

VisionSTK-6ULL-NFC

Linux & NFC – Hands on KIT

i.MX 6ULL Applications Processor
PN7150 NFC (Near Field Communication Controller)

The **i.MX 6ULL** is a power efficient and cost-optimized applications processor family featuring an advanced implementation of a single Arm Cortex-A7 core, which operates at speeds up to 900 MHz.

PN7150 is the high-performance version of PN7120, the plug'n play NFC solution for easy integration into any OS environment, reducing Bill of Material (BOM) size and cost. PN7150 controllers are ideal for home-automation applications such as gateways and work seamlessly with NFC connected tags.

Hardware Description:

Throughout the course engineers will use development boards prepared by SOMLabs & NXP. The VisionSOM-6ULL in conjunction with VisionCB-6ULL is low cost hardware based on the NXP i.MX6ULL. VisionSOM-6ULL provides a variety memory configuration including flexible range of DDR3L, NAND, eMMC and SD memory card that meets our customers' requirements. OM5578/PN7150ARDM is NXP development board with Arduino compatible header.

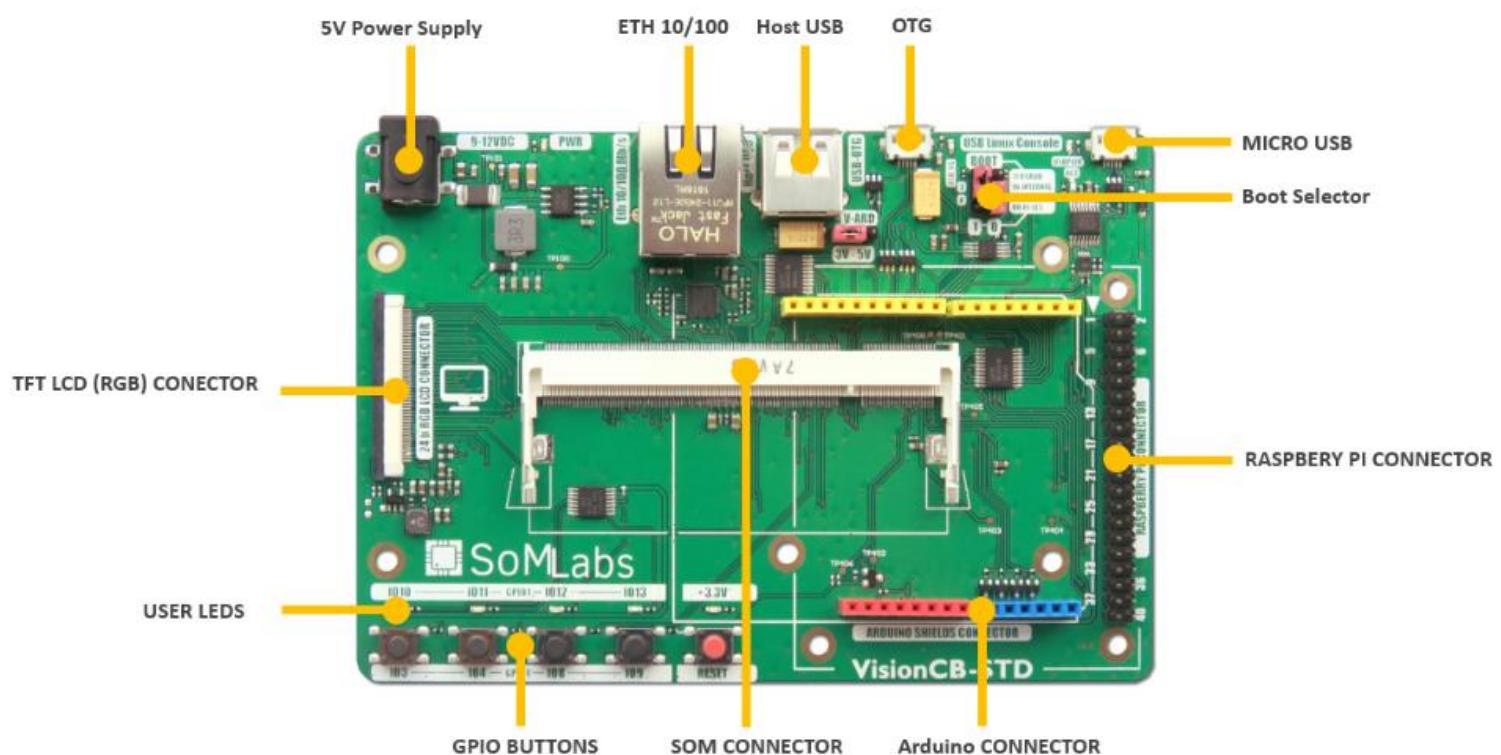
VisionSTK-6ULL-NFC includes:

VisionSTK-6ULL (Starter Kit for I.MX6ULL)
OM5578/PN7150ARDM (Starter kit for PN7150)

VisionSTK-6ULL includes:

VisionCB-6ULL-STD – Carrier Board

P/N: VisionCB-6ULL



VisionSOM-6ULL – System on Module (SOM)

P/N: SLS16Y2_792C_512R_SD_0SF_C

- Latest NXP I.MX6ULL Cortex A7 –900Mhz
- Popular SODIM 200 Footprint
- SD Card for easy development
- Industrial Temperature Range
- Altium Designer's file available
- NAND and eMMC for Program Memory



OM5578/PN7150ARDM Includes:

PN7150 NFC Arduino Shield

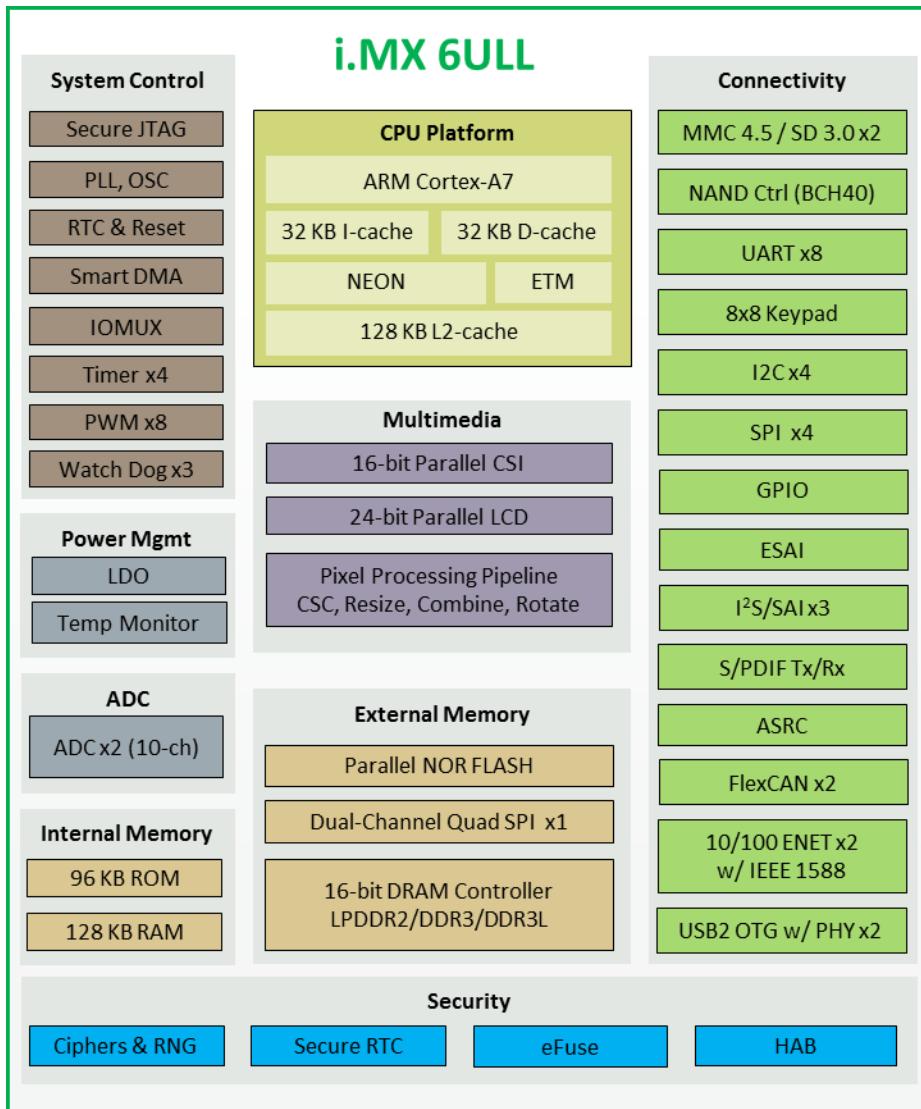
PN7150 NFC Controller SBC Kit for Arduino



NFC Forum Type 2 Tag (Sample Card)



i.MX 6ULL Applications Processor Overview



Specifications

- Process: SMIC40LL
- Core voltage: 1.1V
- Package:
- 289 MAPBGA, 14x14mm, 0.8mm pitch
- 272 MAPBGA, 9x9mm, 0.5mm pitch
- Temperature: -40C to 105C (T_j)

Enablement

Key Features and Advantages

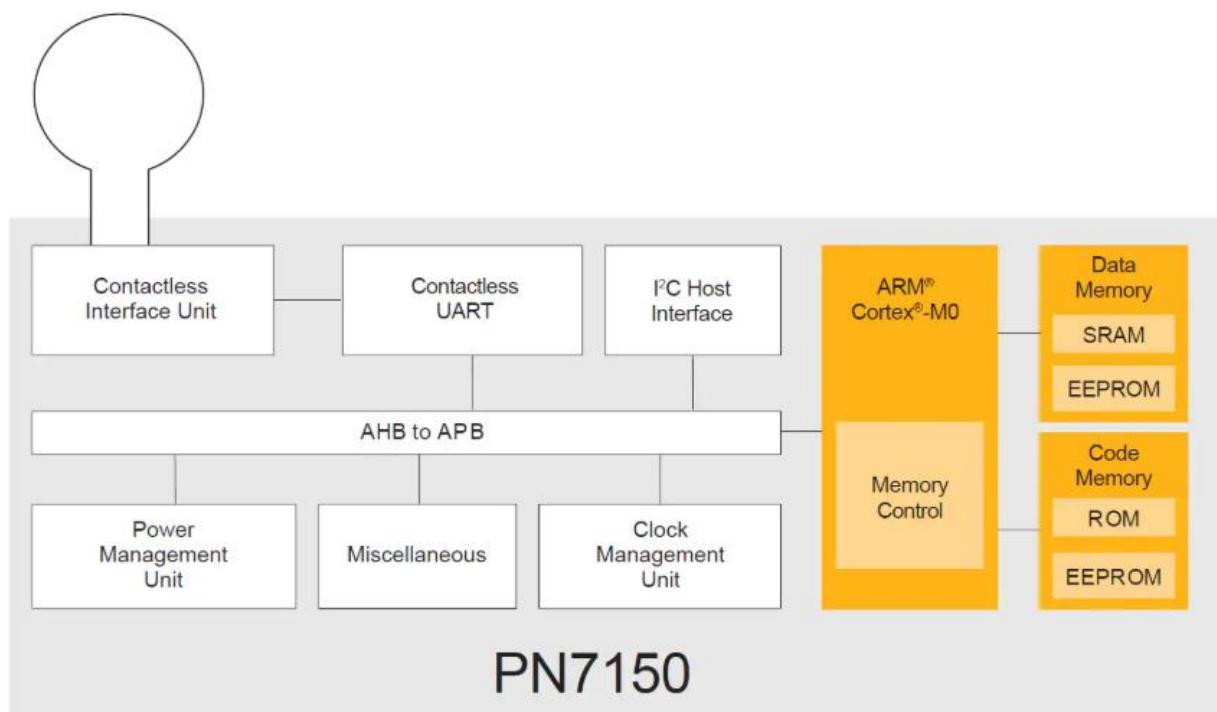
- ARM Cortex-A7 @ up to 900 MHz, 128 KB L2 cache
- Parallel LCD Display up to WXGA (1366x768)
- 8/10/16/24-bit Parallel Camera Sensor Interface
- 16-bit LP-DDR2, DDR3/DDR3L
- 8/16-bit Parallel NOR FLASH / PSRAM
- Dual-channel Quad-SPI NOR FLASH
- 8-bit Raw NAND FLASH with 40-bit ECC
- 2x MMC 4.5/SD 3.0/SDIO Port
- 2x USB 2.0 OTG, HS/FS, Device or Host with PHY
- Audio Interfaces include ESDI, 3x I²S/SAI, S/PDIF Tx/Rx
- 2x 10/100 Ethernet with IEEE 1588

PN7150 NFC (Near Field Communication Controller)



High performance NFC controller, supporting all NFC Forum modes,
with integrated firmware and NCI interface

[Close](#)



Full hardware and software compatibility

- Support for Linux, Android, Windows IoT, RTOS, NullOS

All NFC operating modes

- Read/Write Mode: ISO/IEC 14443 A&B up to 848 kbit/s, FeliCa at 212 & 424 kbit/s, MIFARE Classic with 1K, 4K, NFC Forum type 1, 2, 3, 4, 5 tags, ISO/IEC 15693
- All peer-to-peer modes
- Card Emulation Mode (from host): NFC Forum T4T (ISO/IEC 14443 A&B) at 106 kbit/s, NFC Forum T3T (FeliCa, PN7150 only)

Key Benefits

- Seamless integration of NFC into any application, especially those with OS systems
- Plug-and-play NFC operation with many platforms, including most LPC, QorIQ®, Kinetis and i.MX boards
- All typical NFC use cases, including pairing, personalization, extended user interface, maintenance, etc

- Fast deployment of advanced, fully interoperable NFC functionality, with a lower overall cost