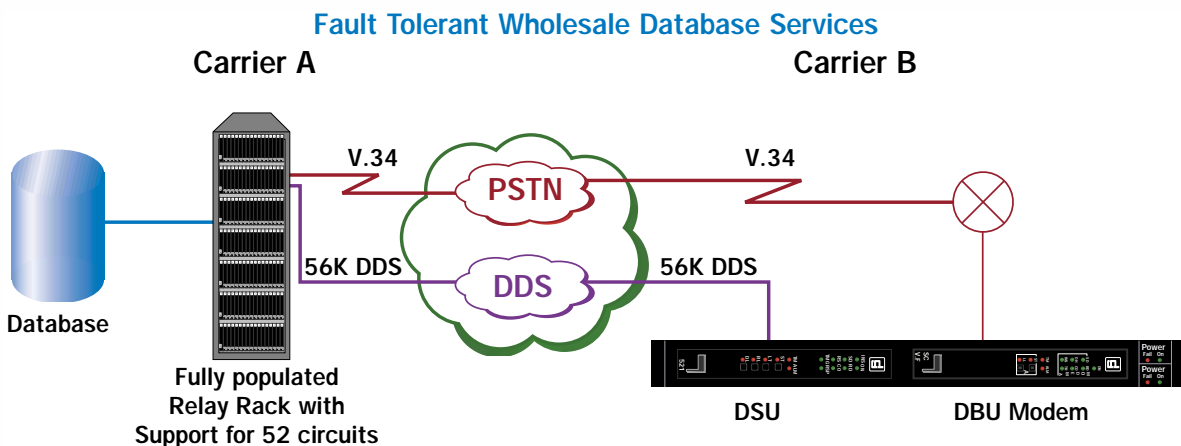
Because GDC's design combines a DSU with a separate DBU modem, it enables network operators to remove the DSU

from the shelf without interrupting the DBU operations. Further, GDC's V.34 DBU modem delivers comprehensive network management through TEAM® software, as well as Steadfast Security® protection for secure DBU operation. The separation of the DBU offers added flexibility as they are deployed in 1 x N versus 1 x 1 configurations.

Both Dial Backup and Automatic Dial Restoral Operations

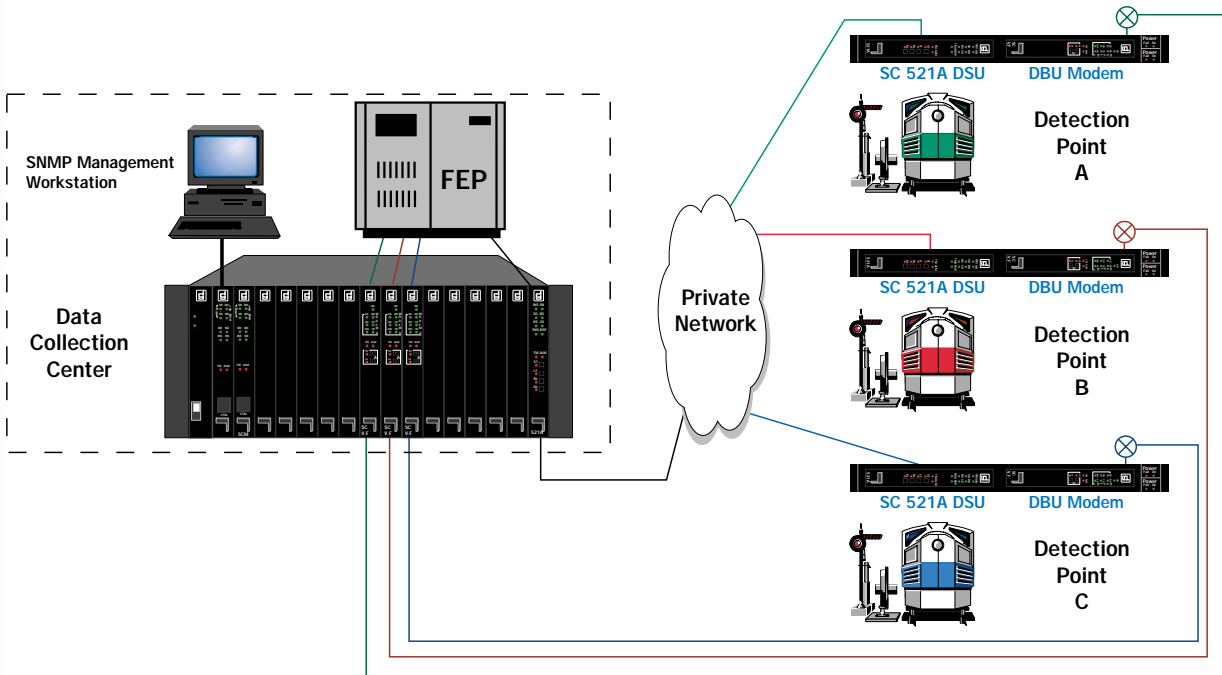
In Dial Backup, the master site V.34 modem — under TEAM® management or manual intervention — calls the remote V.34 DBU. The remote V.34 answers the call and, when the optional security is complete, the modem switches the DTE to the DBU mode. When the master site determines the DBU is no longer needed, the master V.34 modem is sent a command to drop the call and the DBU modem returns control to the primary data set. Dial Backup operation is preferred in a network-managed application where manual intervention may be desired.

In Automatic Dial Restoral operation, the DBU card monitors the data set DCE lead to determine if it should automatically initiate a dial backup call. In this scenario, the V.34 DBU modem is configured to monitor the DSU. When the DSU fails, the V.34 DBU modem will enter Auto Dial Restoral mode. The master site V.34 calls the remote V.34 DBU, which answers the call with Steadfast Security®, ensuring only valid calls are accepted. While the circuit is in Auto Dial Restoral, the DBU feature monitors the primary data set. When the primary data set comes back in service, the DBU automatically restores the primary circuit.



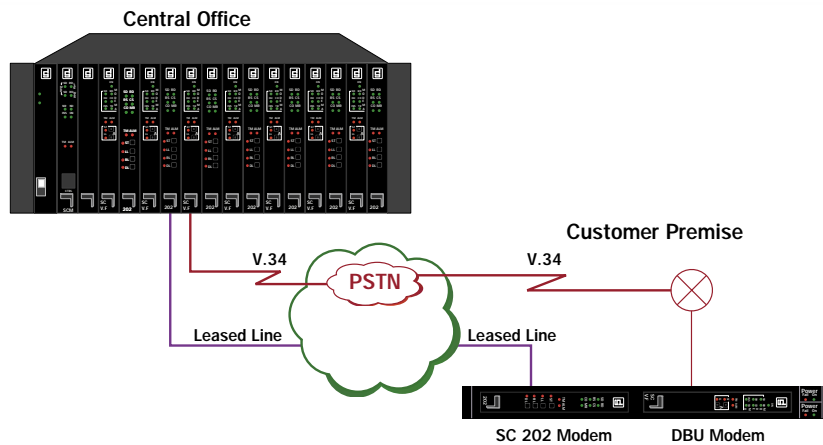
Carrier A generates revenue by allowing other carriers to connect to their database for purposes of calling card verification, validating interconnect agreements for particular subscribers between carriers, and for general wholesale use of Carrier A's database. GDC's DBU solutions keep that money making Operations Systems Support (OSS) network connection up and running at all times.

Mission Critical Multipoint Leased Line connections with Dial Backup and SNMP Management



The mission critical functions of a railway — such as traffic monitoring and switching stations — require Dial Backup functions. If a DSU responsible for monitoring either the location of the trains or controlling the switches were to fail, a collision could occur. The same equipment can be deployed to gather information at subway turnstiles about revenues and ridership.

Point-to-Point Analog Leased Line connections with Auto Dial Restoral, Non-Managed



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