

NEC Protocol Converter

- NEC Synchronous Serial Interface
- Standard asynchronous host serial port
- Converts between popular Satcoms protocols
- Simplifies RC&M systems
- RS-232/RS-485 host interface
- Free-standing unit
- Other packaging options available
- Summary alarm output (optional)
- Processing functions available

The DDA227-03 converts between the NEC synchronous serial protocol used on some of their satellite earth station equipment, and various asynchronous serial protocols which are more frequently found in the Satellite Communications area. As standard the unit supports "Printable ASCII" and "STX/ETX" protocols on the host side; others can be provided if required. On the NEC side of the interface the appropriate HDLC-based protocol is implemented, including link setup (with some restrictions, primarily under error conditions, which arise from NEC's implementation of the protocol). On the host side the DDA227-03 is able to automatically identify the protocol being used, and receive messages addressed to it. For maximum flexibility the message to be forwarded to the NEC equipment is hexadecimal encoded, allowing exchange of 8-bit data even with a 7-bit host interface.

The NEC interface comprises transmit data, receive data and clock, and operates at 128kbit/sec synchronous. From the host's perspective the DDA227-03 starts to respond to a poll in under 10msec, measured from receipt of the checksum character of the poll by the DDA227. (This is subject to the response time of the connected equipment).

The DDA227-03 supports up to 64 addresses on the host side; these are directly mapped to the first 64 NEC addresses.

The DDA227-03 may be allocated its own address; if this is done then various information is available including communications statistics and the status of each address on the NEC side of the interface.

An alarm output gives a hardware indication of persistent comms errors at the NEC interface.

The DDA227 may be customised to suit specific applications; typically by adding processing of the messages for command set translation, or by packaging in other forms.

Selection Guide

DDA227-03	Protocol converter including power supply.
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NEC Protocol Converter (cont.)

Specification	
Physical	Free standing case, 123 (W) x 227 (D) x 44 (H)
Power	90-250V a.c., 20VA max from external PSU
Host	RS-232 or RS-422 on 9-pin D-socket. (RS-232 on 9-D plug, PC-compatible pinout, as factory option) Selectable 9600,e,7 or 19200,e,7
Equipment	RS-422 synchronous 128kbit/sec on 9-pin D-socket Transmit data, data clock outputs Receive input
Host Protocols	Printable ASCII (used by CPI, Miteq, STS) STX/ETX (used by Scientific Atlanta, Continental Microwave, Xicom) Other protocols available on request
Alarm Output	Volt-free relay contact signals alarm on power supply failure, processor failure, or persistent coms errors to an NEC address

Modular LNA/LNB Power Supply & 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

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.