

INFORMATIVE SUMMARY OF VCM PROTOCOLS IN REFERENCES [2] AND [3]

(INFORMATIVE)

The VCM protocols in references [2] and [3] are similar in many respects, and contain a few differences. The table below summarizes these similarities. Differences are highlighted in bold type.

	131.3-B-2 (DVB-S2) [3], consistent with Type 2 VCM	131.2-B-2 (SCCC) [2], consistent with Type 1 VCM
Basic VCM protocol structure	FM, FD, codeblock, optional pilot	FM, FD, codeblock, optional pilot
Input to Protocol	CCSDS Transfer Frames	CCSDS Transfer Frames
Transfer Frame Sync method	CCSDS ASM	CCSDS ASM
Transfer Frame Slicer?	Yes (asynchronous)	Yes (asynchronous)
FM length	26 bits	256 bits
FD length	7 bits	7 bits
FD structure	5 bits to specify VCM mode; pilot flag; long/short frame flag	5 bits to specify VCM mode; pilot flag; 1 reserved bit
FD protection	(64,7) linear code	(64,7) linear code
FM + FD TX modulation	$\pi/2$ BPSK	$\pi/2$ BPSK
Pilot symbols	36 pilot symbols, every 1440 symbols	16 pilot symbols, every 540 symbols
Codes	DVB-S2	SCCC
Modulations	QPSK, 8-PSK, 16/32-APSK	QPSK, 8-PSK, 16/32/64-APSK