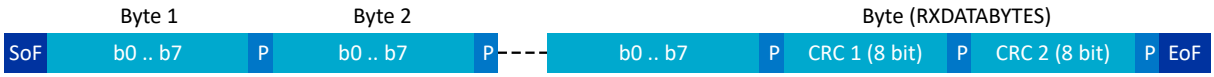
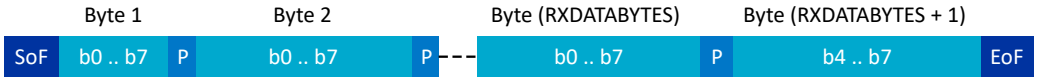
Frame on air

PARITY = Parity
RXDATABITS = 0
CRCMODERX = CRC16RX



PARITY = Parity
CRCMODERX = NoCRCTR
RXDATABITS = 4



PARITY = NoParity
CRCMODERX = NoCRCRX
RXDATABITS = 0

Data to RAM

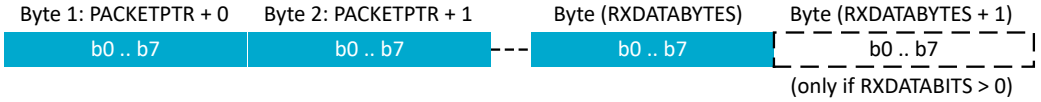


Figure 91: Frame disassemble illustration

Per NFC specification, the time between EoF to the next SoF can be as short as 86 µs, and thefore care must be taken that PACKETPTR and MAXLEN are ready and ENABLERXDATA is issued on time after the end of previous frame. The use of a PPI shortcut from TXFRAMEEND to ENABLERXDATA is recommended.

8.13.7 Frame timing controller

The NFCT peripheral includes a frame timing controller that continuously keeps track of the number of the 13.56 MHz RF carrier clock periods since the end of the EoF of the last received frame.

The NFCT peripheral can be programmed to send a responding frame within a time window or at an exact count of RF carrier periods. In case of FRAMEDELAYMODE = Window, a STARTTX task triggered before the frame timing controller counter is equal to FRAMEDELAYMIN will force the transmission to halt until the counter is equal to FRAMEDELAYMIN. If the counter is within FRAMEDELAYMIN and FRAMEDELAYMAX when the STARTTX task is triggered, the NFCT peripheral will start the transmission straight away. In case of FRAMEDELAYMODE = ExactVal, a STARTTX task triggered before the frame delay counter is equal to FRAMEDELAYMAX will halt the actual transmission start until the counter is equal to FRAMEDELAYMAX.

In case of FRAMEDELAYMODE = WindowGrid, the behaviour is similar to the FRAMEDELAYMODE = Window, but the actual transmission between FRAMEDELAYMIN and FRAMEDELAYMAX starts on a bit grid as defined for NFC-A Listen frames (slot duration of 128 RF carrier periods).

An ERROR event (with FRAMEDELAYTIMEOUT cause in ERRORSTATUS) will be asserted if the frame timing controller counter reaches FRAMEDELAYMAX without any STARTTX task triggered. This may happen even when the response is not required as per *NFC Forum, NFC Digital Protocol Technical Specification*. Any commands handled by the automatic collision resolution that don't involve a response being