Shenzhen Ktc Commercial Display Technology PN7150 NFC Module Development Kit Plug and Play NFC Controller NXP User Manual

Shenzhen KTC Commercial Display Technology CO.,LTD.
NFC Module
Model Number: PN7150

Contents

Product Descrition

Best plug´n play and high-performance full NFC solution PN7150 is a full NFC controller solution with integrated firmware and NCI interface designed for contactless communication at 13.56 MHz. It is compatible with NFC forum requirements.PN7150 is designed based on learnings from previous NXP NFC device generation.

Product specification

Frequency Band:	13.110 MHz to 14.010 MHz
Nominal Operating Frequency:	13.56 MHz
Work in Modes:	☑ Card Emulation
	☑ Reader/Writer
	☐ Peer-to-Peer
NFC Type:	☑ NFC A Type
	☑ NFC B Type
	☑ NFC F Type
	☑ NFC V Type
Max. Data Rates:	848 Kbps
Type of Modulation:	ASK
Number of Channels:	1
Antenna Type:	Integral Antenna
Maximum Field Strength:	61.07 dBRV/m at 3 meter
Normal Test Voltage:	3.3 Vdc
Extreme Test Voltage:	3.0 Vdc to 3.6 Vdc
Extreme Test Temperature:	-30 °C to +85 °C

FCC Statement:
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditio ns:

1. this device may not cause harmful interference
2. this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Important Note:
In the event that these conditions cannot be met (for example certain laptop configurations or co- location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C:15.225 and requirement. There is requirement that the grantee provide guidance to the host manufacturer for compliance with Part 15B requirements.

Only if the test result comply with FCC part 15.225 and 15.209 requirement, then the host can be sold legally.

Trace antenna designs: Not applicable.
Antennas:

Antenna type	Antenna gain
Integral Antenna	Max gain: 0dBi

End Product Labling:
If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: Contains Transmitter Module FCC ID: 2AQ5RNFCPN7150.

Information on test modes and additional testing requirements
Any final host product with the modular transmitter installed should be under test according to guidance given in KDB 996369 D04. Individual modules enter test mode by burning firmware to the module, When something wrong happens in configuring test modes for host product with module, host product manufacturer should coordinate with module manufacturer for technical support. It is recommended that some investigative measurements should be taken to confirm that host product with module installed does not exceed the spurious emissions limits.

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual. When the module is installed inside another device, the user manual of this device must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
   (1) This device may not cause harmful interference.
   (2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Antenna type	Integral Antenna
Antenna gain	Max gain: 0dBi

The module must be installed in TV set and TV monitor have shielding.

ISED Statement:

- This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
  1. This device may not cause interference.
  2. This device must accept any interference, including interference that may cause undesired operation of the device
- This radio transmitter (ISED certification number:24301-NFCPN7150) has been approved by Industry Canada to operate with the antenna types listed with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device is intended only for OEM integrators under the following condition: The transmitter module may not be co-located with any other transmitter or antenna. As long as the condition above is met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.
In the event that these conditions cannot be met (for example certain laptop configurations or co- location with another transmitter), then the Canada authorization is no longer considered valid and the ISED cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

The final end product must be labeled in a visible area with the following: Contains IC: 24301-NFCPN7150

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.

The module must be installed in TV set and TV monitor have shielding.

Documents / Resources

	Shenzhen Ktc Commercial Display Technology PN7150 NFC Module Development Kit Plug and Play NFC Controller NXP [pdf] User Manual NFCPN7150, 2AQ5RNFCPN7150, PN7150, NFC Module Development Kit Plug and Play NFC Controller NXP