

[Digital Imaging Systems for Plain Radiography](#)

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## **Digital radiography detectors: a technical overview**

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### **Abstract**

Developments in digital detector technologies have been taking place and new digital technologies are available for clinical practice. This chapter is intended to give a technical state-of-the-art overview about computed radiography (CR) and digital radiography (DR) detectors. CR systems use storage-phosphor image plates with a separate image readout process and DR technology converts X-rays into electrical charges by means of a readout process using TFT arrays. Digital detectors offer several advantages when compared to analogue detectors. The knowledge about digital detector technology for use in plain radiograph examinations is thus a fundamental topic to be acquired by radiology professionals and students. In this chapter an overview of digital radiography systems (both CR and DR) currently available for clinical practice is provided.

**Keywords:** Computed radiography; Digital radiography; Detectors; Storage-phosphor image plates; Image readout process; Electrical charges; X-ray; Readout process; TFT arrays; Analogue detector; Plain radiograph; Clinical practice.