



DOUBLE D ELECTRONICS LTD

DDA228 Modular LNA/LNB Power Supply and Switching Controller

- * up to 4 LNA/LNB
- * up to 4 waveguide or coaxial switches
- * Supports all standard configurations:
 - 1+1
 - 1+2
 - Dual 1+1
 - 4 independent
- * Mechanically or electrically ganged switches
- * Remote Monitoring & Control Port
- * 2U 19" rack mount
- * Adjustable LNA/B output voltage 12-21V
- * 0-500mA current output
- * Redundant power supplies
- * mimic-like front panel
- * Display of LNA/B voltage and current
- * Summary alarm output
- * SA7630 emulation option

PROVISIONAL

The DDA228 provides support for LNA/LNB redundancy systems. It provides the d.c. power required for the LNA/Bs, and performs fault monitoring and redundancy switching based on the current drain.

The DDA228 may be configured to support all the popular LNA/B configurations including 1+1, dual 1+1, 1+2 and also four independent LNA/B. The unit may be purchased with 2, 3 or 4 power supply/switch modules installed, and further modules may be added in the field.

The DDA228 includes a front panel mimic which shows the current switch configuration and LNA/B status. Each LNA/B includes a pushbutton to switch it on-line or off-line.

In automatic mode a failed LNA/B is switched off-line, and replaced by its standby.

Associated with each LNA/B is a waveguide switch interface (which will also drive many popular coaxial switches). The interface may be configured to drive both mechanically and electrically ganged switches.

Distributed power regulation is employed to minimise the effects of single point failures. Dual mains inputs and primary switch mode power supplies generate the internal power bus and provide the first line of redundancy. Each LNB feed then has its own secondary linear power regulator for best regulation and noise performance.

The LNA/LNB currents are monitored using a microprocessor to filter and process the

readings, and simplify setup. These are then filtered and averaged before comparing against limits.

The nominal and alarm limit values for a channel are set up from the front panel menus, and are shown on the alphanumeric LCD. The actual current is available via a 4-wire RS-485 serial port - ideal for unmanned sites, since it gives better visibility of the situation rather than a simple 'pass/fail'.

Each LNA/LNB has its own output connector for power; this may be fed to the LNA/B either via a bias tee (not supplied), or by direct connection where supported.

SPECIFICATION

Physical:	19" rack, 2U high, 460mm deep (excluding connectors).
Power:	90-250V a.c., 130VA max. Redundant power feed (dual power supplies)
Front Panel:	Polycarbonate laminate with mimic showing switching paths, LNA/B status. Also local/remote and manual/automatic controls, power supply status.
LNB Power:	+12-21V d.c., 500mA maximum (local adjustment)
Host Serial:	4-wire RS-422/RS-485, fixed 9600,7,e,1. Supports "Printable ASCII" and "STX/ETX" protocols. SA7630 emulation option in addition to standard command set.
Alarm Output:	Volt-free relay contact signals alarm on any monitored current out of tolerance.
WGS Drive:	Nominal 24V d.c. up to 3A, common negative coils. Tellbacks used for position indication.

Ordering Information

DDA228-02	LNA/B Power Supply and redundancy switch with two LNA/B and WGS modules (supports 1+1 configuration, mechanically or electrically ganged switches)
DDA228-03	LNA/B Power Supply and redundancy switch with three LNA/B and WGS modules (supports 1+2 configuration, mechanically ganged switches)
DDA228-04	LNA/B Power Supply and redundancy switch with four LNA/B and WGS modules (supports all configurations)