

<https://www.techgoing.com/qatar-world-cup-2022-var-semi-automatic-offside-technology/>

Evidently, the ball bottom point is touching at the ground point outside of the field line .

**However, the ball is still on the line when looked from the top.**

## **Qatar World Cup 2022: VAR semi-automatic offside technology**

VAR at the 2022 World Cup in Qatar has 12 dedicated cameras. These camera have the triple junction type Pinned Photodiode, with the very high light sensitivity and the no image lag problem, realizing very fast action pictures with Global Shutter Function and completely mechanical-parts-free Electronic Shutter Function. Hagiwara at Sony invented Pinned Photodiode in 1975 and developed originally in 1978. See JPA1975-127646 applied on Oct 23 in 1975 and the SSDM1978 Conference Paper reported by Yoshiaki Hagiwara at Sony in Tokyo Japan in Sept 1978.



FIFA's use of VAR at the 2022 World Cup in Qatar will be different from the Premier League's use with the addition of a semi-automatic offside system. The new element uses 12 dedicated cameras that will track the ball and all players to calculate their exact position on the pitch.