

Dual LNB Power Supply and Splitter

- Powers two LNA/LNB via signal cable
- 8-way splitter on each channel
- 950-2250MHz operation
- Unity gain RF path
- Comprehensive failure monitoring
- Remote Monitoring & Control Port
- System Diagram on Front
- Redundant Power Feeds
- 2U 19" rack mount
- Simple setup - no presets
- Summary alarm output

The DDA212 provides power and signal distribution facilities for satellite receive subsystems in earth stations. Comprehensive current and voltage monitoring facilities, under the control of a microprocessor, give rapid detection and indication of faults. This information is available via an optional 4-wire RS-485 serial port - ideal for unmanned sites, since it gives better visibility of the situation rather than a simple 'pass/fail'.

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 and internal amplifier then has its own secondary linear power regulator for best regulation and noise performance.

All supply voltages and currents for both the LNBS and the internal amplifiers are monitored using a microprocessor to filter and process the readings, and simplify setup. Parameters monitored include LNB voltage and current, internal amplifier voltage and current, and primary power supply voltages. These are then filtered and averaged before comparing against limits.

All nominal values for a channel are set up by a single press of a rear panel pushbutton. A range of tolerances may be set for the LNB current, using an internal DIP switch. The unit may also be configured via the RC&M port - ideal for unmanned sites.

The RF path covers the full extended L-Band of 950-2150MHz, and uses robust N-type connectors for all external connections (with an option for BNC connections on the RF outputs). Terminators are supplied for the RF outputs.

Specification	
Physical:	19" rack, 2U high, 260mm deep (excluding connectors).
Power	90-250V a.c., 80VA max. Redundant power feed (dual power supplies)
LNB Power:	+18V d.c., 500mA maximum (may be disabled)
RD Gain:	0dB nominal, ± 3 dB
RF level:	Max -15dBm input
RF impedance:	50 ohms
RDF connectors:	N-type (optional adaptors to BNC on outputs)
Host Serial:	4-wire RS-422/RS-485, fixed 9600,7,e,1. Supports "Printable ASCII" and "STX/ETX" protocols.
Alarm Output:	Volt-free relay contact signals alarm on any monitored voltage or current out of tolerance.

Dual LNB Power Supply and Splitter (cont.)

Selection Guide

The following units have a d.c. path between RF outputs:

DDA212-01	LNB Splitter/Power supply without RC&M interface, N-type output connectors, including terminators
DDA212-02	LNB Splitter/Power supply including RC&M interface, N-type output connectors, terminators
DDA212-11	LNB Splitter/Power supply without RC&M interface, BNC output connectors, including terminators
DDA212-12	LNB Splitter/Power supply including RC&M interface, BNC output connectors, terminators

The following units have 30V blocking capacitors on each RF output:

DDA212-21	LNB Splitter/Power supply without RC&M interface, N-type output connectors, including terminators
DDA212-22	LNB Splitter/Power supply including RC&M interface, N-type output connectors, terminators
DDA212-31	LNB Splitter/Power supply without RC&M interface, BNC output connectors, including terminators

Protocol Converter

- Converts between popular Satcoms protocols
- Simplifies RC&M systems
- RS-232/RS-485 host interface
- RS-232/RS-485 equipment interface
- Free-standing unit
- I/O ports (optional)
- Other packaging options available
- Summary alarm output (optional)
- Processing functions available

The DDA217 may be used to convert between various protocols frequently found in the Satellite Communications area. These include protocols used by CPI, STS, Scientific Atlanta, NDS, Novella, Miteq, Multipoint, LNR, EF-Data and Peak, as well as other manufacturers who have adopted the same standards. On the host side it is able to automatically identify the protocol being used, and receive messages addressed to it.

The equipment side is set to use a specific protocol, and the message received from the host is re-encoded using this protocol. Any reply from the equipment is decoded, then forwarded back to the host in the protocol used by the host. The embedded message is not changed in any way; only protocol-specific items such as start and end characters, addressing information and checksums are converted.

The DDA217 includes eight general-purpose inputs, and six open collector outputs, which may be accessed via the host serial port.

The DDA217 may be configured to occupy a block of either two or ten addresses within the address space of the host protocol. The lowest address is used to access the local I/O, while messages received on any of the remaining nine addresses are forwarded to the connected equipment. The address is set via an externally accessible block of switches.

Protocol Converter (cont.)

The DDA217 may be customised to suit specific applications; typically by adding processing of the messages for command set translation, or by packaging in other forms. Examples of special applications already done include:

- Protocol converter to convert and encapsulate messages sent to an unusual redundancy switch.
- Adding a summary alarm relay contact to equipment which lacks the facility, while maintaining RC&M access via the equipment's serial port.

Specification	
Physical:	Free standing case, 185 (W) x 180 (D) x 65 (H)
Power:	90-250V a.c., 20VA max from external PSU
Host:	RS-232 or 4-wire RS-485 on 9-pin D-socket. Selectable 9600,n,8 or 9600,e,7
Equipment:	RS-232 or 4-wire RS-485 on 9-pin D-socket. Selectable 9600,n,8 or 9600,e,7 (9600,e,8 forced for some protocols)
Protocols:	Printable ASCII (used by CPI, Miteq, STS, Novella) STX/ETX (used by Scientific Atlanta, Continental Microwave, Xicom) NDS Alteia *LNR (for up converters) *ASCII/length (used on Chloride UPS) EF-Data *STX/length (used by Peak, Comscience, Maxtech) *ASCII/CR (used by Leitch) (Asterisked protocols are available only on the equipment port)
Alarm Output:	Volt-free relay contact signals alarm on power supply or processor failure.
Inputs:	Accept volt-free contact or NPN open collector.
Outputs:	Open drain rated 30V d.c. 100mA continuous.

Selection Guide	
DDA217-01	Protocol converter including power supply.
DDA217-02	Protocol converter with summary alarm, and special alarm functionality, including power supply.
DDA217-11	Protocol converter with I/O ports and summary alarm, including power supply.