**Telecommunications and Information Exchange Between Systems**

# ISO/IEC JTC 1/SC 6

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NFC

| Doc. No. | abbreviations | Definitions |
|---|---|---|
| 18092 | Active communication mode | Both the Initiator and the Target use their own RF field to enable the communication. This is the scheme of the Active communication mode. |
| 18092 | ASK modulation | ASK stands for Amplitude Shift Keying. The amplitude of the carrier frequency is modulated according to the logic of the data to be transmitted. The degree of modulation is expressed by (a − b)/(a + b)×100 [%], where a and b respectively represent the maximum and minimum amplitudes of the modulated signal waveform. |
| 18092 | Binary Coded Decimal (BCD) | A system for representing each of the decimal numbers 0 to 9 by a four-bit binary code. The bits, from left to right, are worth 8, 4, 2 and 1 respectively in decimal, so for example the number 6 in BCD is 0110. |
| 18092 | Collision | Transmission by two or more Targets or Initiators during the same time period, such that the Initiator or the Target is unable to distinguish from which Target the data originated. |
| 18092 | Frame | Sequence of data bits and optional error detection bits, with frame delimiters at start and end. |
| 18092 | Initiator | Generates the RF field and starts the NFCIP-1 communication. |
| 18092 | Load modulation | Process of amplitude modulating a radio frequency field by varying the properties of a resonant circuit placed within the radio frequency field. |
| 18092 | lsb first | least significant bit first. Indicates a serial data transmission system that sends lsb before all other bits. |
| 18092 | LSB first | Least Significant Byte first. Indicates a serial data transmission system that sends LSB before all other bytes. |
| 18092 | Manchester coding | Method of bit coding whereby a logic level during a bit duration is represented by a sequence of two defined physical states of a communication medium. The order of the physical states within the sequence defines the logical state. The coding system which divides into half at the changing point in the middle point of bit self-sustaining time, and makes the direction of the changes correspond to two logic value. |
| 18092 | Modulation index | Defined as (a – b)/(a + b) where a and b are the peak and the minimum signal amplitude respectively with the value of the index possibly expressed as a percentage. When the maximum amplitude of the modulated signal waveform is set to a and the minimum value is set to b, the degree of abnormal conditions is usually expressed as a percent. |
| 18092 | msb first | most significant bit. Indicates a serial data transmission system that sends the msb before all other bits. |
| 18092 | MSB first | Most Significant Byte. Indicates a serial data transmission system that sends the MSB before all other bytes. |
| 18092 | NFCIP-1 device | General term for either an Initiator or a Target communicating in the Active or the Passive communication mode. |
| 18092 | NFC Identifier (NFCIDn) | NFCIDn is a randomly generated number used by the RF Collision Avoidance and Single Device Detection sequence for both the Active and the Passive |

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| | | communication modes. |
| 18092 | Passive communication mode | The Initiator is generating the RF field and the Target responds to an Initiator command in a load modulation scheme. |
| 18092 | RF Collision Avoidance (RFCA) | Method to detect the presence of a RF field based on the carrier frequency and method to detect and resolve collisions on protocol level. |
| 18092 | SEL_PAR | Total number of valid bits of NFCID1 CLn including SEL_CMD and SEL_PAR transmitted by the Initiator. |
| 18092 | Sensing | An NFCIP-1 device in the Active communication mode expects a Response to a Request it has sent on the RF field to detect the start of communication to receive the Request. |
| 18092 | Single Device Detection (SDD) | SDD is an algorithm used by the initiator to detect one out of several Targets in its RF field. |
| 18092 | Subcarrier | Signal of frequency fs used to modulate a carrier of frequency fc. |
| 18092 | Target | Target responds to Initiator command either using load modulation scheme (RF field generated by Initiator) or using modulation of self generated RF field. |
| 18092 | Time Period | The Time Period defines the number of slots used for RF Collision Avoidance. |
| 18092 | Time Slot | Method of preparing a time window when a Target answers, and assign and identify two or more logic channels. |
| 18092 | transaction | A transaction includes the initialisation and the transparent data exchange between an Initiator and a Target either in the Active or the Passive communication mode. |
| 21481 | HThreshold | The minimum value of an external RF field that a NFCIP-2 device shall detect to not disturb ongoing communication by ensuring that its own RF field is switched off. |
| 21481 | NFC MODE | The communication as specified in ECMA-340. |
| 21481 | OPERATING FREQUENCY (fc) | 13,56 MHZ +/- 7 kHz. |
| 21481 | PCD | Proximity Coupling Device as specified in ISO/IEC 14443. |
| 21481 | PCD MODE | The contactless communication between PCD and PICC as specified in ISO/IEC 14443. |
| 21481 | VCD | Vicinity Coupling Device as specified in ISO/IEC15693. |
| 21481 | VCD MODE | The contactless communication between VCD and VICC as specified in ISO/IEC 15693. |

| Doc. No. | Terms | Definition |
|---|---|---|
| 18092 | ALL_REQ | Wake up ALL Request |
| 18092 | ASK | Amplitude Shift Keying |
| 18092 | ATR | Attribute Request and Attribute Response |
| 18092 | ATR_REQ | Attribute Request |
| 18092 | ATR_RES | Attribute Response |
| 18092 | BCC | NFCID1 CLn check byte, calculated as exclusive-or over the 4 previous bytes |
| 18092 | BCD | Binary Code Decimal |
| 18092 | bd | Bit duration |
| 18092 | BRi | Receiving bit duration supported by Initiator |
| 18092 | BRt | Receiving bit duration supported by Target |
| 18092 | BSi | Sending bit duration supported by Initiator |
| 18092 | BSt | Sending bit duration supported by Target |
| 18092 | CLn | Cascade Level n, 3 ≥ n ≥ 1 |
| 18092 | CMD | Command |
| 18092 | CRC | CRC Cyclic Redundancy Check |
| 18092 | CT | Cascade Tag |
| 18092 | D | Divisor |
| 18092 | DEP | Data Exchange Protocol Request and Data Exchange Protocol Response |
| 18092 | DEP_REQ | Data Exchange Protocol Request |
| 18092 | DEP_RES | Data Exchange Protocol Response |
| 18092 | DIDi | Initiator Device ID |
| 18092 | DIDt | Target Device ID |
| 18092 | DRi | Data rate Received by initiator |
| 18092 | DRt | Data rate Received by target |
| 18092 | Dsi | Data rate Send by initiator |
| 18092 | DSL | Deselect Request and Deselect Response |
| 18092 | DSL_REQ | Deselect Request |
| 18092 | DSL_RES | Deselect Response |
| 18092 | DSt | Data rate Send by Target |
| 18092 | fc | Frequency of operating field (carrier frequency) |
| 18092 | fd | Baseband frequency of Manchester coding |
| 18092 | FRT | Frame Response Time |
| 18092 | fs | Frequency of subcarrier (fc/16) |
| 18092 | Gi | Optional information field for Initiator |
| 18092 | Gt | Optional information field for Target |
| 18092 | ID | Identification number |
| 18092 | lsb | least significant bit |
| 18092 | LSB | Least Significant Byte |
| 18092 | MI | Multiple Information link for Data Exchange Protocol |
| 18092 | msb | most significant bit |
| 18092 | MSB | Most Significant Byte |

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| 18092 | NAD | Node Address |
| 18092 | NFCID1 | Random Identifier for single device detection in the Passive communication mode at 106 kbps |
| 18092 | nfcid1n | Byte number n of NFCID1 |
| 18092 | NFCID2 | Random ID for SDD in the Passive communication mode at 212 kbps and 424 kbps |
| 18092 | nfcid2n | Byte number n of the Random Identifier NFCID2 |
| 18092 | NFCID3 | Random ID for transport protocol activation |
| 18092 | nfcid3n | Byte number n of the Random Identifier NFCID3 |
| 18092 | P | Odd parity bit |
| 18092 | PA | Preamble |
| 18092 | pdu | protocol data unit |
| 18092 | PFB | Control information for transaction |
| 18092 | PNI | Packet Number Information |
| 18092 | PPi | Protocol Parameters used by Initiator |
| 18092 | PPt | Protocol Parameters used by Target |
| 18092 | PSL | Parameter Selection Request and Parameter Selection Response |
| 18092 | PSL_REQ | Parameter Selection Request |
| 18092 | PSL_RES | Parameter Selection Response |
| 18092 | RF | Radio Frequency |
| 18092 | RFCA | RF Collision Avoidance |
| 18092 | RFU | Reserved for Future Use |
| 18092 | RLS | Release Request and Release Response |
| 18092 | RLS_REQ | Release Request |
| 18092 | RLS_RES | Release Response |
| 18092 | RWT | Response Waiting Time |
| 18092 | SB | Start byte for data exchange protocol at 106 kbps |
| 18092 | SDD | Single Device Detection |
| 18092 | SDD_REQ | Single Device Detection Request command |
| 18092 | SEL_CMD | Select Command byte |
| 18092 | SEL_PAR | Select Parameter byte |
| 18092 | SEL_REQ | Select Request command |
| 18092 | SENS_REQ | Sense Request command |
| 18092 | SENS_RES | Sense Response command |
| 18092 | SLP_REQ | Sleep Request command |
| 18092 | SYNC | Synchronous pattern |
| 18092 | TO | Timeout value |
| 18092 | WT | Waiting Time |
| 18092 | WUP | Wakeup Request and Wakeup Response |
| 18092 | WUP_REQ | Wakeup Request |
| 18092 | WUP_RES | Wakeup Response |

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| 22536 | ar | Reference device width |
| 22536 | br | Reference device height |
| 22536 | ch | Calibration coil height |
| 22536 | cw | Calibration coil width |
| 22536 | cr | Calibration coil corner radius |
| 22536 | dis | Distance between field generating antenna and sense coils |
| 22536 | DUT | Device under test |
| 22536 | DFT | Discrete Fourier Transformation |
| 22536 | fc | Frequency of the operating field |
| 22536 | fs | Frequency of subcarrier at 106 kbit/s in passive communication mode |
| 22536 | Hmax | Maximum field strength of the Initiator antenna field |
| 22536 | Hmin | Minimum field strength of the Initiator antenna field |
| 22536 | HThreshold | Minimum field strength for the RF level detector |
| 22536 | LCalcoil | Inductance of the calibration coil |
| 22536 | LRefcoil | Inductance of the reference device |
| 22536 | lx | Length of test assembly connection cable |
| 22536 | lya | Field generating and sense coil PCB width |
| 22536 | lyb | Field generating and sense coil PCB height |
| 22536 | lyd | Field generating coil diameter |
| 22536 | lyw | Field generating coil track width |
| 22536 | nr | Number of turns of reference device |
| 22536 | oh | Calibration coil outline height |
| 22536 | ow | Calibration coil outline width |
| 22536 | PCB | Printed Circuit Board |
| 22536 | RCalcoil | Resistance of the calibration coil |
| 22536 | RRefcoil | Resistance of the reference device |
| 22536 | rs | Sense coil corner radius |
| 22536 | sa | Sense coil width |
| 22536 | sb | Sense coil height |
| 22536 | sr | Reference device track spacing |
| 22536 | wr | Reference device track width |