# Case Study
## DECS-150 Upgrade at Offshore Drilling Platform

**Basler Electric products are used worldwide and recognized for their high performance and reliable quality. One important application of Basler products is offshore drilling platforms.**

On one offshore platform, operating offshore China, Toshiba VZRAB-1S analog voltage regulators had been used on three dual-fuel gensets with a total capacity of 1,050 kW. To meet current requirements and obtain the benefit of genset paralleling through automatic synchronizing, these analog regulators were replaced with Basler's DECS-150 Digital Excitation Control Systems.

The original excitation systems used a three-phase compound excitation circuit which required complex connections yet provided inferior regulation accuracy and speed of response. Installation of the DECS-150 controllers greatly simplified the required connections and improved regulation accuracy and response speed.

**Figure 2 - DECS-150**

In this application there is no need for shunt excitation or use of a generator auxiliary winding or permanent magnet generator (PMG). A UPS supplies operating power to the DECS-150 so the DECS-150 logic scheme was modified to add start/stop logic. When the generator frequency rises above 32 Hz, excitation is started. When the frequency decreases below 30 Hz, excitation is stopped.

The programmable logic function of the DECS-150 provides the flexibility to easily customize DECS-150 operation in many special applications.

**Figure 1 - Typical offshore drilling platform**