The Deep Space Optical Terminal (DOT) transmit module demonstrates the DOT downlink signaling in a flight electronics assembly that can be qualified for deep space. The assembly has the capability to generate an electronic pulse-position modulation (PPM) waveform suitable for driving a laser assembly to produce the optical downlink signal. The downlink data enters the assembly through a serializer/deserializer (SERDES) interface, and is encoded using a serially concatenated PPM (SCPPM) forward error correction code. The encoded data is modulated using PPM with an inter-symbol guard time to aid in receiver synchronization. Monitor and control of the assembly is via a low-voltage differential signal (LVDS) interface.

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