1.2.3 Quarter-inch cartridge

The QIC tape device was first introduced in 1972 by the 3M company as a means to store data from telecommunications and data acquisition applications. As time passed, the comparatively inexpensive QIC tape device became an accepted data storage system, especially for stand-alone PCs.

A QIC tape device (shown in Figure 1-3) looks similar to an audio tape cassette with two reels inside, one with tape and the other for take-up.

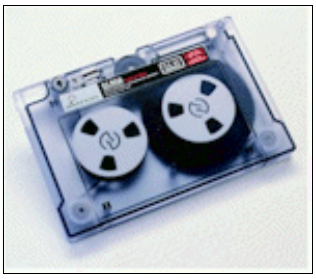

Figure 1-3 QIC tape

The QIC format employs a linear (or longitudinal) recording technique in which data is written to parallel tracks that run along the length of the tape. The number of tracks is the principle determinant of capacity.

The QIC uses a linear read/write head similar to the heads found in cassette recorders, as shown in Figure 1-4. The head contains a single write head that is flanked on either side by a read head so that the tape drive can verify data that is just written when the tape is running in either direction.

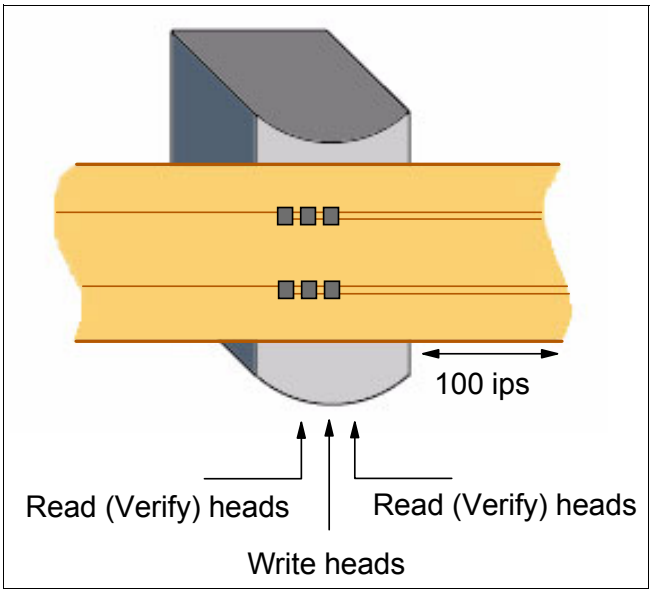

Figure 1-4 QIC head diagram

Tandberg Data manufactures QIC drives with its Scalable Linear Recording (SLR) technology. Their most recent drive, the SLR140, provides 70 GB (native) and 140 GB (with a 2:1 compression ratio) capacity on a single data cartridge. The maximum data transfer rates are 6 MBps uncompressed and 12 MBps (with a 2:1 compression ratio).