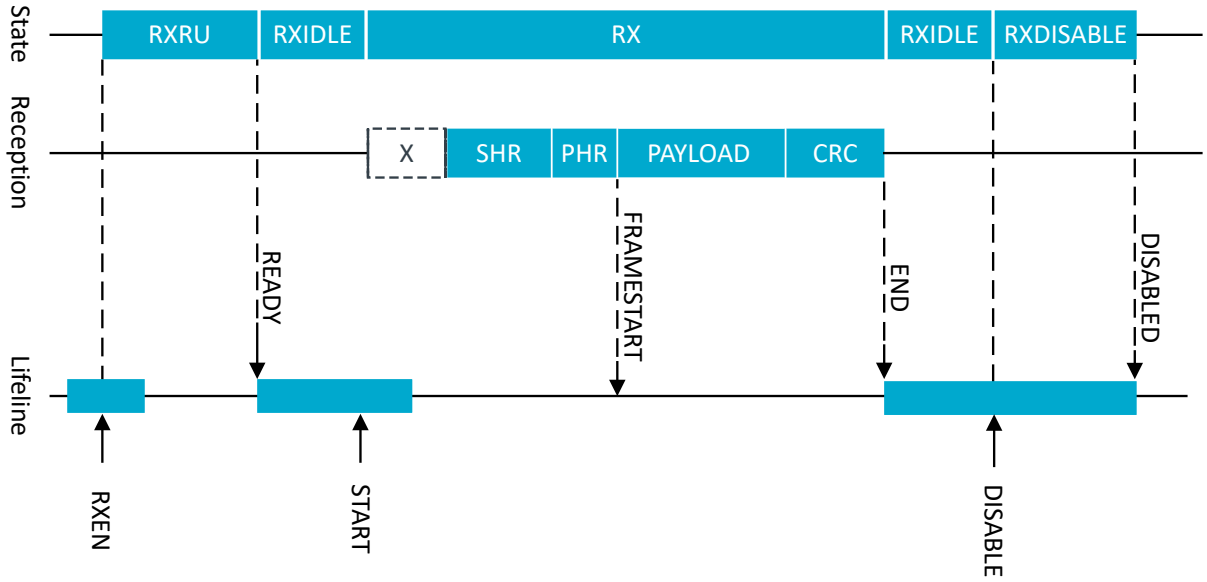

Figure 128: IEEE 802.15.4 receive sequence

When a valid SHR is received, RADIO will start storing future octets (starting with PHR) to the data memory pointed to by PACKETPTR. After the SFD octet is received, the FRAMESTART event is generated. If the CRC module is enabled, it will start updating with the second byte received (first byte in payload) and run for the full frame length. The two last bytes in the frame are not written to RAM when CRC is configured. However, if the result of the CRC is zero after running the full frame, the CRCOK event will be generated. The END event is generated when the last octet has been received and is available in data memory.

When a packet is received, a link quality indicator (LQI) is generated and appended immediately after the last received octet. When using an IEEE 802.15.4 compliant frame, this will be just after the MSDU since the FCS is not reported. In the case of a non-compliant frame, it will be appended after the full frame. The LQI reported by the hardware must be converted to the IEEE 802.15.4 range by an 8-bit saturating multiplication of 4, as shown in IEEE 802.15.4 ED measurement example on page 479. The LQI is only valid for frames equal to, or longer than, three octets. When receiving a frame, the RSSI (reported as negative dB) will be measured at three points during the reception. These three values will be sorted with the middle value selected (median 3) to be remapped within the LQI range. The following figure illustrates the LQI measurement and how the data is arranged in data memory.