

Digisonde



An HF Radar System for Ionospheric Research and Monitoring

TECHNICAL MANUAL

Operation and Maintenance

Document Version 1.2.6



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Digisonde-4D Block Diagram

1:6. Figure 1-4 shows the Digisonde-4D block diagram identifying the Digital Transmitter card, the Digital Receiver card, the Preprocessor card, four tracking filters, two 150 W Power Amplifiers with half-octave filters, and two embedded computers responsible for hardware control and data acquisition (Control Platform) and data processing and remote access (Data Platform).

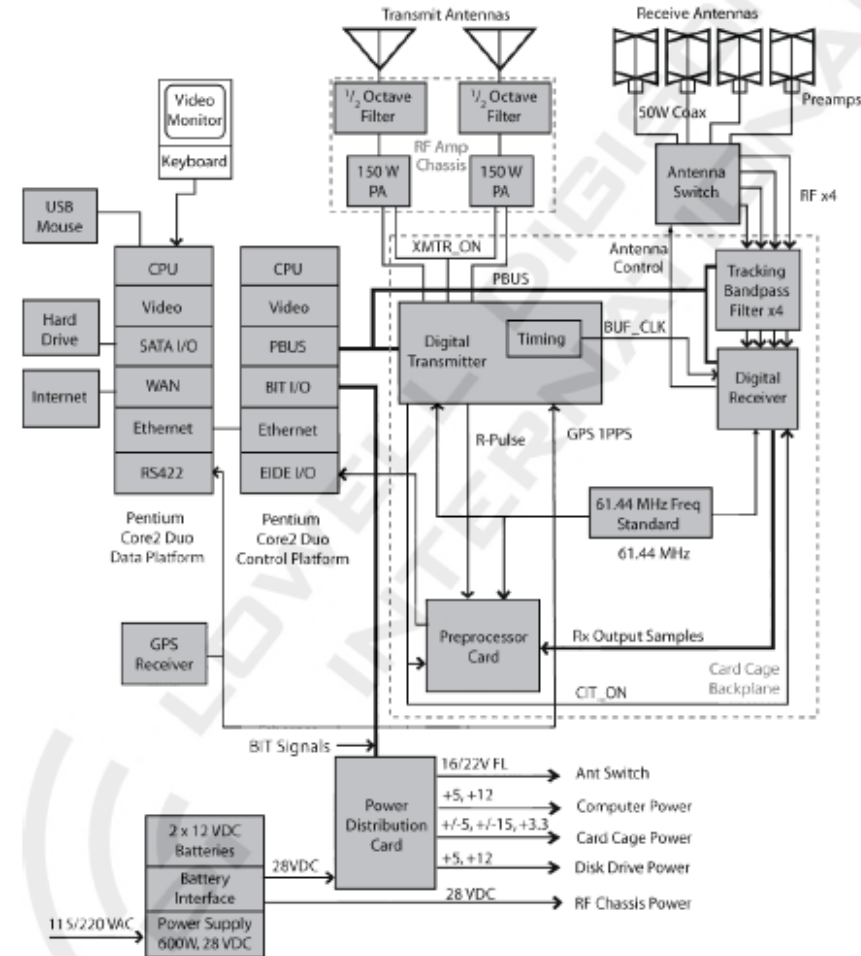


Figure 1-4: Block Diagram of Digisonde-4D

Transmit Antenna

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2:18. The crossed delta transmit antenna has been designed using the NEC modeling program. The design objectives were for a simple antenna that optimally transmits circularly polarized waves vertically upward for frequencies between 2 and 16 MHz. LDI usually has this transmit antenna built by a major antenna manufacturer. The Digisonde[®] user may build his own transmit antenna in consultation with LDI. The tower is 30.5 meters (100 ft.) high. It will require a square ground area 44 meters x 44 meters (144 ft. x 144 ft.) for installation. In addition there are recommendations for spacing from the receive antennas.

