

The Manufacture of the CMS Tracker Front-End Driver.

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Abstract

The Front-End Driver (FED) is a 9U 400mm VME64x card designed for reading out the CMS silicon tracker. The FED was designed to maximise the number of channels that could be processed on a single 9U board and has a mixture of optical, analogue (96 ADC channels) and digital, Field Programmable Gate Array (FPGA), components. Nevertheless, a total of 440 FED boards are required to readout the entire tracker. Nearly 20 full-scale prototype 9U FED boards have been produced to date. This paper concentrates on the issues of the large-scale manufacture and assembly of PCBs. It also discusses the issues of production testing of such large and complex electronic cards.