Blue Water Design LLC

Model FD2013 ALERT2 Field Decoder

Description

The D2013 is a portable device for receiving, demodulating, MANT and Application Layer decoding and display for ALERT2 transmissions when interfaced to a Windows PC. Powered by the USB connection, it requires no other power supply. The ALERT2 Windows based "Display" software completely decodes the ALERT2 Application packets allowing stand alone field analysis of ALERT2 transmissions. The Display software provides filtering and logging for archival purposes. The FD2013 meets the NHWC ALERT2 AirLink v1.1, MANT v1.1 and Application Layer v1.0 format specifications.

ALERT2 Receiver - Demodulation – Decoding features

- Integral Ritron DTX-145 VHF or DTX-445 UHF transceiver for receiving; external Ritron programming connector.
- Front panel radio channel selection switch, 1 of 8 channels.
- Front panel speaker with on/off switch and volume control for audio monitoring of radio channel.
- High performance Digital Signal Processor ALERT2 demodulation and Forward Error Correction decoding.
- Front panel LED indicators for On (heartbeat), AirLInk Frame Synchronization and Bit Synchronization.
- USB powered
- Included "Rubber Ducky" antenna for portable operations.
- Telos, Inc. Windows (XP, 7, 8.0, 8.1) PC Display software for ALERT2 Application Layer and MANT Packet Decoding.
- Display software provides human readable MANT and Application Layer header decoding: Add Path Flag, SA Path List, hop count, protocol type, PDUID, etc.
- Display software decodes the Application Layer General Sensor Report, Multi Sensor Report and Concentration protocol payloads into human readable sensor IDs and values.
- The Application Layer data display can be filtered by Source Address simplifying analysis of a particular site.
- Decoded data, headers and raw data may be logged to PC files for later analysis and archival purposes.

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Connections/Control/Indicators (front panel)

Label		Notes
Radio Channel	Rotary Switch, 8 position	Radio Channel Selection switch (1 of 8)
Speaker, Off/Min/Max	Rotary potentiometer w/switch	Front panel speaker control; off or on; volume control
On, Frame, Bit	Green, Yellow, Blue LEDs	On (heartbeat), Frame Sync and Bit Sync indicators
	USB micro B connector	Power and serial I/O connection to Windows PC

Connections/Interfaces (rear panel)

Label	Connector	Notes
RX RF	BNC, female	RF input, VHF/UHF Receiver transceiver, 50 ohm
Ritron Radio Programming	DB25, female	I/O for Ritron DTX programming cable; FD2013 must be powered.

Specifications					
	Min	**Typical**	**Max**		**Notes**
Power Supply	4.9	5	5.1	Volts DC	USB powered
Power		285		mAmps	USB powered
Temperature Range	-10		60	deg C	operating (specifications)
Size	5.25 (W) x 8.0 (D) x 2.88 (H)			inches	enclosure size (w rubber feet)
		0.25(D)		inches	max connector protrusion, rear panel
		0.50(D)		inches	max (LEDs) protrusion, front panel
Weight		2.0		pounds	(not including cable)

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Specifications subject to change .