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5000805 RTS MONITOR BOARD and 5100743-ABB CONTROLLER CARD



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5000805 RTS Monitor Board Specifications

Inputs:	(1) System A RS232 COM1 Input, (1) System B RS232 COM1 Input – all 9 leads supported
Outputs:	(1) System A RS232 COM1 Output, (1) System B RS232 COM1 Output – all 9 leads supported (1) R6000 Switch Control Output
Connectors:	(4) DB9 female – System A & B Inputs/Outputs (1) RJ12C – R6000 Switch Control Output
Power	provided by R6000 Switch Rack
Size	4U high. uses 2 card slots in R6000 Switch Rack
Weight	1 lb. (2.2 kg)

5100743-ABB Controller Card Specifications

Inputs:	(1) Dual RJ11 connector for GANG IN/GANG OUT, (1) Front Panel Keylock Switch , (1) Front Panel A/B Toggle Switch, (1) Front Panel System Pushbutton Switch
Outputs:	(2) Two Position Pluggable Terminal Blocks for Power Supply Status
Power:	Two 100-240 VAC input, 12 VDC output Power Supply Modules for Redundant Power
Size	4U high
Weight	1 lb. (2.2 kg)

Introduction

The 5000805 RTS Monitor Board is a special purpose card designed for use with the 5100743-ABB Custom Controller Card in a R6000 Switch Rack. The RTS Monitor Board allows all of the A/B Switch Cards in an R6000 Switch Rack to be controlled by the RTS leads from the RS232 COM port of a primary host system and from the COM port of a backup host system. All 9 RS232 leads from the primary host system and all 9 RS232 leads from the backup host system are passed straight through the RTS Monitor Board, except pin 7 - RTS. Pin 7 is also passed through the RTS Monitor Board, but as a re-driven signal i.e. it goes into an RS232 receiver IC whose output connects to both the RTS monitoring circuitry, and to an RS232 driver IC where it is retransmitted back out the RTS Monitor Board.

The RTS Monitor Board continuously monitors the status of RTS from the attached primary host system and from the attached backup host system. If RTS from the backup host system is asserted (goes high) while RTS from the primary host system is inactive (is low), the RTS Monitor Board will generate a signal on its Control output connector. This signal is used to drive the Gang In connection on the 5100743-ABB Custom Controller Card which causes the R6000 Controller Card to switch all the switch cards that are installed in the rack to the “B” state (port B on each A/B Switch Card will be connected to the Common port on that A/B Switch Card). Any other combination of RTS signal states from the primary and backup host systems will cause the RTS Monitor Board to generate an output that signals the Controller Card to switch all the installed A/B Switch Cards to the “A” state (port A on each A/B Switch Card will be connected to the Common port on that A/B Switch Card). Note that if the Keylock Switch on the 5100743-ABB Custom Controller Card is set to the “Enabled” position, then the front panel toggle switches on the controller card and on the installed A/B switch cards can be used to control the connection state of the A/B switch cards, and the control signal received from the RTS Monitor Board is disabled.

Configuration

Remove power from the R6000 Switch Rack before adding or removing any cards from the rack. Install the RTS Monitor Board in any two adjacent slots in the R6000 Switch Rack. At this time, also install the 5100743-ABB Controller Card and as many A/B Switch Cards in the R6000 Switch Rack as are required for your application.

Once all cards are installed in the R6000 Switch Rack, the rack should be powered up and all the switch cards should be switched to the “B” state and then back to the “A” state to ensure that all the relays on each switch card are in a known position before attaching any devices to the A/B Switch Cards in the R6000 Switch Rack. This can be done by applying power to the R6000 Switch Rack and turning the keylock switch on the Controller Card to the “ON” (enable) position. Then toggle the “A B Gang” switch on the Controller Card to the “B” position, and then back to the “A” position. The status LED on each switch card should now show that it is in the “A” position.

Using an RJ11 crossover cable, connect the Control output connector on the RTS Monitor Board to the Gang In connector on the Controller Card. Note when using the 5100743-ABB Controller Card, the Control signal output from the RTS Monitor Card can be disabled by using the keylock switch on the front panel of the R6000 Switch Rack. Therefore, the keylock switch on the 5100743-ABB Controller Card should be set to the “OFF” (disable) position once the RTS Monitor Card’s Control output is connected to the Gang In connector on the Controller Card. This will prevent the toggle switches on the Controller Card and on each A/B Switch Card from accidentally being activated, and will allow the RTS Monitor Board to control the connection state of all switch cards installed in the chassis.

Using a straight through RS232M cable, connect COM1 from the primary host system to the “A IN” DB9F connector on the RTS Monitor Board. Likewise, connect COM1 from the backup host system to the “B IN” DB9F connector on the RTS Monitor Board.

Using a straight through RS232M cable, connect the “A OUT” DB9F connector on the RTS Monitor Board to the A port on one of the DB9 A/B Switch Cards installed in the R6000 Switch Rack. Likewise, connect the “B OUT” DB9F connector on the RTS Monitor Board to the B port on the same DB9 A/B Switch Card. Connect the RS232 device you wish to share between the primary host system and the backup host system to the COMMON port on the DB9 A/B Switch Card.

Additional A/B Switch Cards can be installed in the R6000 Switch Rack to allow other devices to be switched under the control of the RTS Monitor Board. The system is now fully configured and ready for use.

Operating the R6000 System in manual mode

The R6000 Switch Rack with RTS Monitor Board and 5100743-ABB Controller Card installed can be operated manually. Manual operation over-rides automatic operation by the RTS Monitor Card.

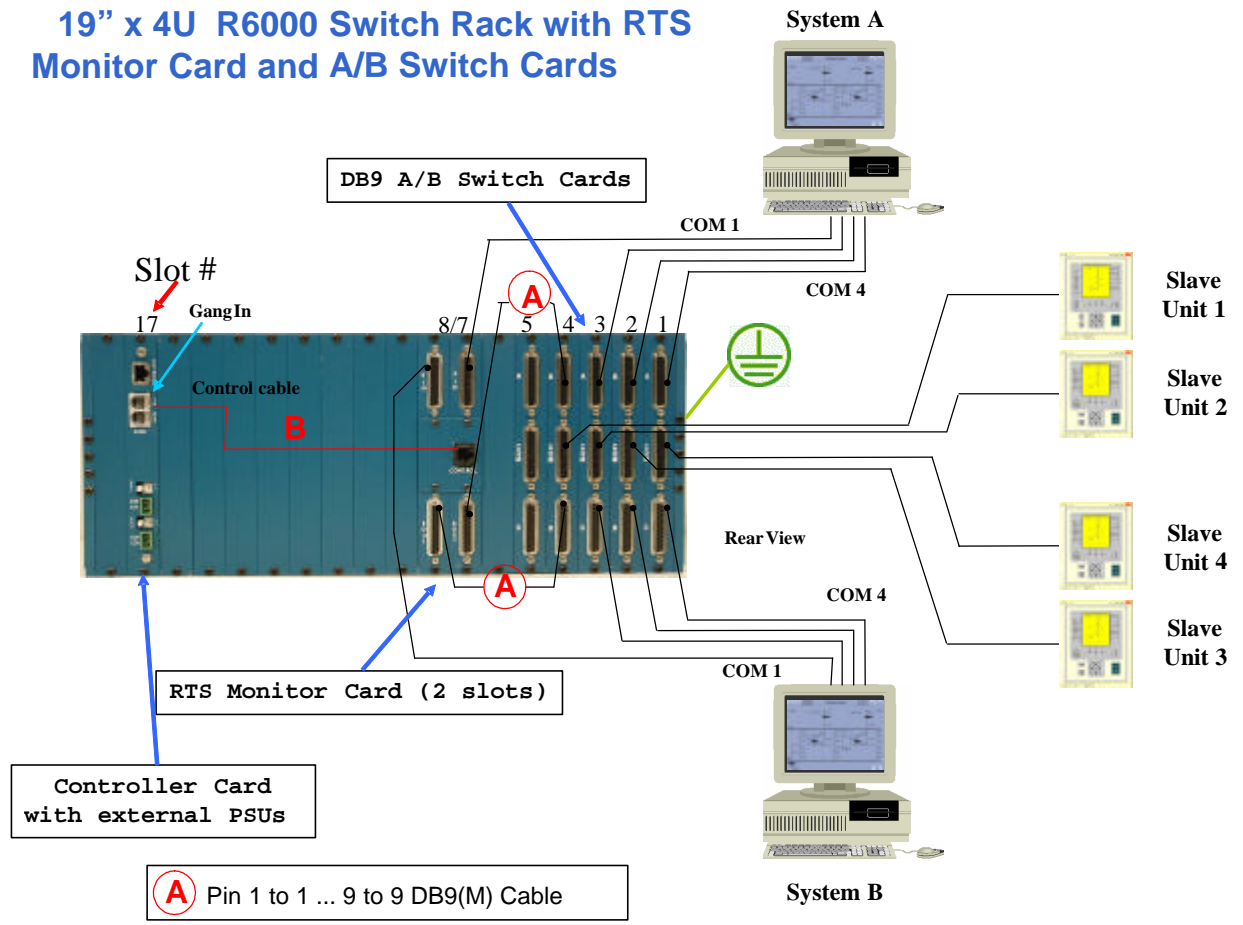
Enter manual operation mode by moving the keylock switch located on the front panel of the R6000 Series system chassis from OFF to ON. This over-rides the Control signal from the RTS Monitor Card. Any changes in the status of the connected System A and/or System B RTS lead will not force the R6000 Switch Rack to switch as it does when the RTS Monitor Card automatically controls switching of the system.

Once manual control mode has been entered by moving the keylock switch to the ON position, the system can be controlled as shown in Section 5 of the user manual for the standard R6000 Series system. The controller card and switch card toggle switches in the rack will now function as follows:

- The toggle switch on each A/B Switch Card is used to switch only that card. Hold the switch in the “A” position to connect Port A to Port C. The “A” LED will illuminate when the switch operation has been completed. Release the switch when switching has finished. Hold the switch in the “B” position to connect Port B to Port C. The “B” LED will illuminate when the switch operation has been completed. Release the switch when switching has finished. The switch card will remain in the selected position when it is operated as described here.
- The toggle switch on the Controller Card is used to switch all cards in the rack, and is operated in the same fashion as the individual toggle switches. To switch the entire system (multiple racks ganged together), hold in the “System” push-button while operating the toggle switch on the controller card.

When the keylock switch is in the OFF position, the toggle switches on the controller card and on the individual switch cards in the rack will be disabled. Note that the rack will now switch in response to switch commands received from the gang-in port that is controlled automatically by the RTS Monitor Card.

19" x 4U R6000 Switch Rack with RTS Monitor Card and A/B Switch Cards



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