DSP-D300

ALERT/IFLOWS Data Decoder

Features

- *Low noise DSP demodulator*
- *Packet error detection*
- *Handles 8192 data addresses & filters*
- *Network enabled*
- *SSH Secure internet protocol*
- *Remote configuration and status*
- *Field configuration and diagnostics*
- *Field firmware update*
- *USB port*
- *10/100 Ethernet port*
- *Two RS-232 serial ports*
- *Transformer-isolated receive data input*
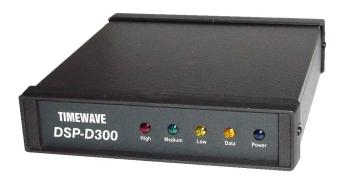- *Encoding option available*

The Timewave DSP-D300 decodes Automated Local Evaluation in Real Time (ALERT) data. Timewave's advanced digital signal processing technology increases accuracy and reduces noise for today's applications and establishes a platform for the improved protocols of the future.

Ethernet + USB + Serial I/O

The DSP-D300 plugs into the internet! If you have internet access on a network at a site, the DSP-D300 gives you remote data transfer, configuration and status. You can stream data to multiple IP addresses simultaneously.

Most current systems use the rapidly-disappearing RS-232 serial technology for control and data transfer. The multiple I/O protocols of the DSP-D300 let you extend the life of those legacy systems as you upgrade the system with new components. No more worries about whether a new laptop computer has an RS-232 serial port! The USB port handles all the control, configuration and diagnostics. You can even update the internal program of the DSP-D300 in the field.

Address Filtering and Packet Error Detection

The DSP-D300 includes configuration software to set the entire range of 8,192 remote addresses and filters via the local USB port or via SSH secure internet protocol. If you're using a satellite uplink, internal error detection eliminates noisy bad packets.

Internet security

Federal guidelines call for secure internet communications no matter what other advantages an internet-enabled system has.

The DSP-D300 meets the challenge with the SSH 2.0 protocol for control and status communications.

Flexible Installation

The freestanding housing features a rugged aluminum extruded housing and EMI-blocking conductive paint. Single or dual rack mount and NEMA options make installation quick and easy. Two units can mount side-by-side with an optional 19 inch rack mount kit.

The DSP-D300 features readily available standard connectors on all input and output ports.

Field Diagnostics

The installation and diagnostics software package included with the DSP-D300 allows you to measure the output level of the receiver to optimize the receiver and DSP-D300 settings during installation. You can test the operation of the DSP-D300 in the field with just the DSP-D300 and a computer with a sound card.

TIMEWAVE
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DSP-D300 Specifications

Processors

- 400 MHz 32-bit DSP processor with 24 bit A/D
- 50 MHz 32-bit ARM RISC processor for Ethernet
- 25 MHz USB processor

Memory

- 4 MB Flash (option - expandable to 8 MB)
- 8 MB RAM

Input/Output

•	Radio audio interface:	600 Ohm balanced, transformer isolated, RJ-45
•	Monitor Audio output:	Remote level control, 150 mW into 16 Ohms, 3.5 mm stereo jack
•	Input sensitivity:	Adjustable from –50 dBm to 0 dBm
•	Demodulator:	FSK , 300 bps, 240 Hz shift, programmable polarity for Mark/Space
•	Demod. center frequencies:	600 Hz, 1080 Hz, 1560 Hz, 2040 Hz (default), 2520 Hz., other frequencies/shift/bps optional
•	Decode protocol:	ALERT/IFLOWS (ADF, BDF, EIF)
•	ALERT/IFLOWS ID range:	0000-8191 (remote and local programmable configuration)
•	Modulator (option):	FSK , 300 bps, 240 Hz shift
•	Mod. center frequencies:	600 Hz, 1080 Hz, 1560 Hz, 2040 Hz (default), 2520 Hz., other frequencies/shift/bps optional
•	Modulation protocol(option):	ALERT/IFLOWS (ADF, BDF, EIF) & others
•	Digital I/O:	Ethernet (10/100 base/T) (RJ-45 connector) USB (2.0 compatible) (USB type B) RS-232C non- filtered (DB-9 connector) RS-232C with address filtering (DB-9 connector)
•	Terminal data rates:	RS-232 – 300-9600 bps Ethernet -10/100 Mbps USB -12 Mbps
•	Ethernet protocols:	• SSH 2.0 (U.S. Government Specification) (Secure Shell) • Telnet (RAW and with Protocol)
•	Time/Date:	NIST synchronized via internet
•	Diagnostics:	Local and remote IFLOWS status, system temperature, system power supply voltage.

Physical

•	Enclosure:	Extruded Aluminum, rack mount option, NEMA option
•	Size:	7.6 in. wide x 8.5 in. deep x 1.9 in. high
•	Weight:	2.4 lb. (1.1 Kg.)
•	Operating Temp.:	-20° C to 50° C
•	Power:	+5 to +18 VDC @200 mA. (5.5 mm x 2.1 mm coaxial power jack, center +)

Software

•	USB Control:	Control, configuration, logging and diagnostics (Windows 2000/XP/98)
•	Ethernet:	Client diagnostic packet logger (Windows 2000/XP/98)
•	COM port:	Client diagnostic packet logger (Windows 2000/XP/98)
•	Log Report Generator:	Optional – parses packet logs and generates usage reports (Windows 2000/XP/98, Linux)