

### TRANSMIT KEY LINE

#### Feature Description

The 950mp is an extremely compact and lightweight board designed to be easily integrated into portable VSAT terminals. Its reduced size and weight allow the 950mp to be incorporated into units that can be easily transported by a single person or mobile vehicle, making it ideal for Communications-on-the-Move (COTM), emergency response, and for command and control applications in the field.

Maintaining satellite communications is often a critical requirement of 950mp terminals in which the only available power comes from batteries or from a small generator with limited fuel. This makes power conservation crucial to the success of the mission. Since the biggest power requirement of a satellite terminal comes from the BUC, the Transmit Key Line feature is designed to allow the terminal to conserve power by turning off the BUC PA when the 950mp is not transmitting. This significantly increases the amount of time the terminal is on line.

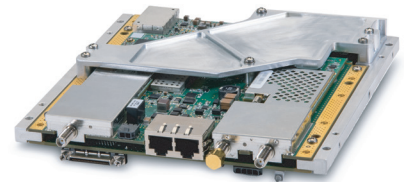
#### How It Works

The Transmit Key Line feature uses a differential RS-422 compatible signal to the BUC from the I/O connector on the 950mp. This signal can be used to turn on the BUC PA prior to transmitting and turn off back off when the transmission is complete. The 950mp has to be integrated with a BUC that supports the Key Line signal to take advantage of this capability.

By default, the Transmit Key Line feature is disabled for the 950mp. This state keeps the Key Line signal set to indicate the BUC should always be enabled. When service providers enable Transmit Key Line, they must also enter a BUC PA warm up time between 0 and 1,700 microseconds ( $\mu$ s). This represents the minimum amount of time prior to transmitting that the modem will raise the Key Line signal.

The Network Management System (NMS) converts the warm up time entered on the Remote VSAT tab to a number of slots before sending the configuration to the modem in the remote-side options file.

For example, if the BUC warm up time is 500  $\mu$ s and the slot time is 300  $\mu$ s, then the BUC warm up sent to the remote will be 2 slots. The remote will raise the Key Line signal two slot times (600  $\mu$ s) before the scheduled burst time.



The iDirect Transmit Key Line feature enables the 950mp, as well as the other 9-Series Satellite Routers, to conserve power by turning off the Block Up-Converter Power Amplifier (BUC PA) on a burst by burst basis.

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***“The 950mp, along with all the 9-Series Satellite Routers, utilizes Transmit Key Line for power savings.”***

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