
**Information technology —
Telecommunications and information
exchange between systems — Near Field
Communication Wired Interface (NFC-WI)**

*Technologies de l'information — Téléinformatique — Interface câblée
de communication de champs proche (NFC-WI)*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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Introduction

Following the standardisation of Near Field Communication (NFC) systems and their test methods in Ecma International, this International Standard specifies a two-wire interface between two components called “Transceiver” and “Front-end”. Systems that implement the NFC-WI interface can thus be augmented with, for example, a wireless Front-end for NFCIP-1 as illustrated in Figure 1. Although this International Standard only specifies requirements for the Signal-In and Signal-Out wires and the digital signals they carry, informative Annex A lists some NFCIP-1 specific considerations.

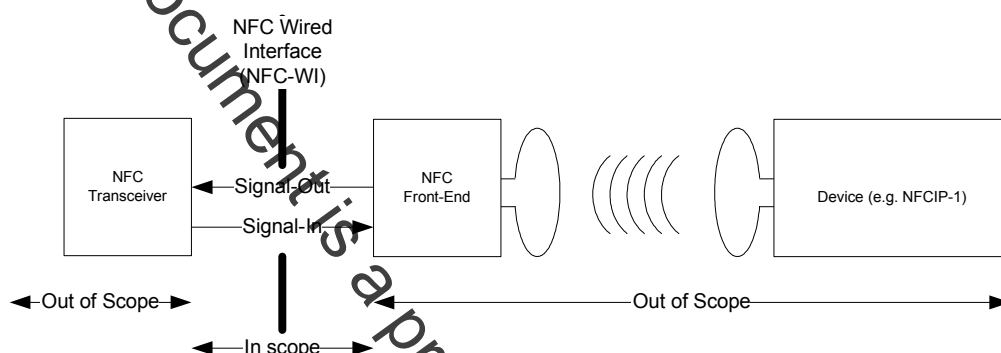


Figure 1 — Context diagram for the NFC wired interface

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Information technology — Telecommunications and information exchange between systems — Near Field Communication Wired Interface (NFC-WI)

1 Scope

This International Standard specifies the digital wire interface between a Transceiver and a Front-end. The specification includes the signal wires, binary signals, the state diagrams and the bit encodings for three data rates.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

Clock

sequence of LOW and HIGH as defined in 3.2 with duration of $1/(2 \cdot f_{\text{CLK}})$, where f_{clk} is the clock frequency as defined in 6.3

2.2

Information

bit-coded data as defined in Clause 8

2.3

Front-end

entity that drives the Signal-Out wire and receives on the Signal-In wire

2.4

Transceiver

entity that drives the Signal-In wire and receives on the Signal-Out wire

3 Conventions and notations

3.1 Representation of bit values

Bit values are either ZERO or ONE.

3.2 Representation of logical states of LOW and HIGH

- The logical signal state is LOW if the electrical level of a signal has the input voltage of V_{IL} or the output voltage of V_{OL} as specified in Table 1 in 6.2.
- The logical signal state is HIGH if the electrical level of a signal has the input voltage of V_{IH} or the output voltage of V_{OH} as specified in Table 1 in 6.2.