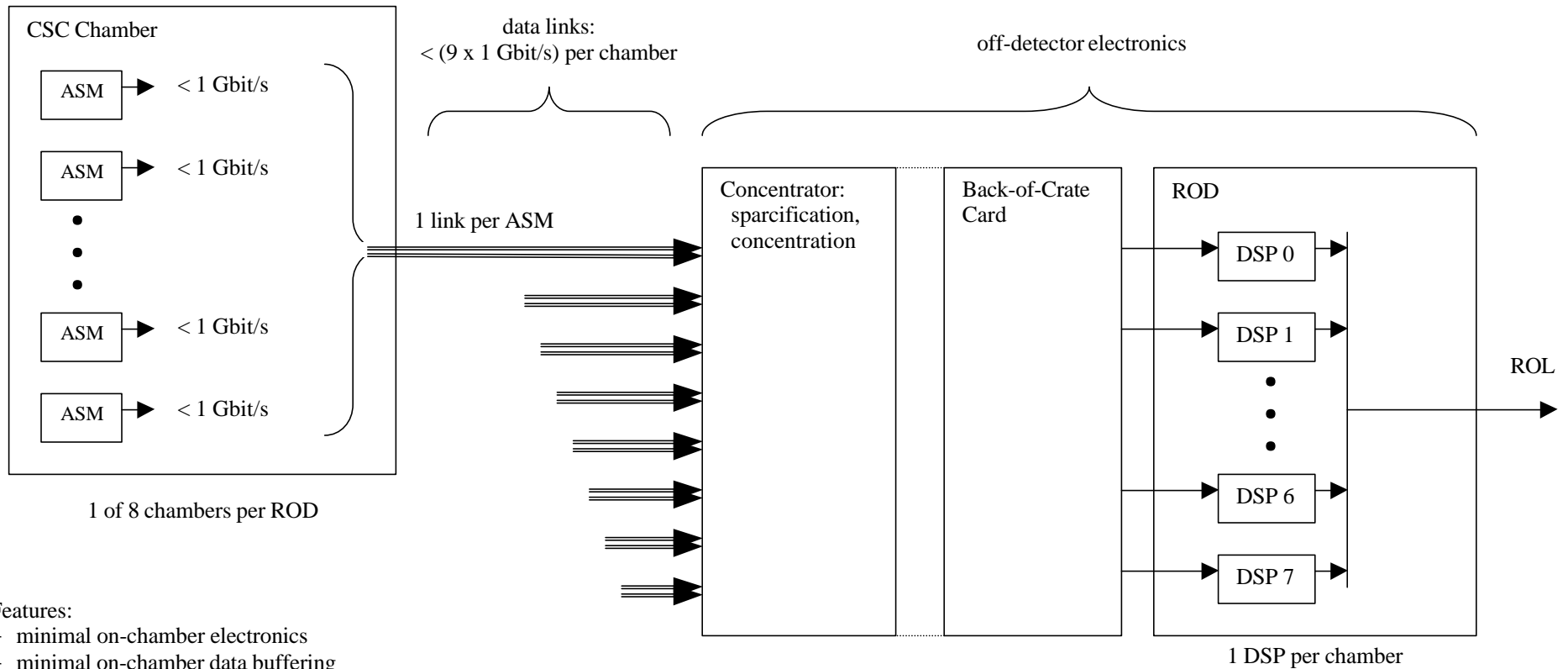


CSC Readout Electronics: Option 1, Full Readout



Features:

- + minimal on-chamber electronics
- + minimal on-chamber data buffering
- + little or no central electronics on chamber
- + inherent fault tolerance
- many high-rate links per chamber

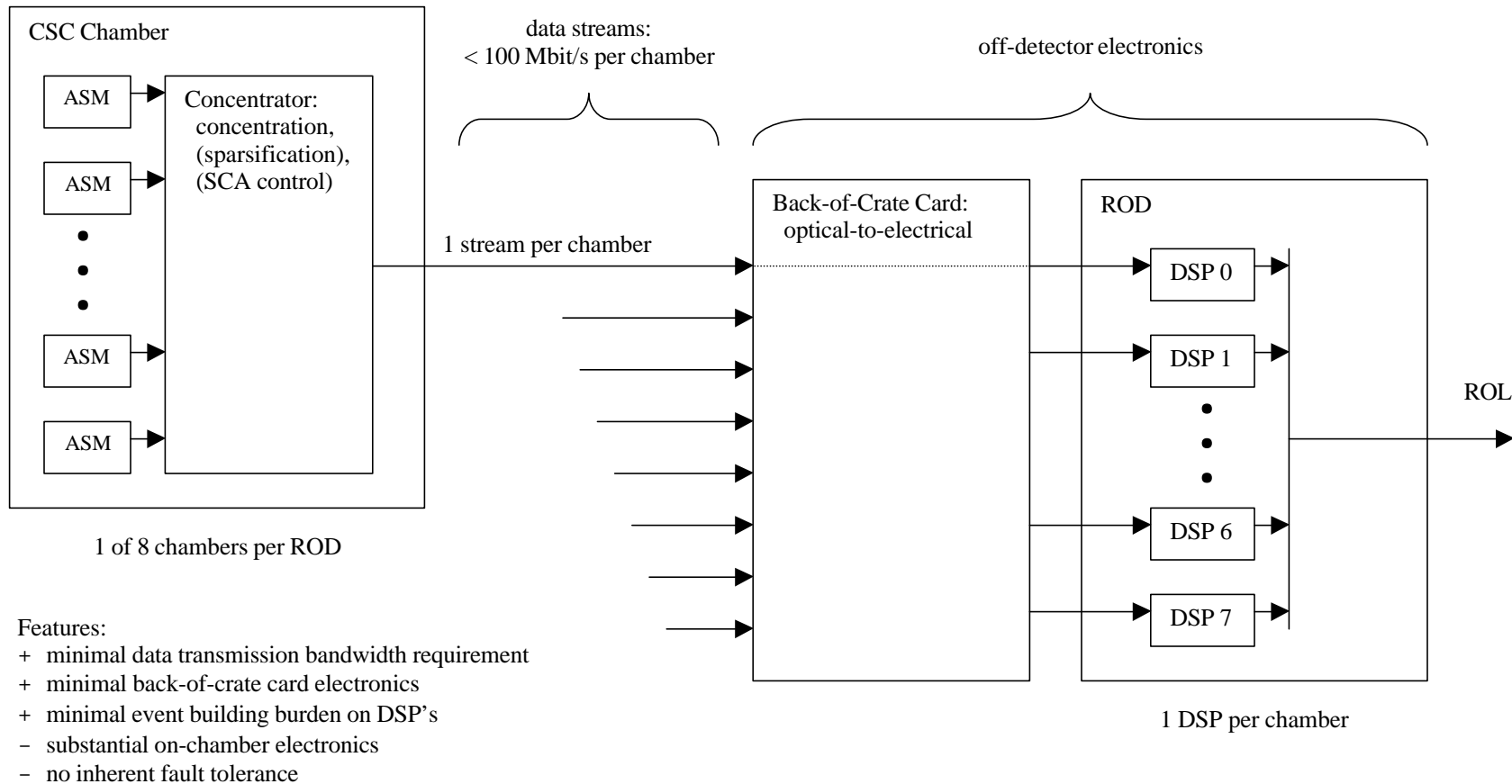
The clock/control links are not shown.

All communication with a chamber might be accomplished through a single fiber ribbon. E.g., a 12-fiber ribbon would provide nine data fibers and three clock/control fibers.

“Concentration” implies event building on a per-chamber basis.

Concentrator electronics may not fit in the back-of-crate space. Additional area equivalent to one 9U board per ROD may be required.

CSC Readout Electronics: Option 2, Sparse Readout with On-Chamber Concentration



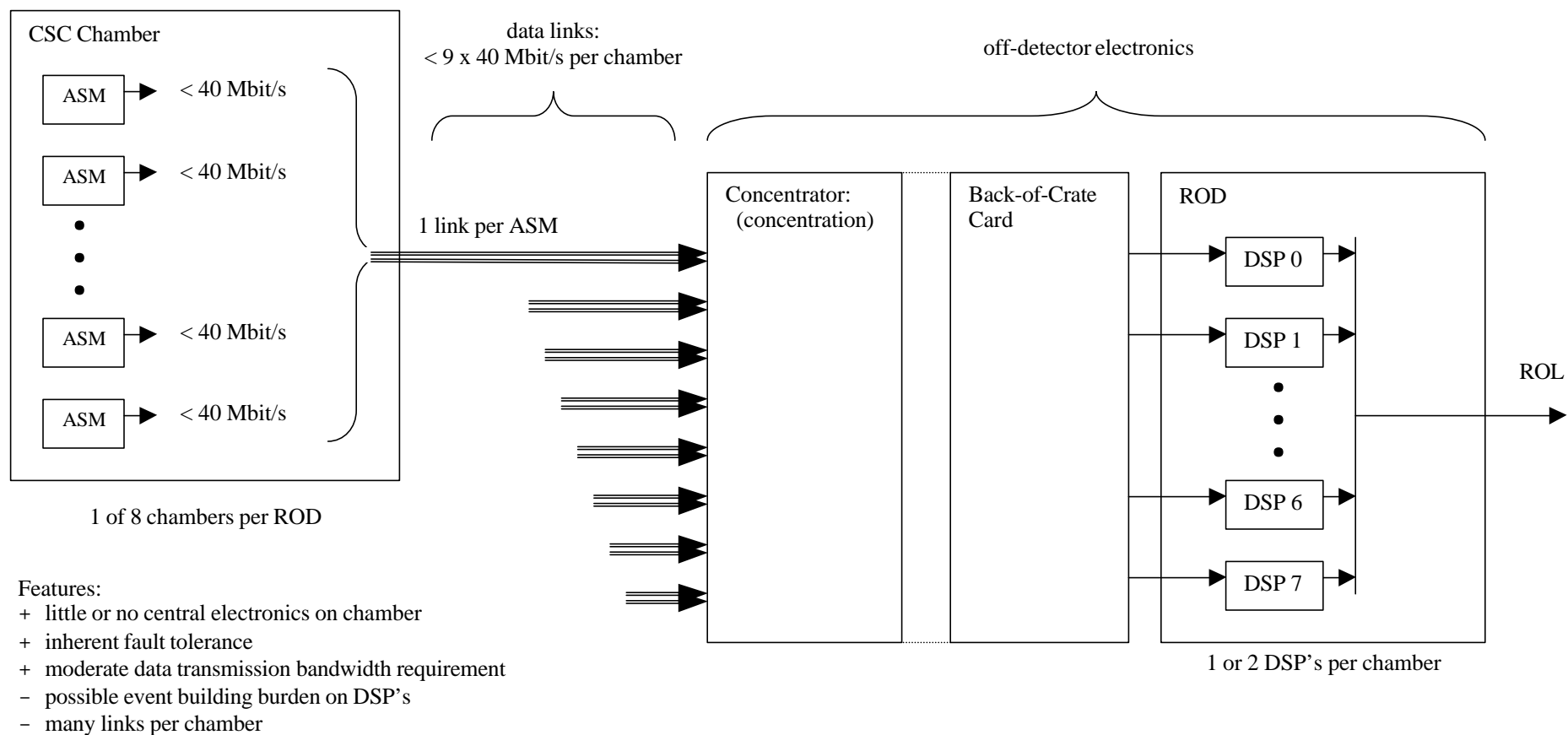
The clock/control links are not shown.

Sparsification and/or SCA control may reside on the ASM.

A data link might be a single high-speed fiber (e.g., G-link) or a ribbon of fibers (e.g., two or more SCT-style 40 Mbit/s fibers).

“Concentration” implies event building on a per-chamber basis.

CSC Readout Electronics: Option 3, Sparse Readout with Off-Detector Concentration



The clock/control links are not shown.

Concentration may be performed in the DSP's. If so, two DSP's per chamber, one for transverse channels and one for precision, may be required, depending on occupancy. All communication with a chamber might be accomplished through a single fiber ribbon. E.g., a 12-fiber ribbon would provide nine data fibers and three clock/control fibers. "Concentration" implies event building on a per-chamber basis.