

## Modules and Front-End Electronics Developments for the ATLAS ITk Strips Upgrade

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The ATLAS experiment is currently preparing for an upgrade of the tracking system in the course of the High Luminosity LHC, scheduled for 2024. The existing Inner Detector will be replaced by an all-silicon Inner Tracker (ITk) with a pixel detector surrounded by a strip detector. The ITk strip detector consists of a four layer barrel and a forward region composed of six discs on each side of the barrel. The basic unit of the detector is the silicon-strip module, consisting of a sensor and one or more hybrid circuits that hold the read-out electronics. The geometries of the barrel and end-cap modules take into account the regions that they have to cover. In the central region, the detectors are rectangular with straight strips, whereas on the forward region the modules require wedge shaped sensors with varying strip length and pitch. The current prototyping phase has resulted in the ITk Strip Detector Technical Design Report (TDR), which kicks-off the pre-production readiness phase at the involved institutes. In this contribution we present the current status of R&D of the ITk Strip Detector modules and read-out electronics.

### Summary

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