

Abstracts

RF and system requirements for cable modem applications

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Examines the critical RF and system requirements for high speed digital modem applications in a hybrid fiber coax (HFC) environment. An overview of the basic elements and modulation formats of the system including the RF tuner, IF amplifiers and frequency allocations for two-way transmission on a single cable are presented. Requirements for intermodulation distortion (IMD) and noise figure (NF) in a digital quadrature amplitude modulation (QAM) system are contrasted with the traditional analog NTSC format, which the cable systems were initially designed to support. Important RF system requirements for downstream and upstream data paths are presented.

 [Return to main document.](#)