Inari 8.3"
Operational Description

1. Introduction

This document describes the features and operation of the Inari tablet device.

2. Product Overview

Inari is powered by Intel ATOM™ chipset Z37xx, a quad-core processor. It also enables wireless communication using WiFi a/b/g/n including Intel Wireless Display, Bluetooth, GPS/GLONASS. 3G/LTE WWAN modem modules are supported.

Integrated NFC allows easy accessory pairing, reading RFID tags, e.g. like in smart card badges.

Inari is equiped with two cameras, a 8MP rear camera for high-quality images and videos, and a 2.1MP front camera for video chats.

Inari has several interfaces for accessories: Docking connector with USB 3.0,HDMI and charging interfaces, USB 2.0 connector on the side, 3.5mm audio jack and a MicroUSB port (for charging). MicroSD card slot on the side allows storage capacity expansion supporting cards up to 32GB.

Device contains 2-4GB of LPDDR3 memory and 32-128 GB of integrated data storage.

Device configuration varies depending on the versions and the configuration is shown in type label according to Figure 1

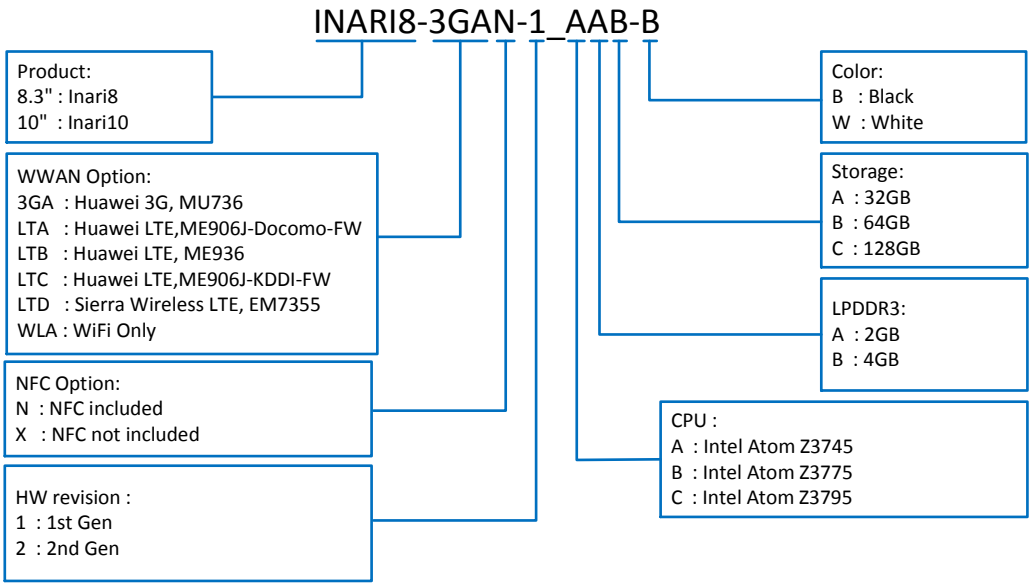


Figure 1. Inari type number definition

Inari functional blocks are presented in the block diagram below.

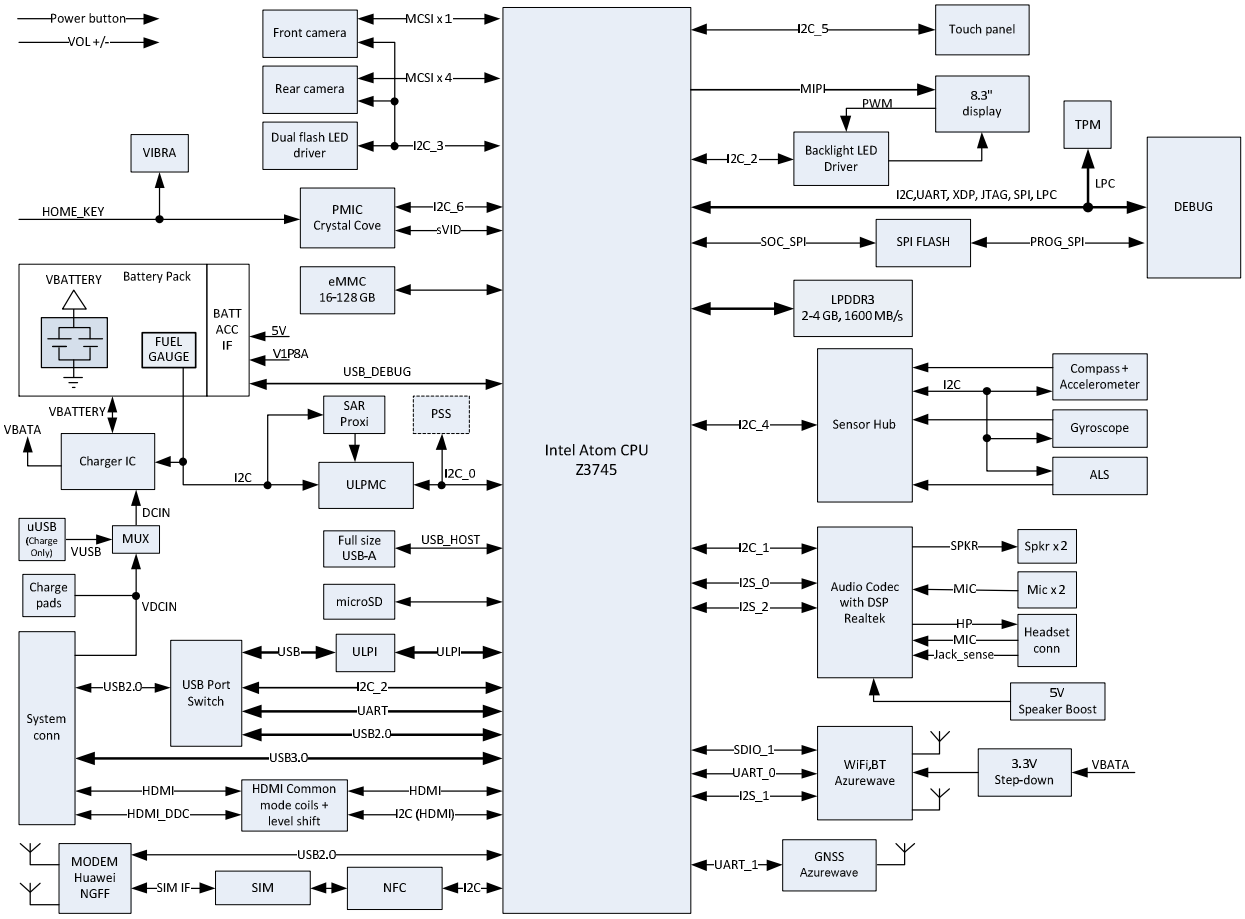


Figure 2. Inari Tablet device block diagram

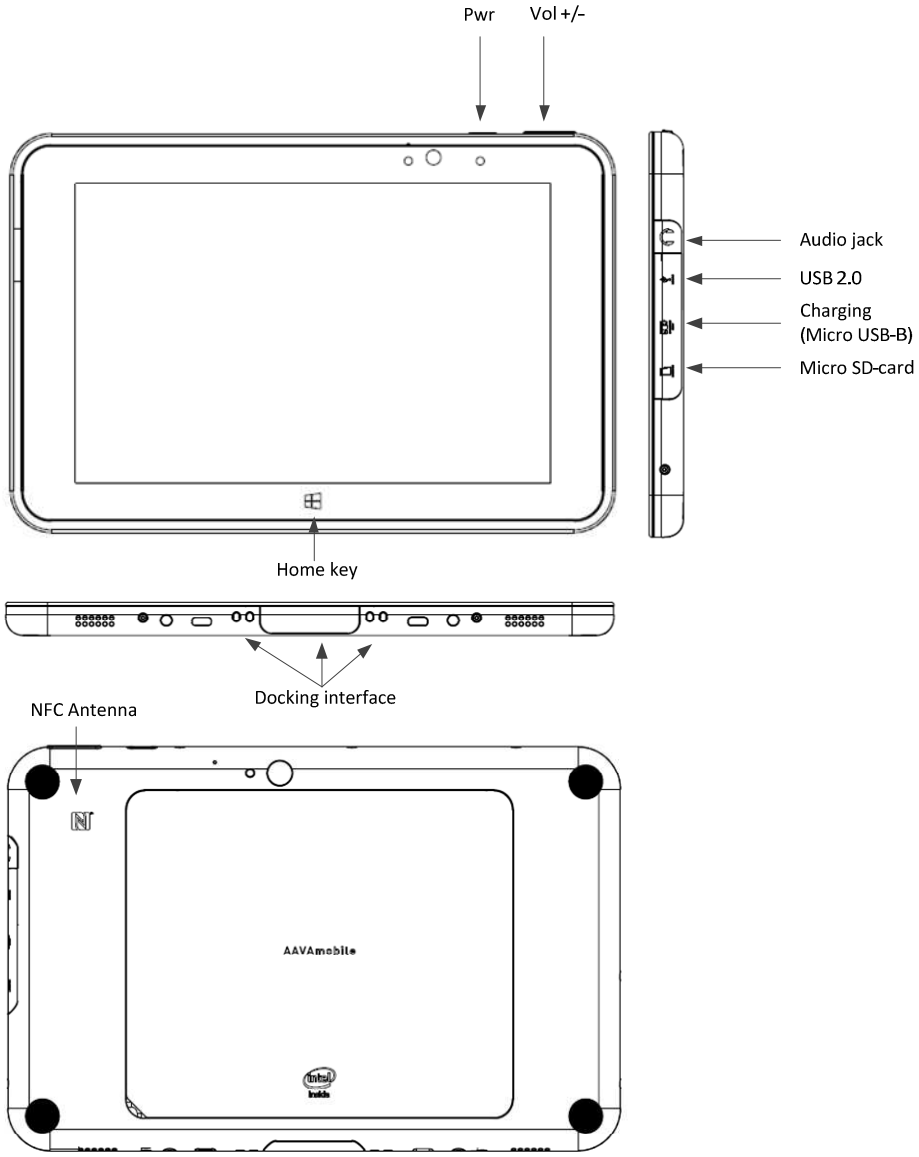


Figure 3. Inari main parts

3. Subsystem descriptions

This section provides details about different subsystems and associated circuitry supported on Inari Tablet.

3. 1. Intel Bay Trail-T Platform

3.1.1 Valleyview-T SoC – Atom Z37x5

Valleyview-T is 22nm quad-core SoC targeted for tablet devices. Different versions of Inari have differerent variants of SoC, which have different performance. SoC versions and the main differences are listed in the table below.

Table 1. Inari major features

Feature	Atom Z3795	Atom Z3745
Burst Frequency	2.39 MHz	1.86 MHz
Base Frequency	1.6 MHz	1.33 MHz
L2 Cache	2M	2M
Cores/Threads	4/4	4/4
Memory Support	LPDDR3 1067	LPDDR3 1067
Graphics	Intel® HD Graphics	Intel® HD Graphics
OS support	Windows 8.1 32bit/64bit *	Windows 8.1 32bit/Android *

* OS support could be updating.

3.1.2 Memory

Selected SoC versions support LPDDR3 2-channel configuration, which enables up to 17.1 GB/s bandwidth and up to 4GB density. Inari has 2GB or 4GB of memory, depending on the version.

3.1.3 Power management

Bay Trail platform has a dedicated power management IC (PMIC). Main features of the PMIC are listed below.

- Platform Power Delivery
- Power management related control signals
- Power detecting
- Reset control
- RTC battery control

3. 2. LCD Display and Touch Panel

Inari has 8.3 inch LCD display. Display is connected to SoC using MIPI-DSI interface. Display features are listed in the table below.

Active Screen Size	8.27 inches diagonal
Outline Dimension	116.9±0.3 (H) × 189.2±0.3 (V) × 2.35 mm (D, max. w/o PCB)
Pixel Pitch	0.09276 mm × 0.09276 mm
Pixel Format	1200 horiz. by 1920 vert. Pixels RGB strip arrangement (Display default orientation is portrait, rotation to landscape is done by display driver)
Color Depth	8-bit 16,777,216colors
Luminance, White	400cd/m2(w/TSP Typ., @ILED=23mA)
Display Operating Mode	Transmissive mode, normally Black
Surface Treatment	Glare treatment of the front polarizer

3. 3. Cameras

Inari tablet has two cameras: 2 Mpix front facing camera and 8 Mpix back facing camera, which has flash LED. Red LED indicates camera activity. Both cameras are using MIPI-CSI interface for data transfer and sideband signals for clocking and controls.

2.1 Mpix camera	
Active Array Size	2.1 M pixels (1932 x 1092, maximum)
Pixel Size	1.4µm x 1.4µm
Pixel Data Output	8-/10-bit RGB RAW output
Frame Output	1080p (1920 x 1080): 30 fps 720p: 60 fps VGA (640 x 480): 120 fps QVGA (320 x 240): 240 fps
8 Mpix camera	
Active Array Size	8.08 M pixels (3280 x 2464, maximum)
Pixel Size	1.4µm x 1.4µm
Pixel Data Output	RAW output
Frame Output	22.5fps at all pixel scan mode 30fps at 16:9 scan mode

3. 4. Storage

This chapter covers requirements details of data storages.

3.4.1 eMMC

eMMC 4.41 is used for device internal data storage. Different memory densities are supported depending on the device version.

• Capacity: 32GB to 128GB
• I/O: 1.8V with max throughput 832MB/s

3.4.2 uSD-card

Inari supports uSD (SD 3.0 based /SDHC) removable storage media. Following medias and densities are supported.

- SDSC (Secure Digital Standard Capacity) cards up to 4GB
- SDHC (Secure Digital High Capacity) cards up to 32GB.
- SDXC(Secure Digital eXtended Capacity) cards up to 2TB.

3. 5. Interfaces

3.5.1 USB

Inari has multiple USB interfaces for different purposes.

- Full size USB 2.0 A-type connector at the side.
  - This is intended to be used with USB accessories
- 40-pin docking connector with USB3.0 (+ OTG if Android OS is used)
  - This USB interface is intended to be used with Inari docking station.
  - More information about the docking interface in the following chapter.
- USB 2.0 proprietary accessory connection below the battery cover.
  - This USB interface is intended to be used only with custom accessory systems.

3.5.2 Docking interface

Inari docking interface is used to connect Inari tablet to Inari docking station. It has following interfaces.

- USB3.0
- HDMI
- Charging
- Single wire interface
- Dock detection

Interface uses 40pin connector with proprietary pin out and is designed to be used only with docking station.

Table 2. Docking connector pinout

Pin	Name	Name	Pin	Pin
2	USB2_CPU_P0_DP	DCIN	1	
4	USB2_CPU_P0_DN	DCIN		3
6	GND	DCIN	5	
8	USB3_RX_SS1_N	DCIN		7
10	USB3_RX_SS1_P	DCIN	9	
12	GND	GND		11
14	USB3_TX_SS1_N	GND	13	
16	USB3_TX_SS1_P	USB_ID		15
18	GND	DOCK_SINGLEWIRE	17	
20	HDMI_CLK_DN	DOCK_DET		19
22	HDMI_CLK_DP	VBUS	21	
24	GND	VBUS		23
26	HDMI_D0N	GND	25	
28	HDMI_D0P	GND		27
30	GND	HDMI_DDC_SCL	29	
32	HDMI_D1N	HDMI_DDC_SDA		31
34	HDMI_D1P	HDMI_5V	33	
36	GND	HDMI_HPD		35
38	HDMI_D2N	GND	37	
40	HDMI_D2P	GND		39

3.5.3 Charging ports

Inari supports 3 different charging ports.

- Micro-USB type-B charging connector for standard USB chargers
- Docking interface through 40 pin connector
- Charging station contacts at the bottom

Micro-USB charging port	
Voltage	5V
Current	Max 2A
Charge time	3 hours @ 10W
Docking interface / charging pads	

Voltage	5-15V
Current	Max 2A
Charge time	2 hours @ 20W

3.5.4 Headset

A 3.5 mm jack TRSS type headset jack is provided on Inari Tablet and it supports 3.5 mm stereo or mono headset with CTIA pinout and stereo headphones. The following figure and table provides connection information of the audio jack.

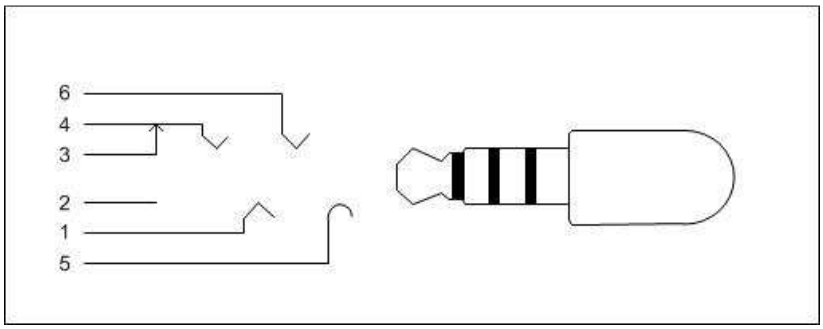


Figure 4. Inari Audio Connector Pin Layout

Table 3. Inari Audio Connector Signals

3,5mm Plug PIN #	Schematic Signal Name	Direction	Description
1	HEADPHONE_OUT_R	Out	Right channel audio output
2	Not connected	-	Not connected
3	PLUGDET_CONN	In	Plug detection
4	HEADPHONE_OUT_L	Out	Left channel audio output
5	MIC_JACK_IN	In	Microphone audio input, audio jack detection
6	GND	In	Ground contact

3. 6. Sensors

Inari has HID compliant sensor subsystem, which consists of following sensors.

- 3-Axis accelerometer
- 3-Axis compass
- 3-Axis gyroscope
- Ambient light sensor

Sensor subsystem is interfacing to CPU through sensor fusion IC.

3.6.1 Proximity sensor use for SAR reduction

Capacitive proximity sensor is used to indicate body proximity to modem and activate the power reduction. Microcontroller is used to monitor the proximity sensor and secure that it operates correctly when full power is applied to modem. CPU interaction is not needed.

Proximity sensor sampling period is 7-11 ms and power reduction can't be overridden by other CPU events like low RSSI, high packet loss rate or network power-up commands.

Sufficient sensitivity of the sensor for all devices is secured by design tolerances and production testing.

Power reduction depends on the use case as presented in the table below.

Table 4. Inari 8 (Global) Modem power reductions when SAR proximity sensor is active.

Use case	Power reduction
GPRS 850, 900	-6dB
GPRS 1800	-3dB
GPRS 1900	-5dB
EGPRS 850, 900, 1800	-1dB
EGPRS 1900	-3dB
WCDMA Band 1, 2	-8dB
WCDMA Band 4, 5, 8	-6dB
LTE Band 1, 2	-7dB
LTE Band 7	-9dB
LTE Band 3, 4, 5, 8, 13, 17, 20	-5dB

Table 5. Inari 8 (Japan) Modem power reductions when SAR proximity sensor is active.

Use case	Power reduction
WCDMA Band 1	-4dB
WCDMA Band 5, 6, 19	-3dB
LTE Band 1	-2dB
LTE Band 19	-1dB
LTE Band 21	-4dB

Table 6. Inari 8 (US) Modem power reductions when SAR proximity sensor is active.

Use case	Power reduction

GPRS 850, 900, 1800	-7dB
GPRS 1900	-8dB
EDGE 850, 900	-6dB
EDGE 1800, 1900	-7dB
CDMA Band 0, 10	-7dB
CDMA Band 1	-9dB
WCDMA Band 1	-7dB
WCDMA Band 2, 4	-8dB
WCDMA Band 5, 8	-6dB
LTE Band 2, 4, 25	-8dB
LTE Band 5, 13, 17	-6dB
LTE Band 21	-4dB

SAR values with power reduction active at 0mm distance can be found from certification test reports. If the proximity sensor fails then power reduction does not work and estimated

3. 7. Audio Subsystem

Audio subsystem consists of the following components:

- Low Power Engine (LPE) with three I2S ports integrated in the Soc
- Realtek ALC5642 audio codec
- 5 Volt step-up converter for the audio codec speaker amplifier
- The AzureWave AW-AH691A CWS module including Bluetooth and WLAN features
- 2 microphone for capturing sound or voice
- Stereo speakers for music or voice playback
- 3,5mm audio jack with CTIA pinout for connecting headset with microphone or headphones.

3.7.1 Speakers

Inari device has two dynamic speakers. These speakers can be used for media playback or system alerts.

3.7.2 Microphones

Inari has two build in digital microphone. Each microphone has sensitivity of -26dBFS.

3. 8. Complimentary Wireless Solution (WLAN, BT, GPS, NFC)

Inari supports WLAN, BT and NFC for wireless communication and GPS/Glonass (GNSS) for location. Figures Figure 5, Figure 6 and 7 below describe the wireless subsystems.

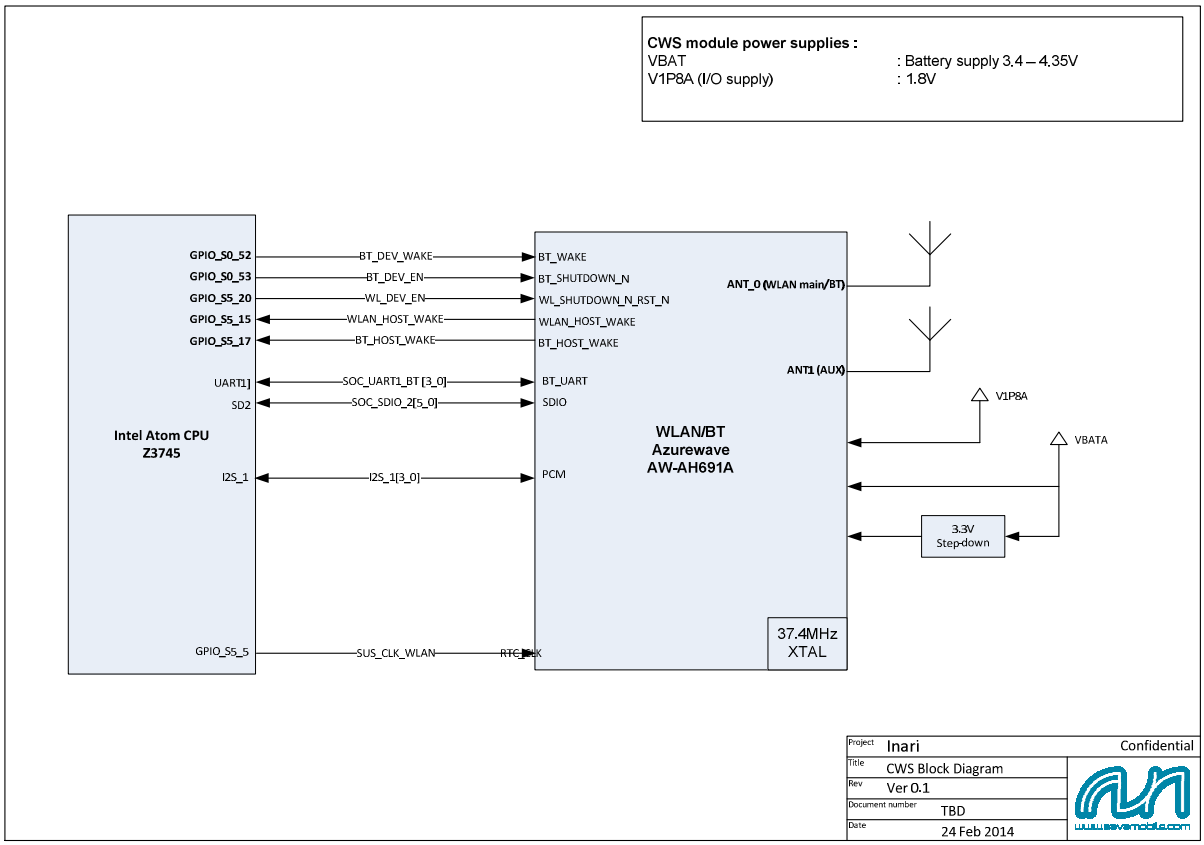


Figure 5. WLAN/BT subsystem

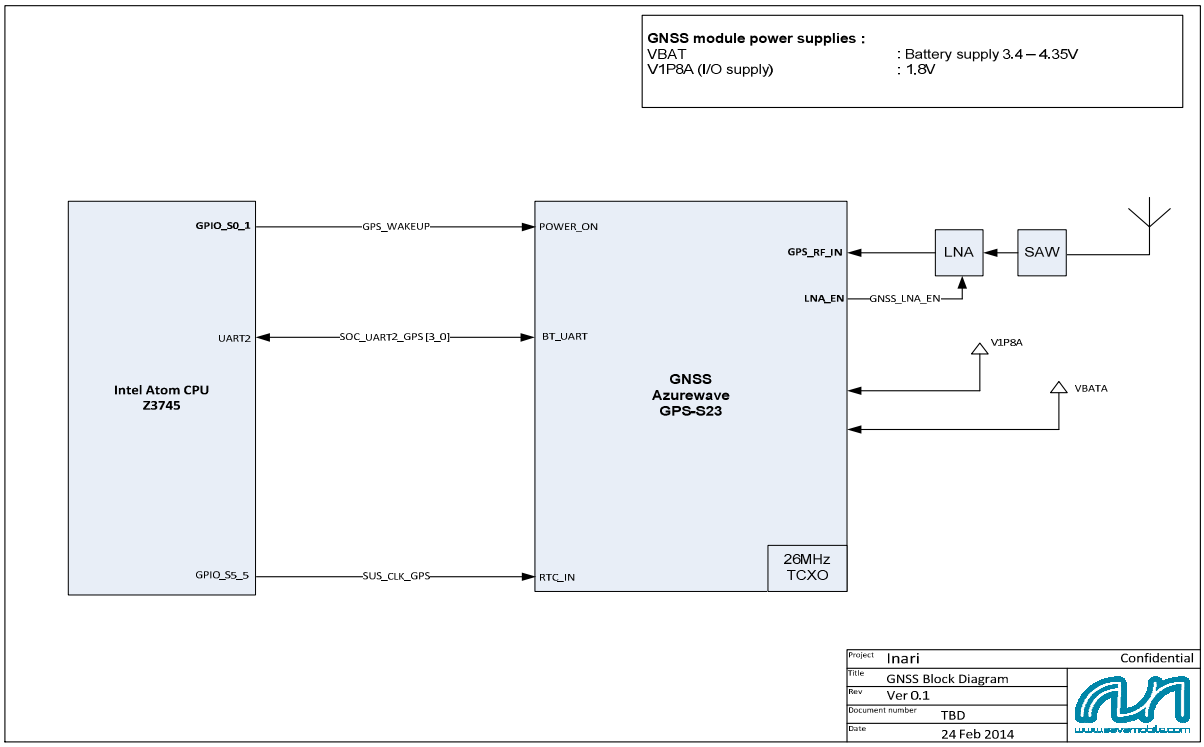


Figure 6. GNSS subsystem

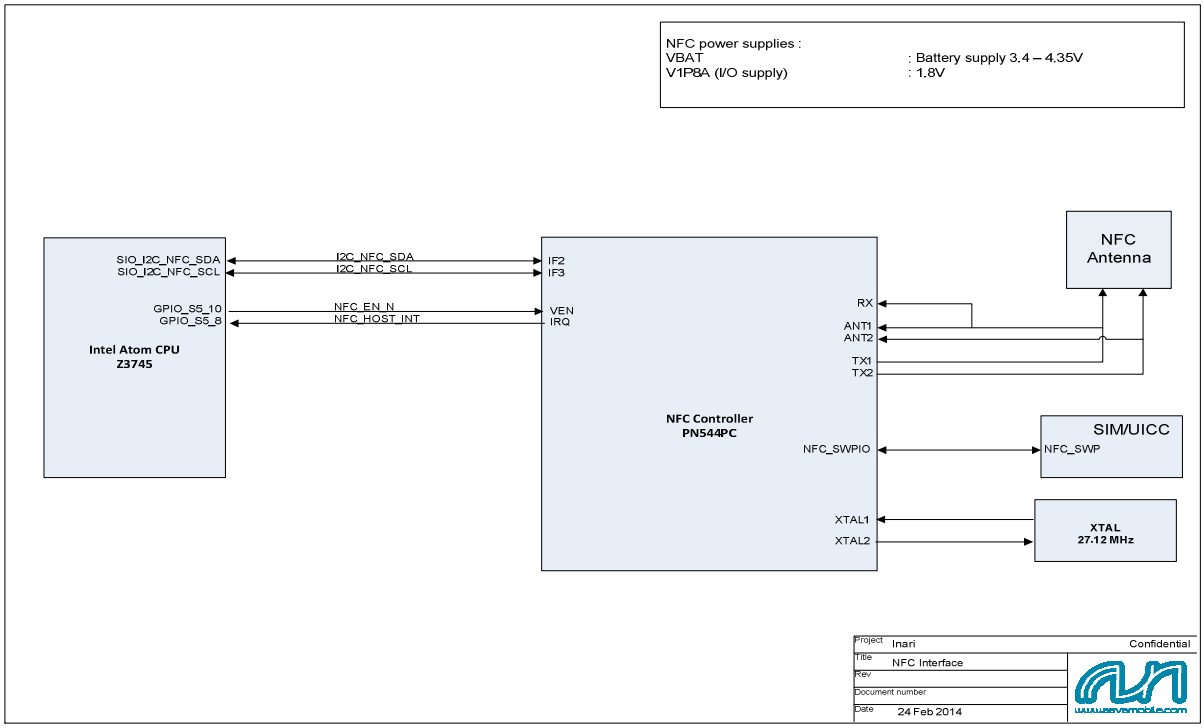


Figure 7. NFC subsystem

Inari supports WiFi (802.11 a/b/g and 2x2 802.11n), Bluetooth 4.0, GPS/Glonass (GNSS) and NFC.
WiFI/BT module is Azurewave AW-AH691A SiP module, which is based on Broadcom WiFI/BT- chip BCM43241.
GNSS module is Azurewave GPS-S23, which is based on Broadcom chip BCM4752.
NFC is based on NXP NFC controller PN544PC.

There are two dual-band ceramic antennas for WLAN 2.4GHz/5GHz and BT, and one ceramic antenna for GNSS.

WLAN and BT do not transmit simultaneously.
WiFi and 3G can operate simultaneously to enable the support for WiFi hotspot use case.

Feature Set:
- 802.11 a/b/g and 2x2 802.11nn
- BT4.0
- GPS/Glonass

The actual used WiFi channel list depends on the country code and is defined by regulatory database. This is not changeable or accessible to the user to alter. For example the channel list for US is as follows:

Low Band:
1 2 3 4 5 6 7 8 9 10 11

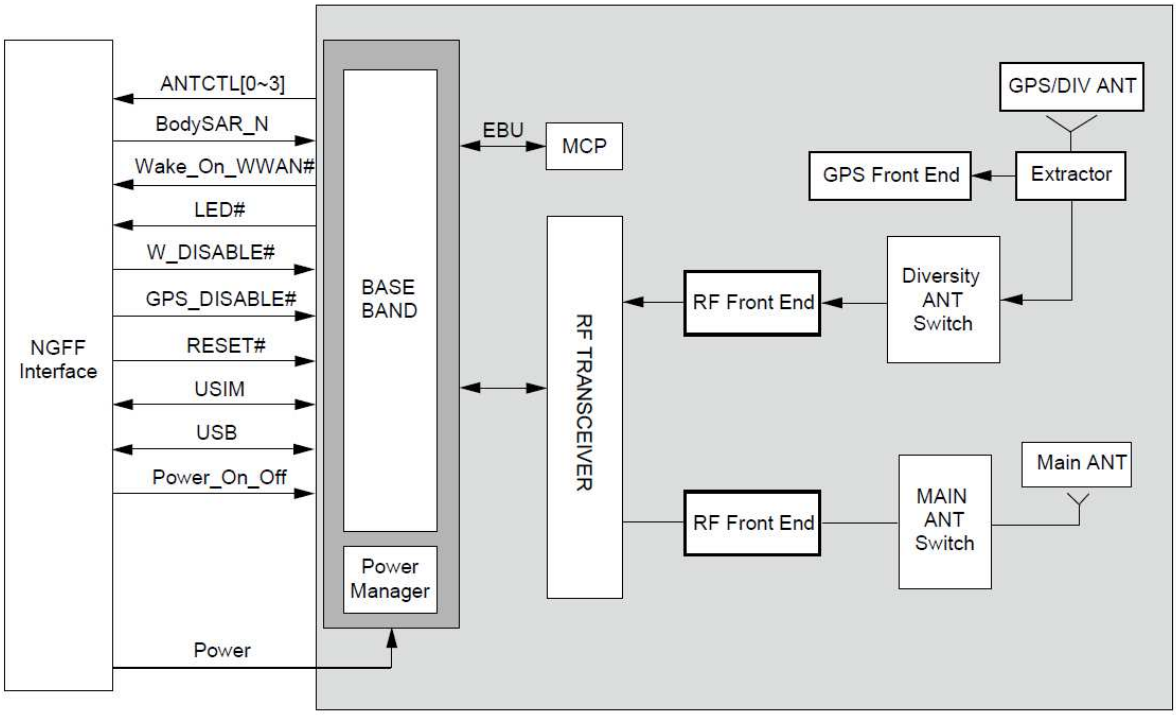
High Band:
36 40 44 48 52 56 60 64 100 104 108 112 116 132 136 140 149 153 157 161 165

3. 9. 3G/LTE Modem Module

3.9.1 3G – Huawei MU736

Inari WWAN option 3GA has 3G Modem Module Huawei MU736 for 2G/3G cellular data communication. There is a single flexible antenna for GSM and WCDMA and secondary receive diversity flexible antenna for GSM and WCDMA in Inari. MU736 have also GPS/A-GPS option, but Inari will use own GNSS Module and therefore MU736 GPS/A-GPS option is disabled.

Figure 8 below describes circuit block diagram of the MU736 module.



Huawei MU736, 3G Modem Module

- GPRS/EDGE: Multi-slot Class 33
- WCDMA CS: UL (64 kbps) / DL (64 kbps)
- WCDMA PS: UL (384 kbps) / DL (384 kbps)
- HSPA: UL (5.76 Mbps) / DL (7.2 Mbps)
- HSPA+: UL (5.76 Mbps) / DL (21 Mbps)

Supported bands

- GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900
- 3G (UMTS/HSPA/HSPA+):
  3G FDD I (2100), II (1900), IV (AWS), V (850) and VIII (900)
- Receiver Diversity: GSM850, E-GSM900, PCS1900, FDD I, FDD II, FDD V and FDD VIII

Table 7. Supported Systems and Frequency Bands, sorted by TX frequency

GMSK/8-PSK	3G	Transmit Band [MHz]	Receive Band [MHz]	Duplex Dist. [MHz]
GSM850	FDD V	824 … 849	869 … 894	45
GSM900	FDD VIII	880 … 915	925 … 960	45
	FDD IV	1710 … 1755	2110 … 2155	260
GSM1800		1710 … 1785	1805 … 1880	95

GSM1900	FDD II	1850 … 1910	1930 … 1990	80
	FDD I	1920 … 1980	2110 … 2170	190

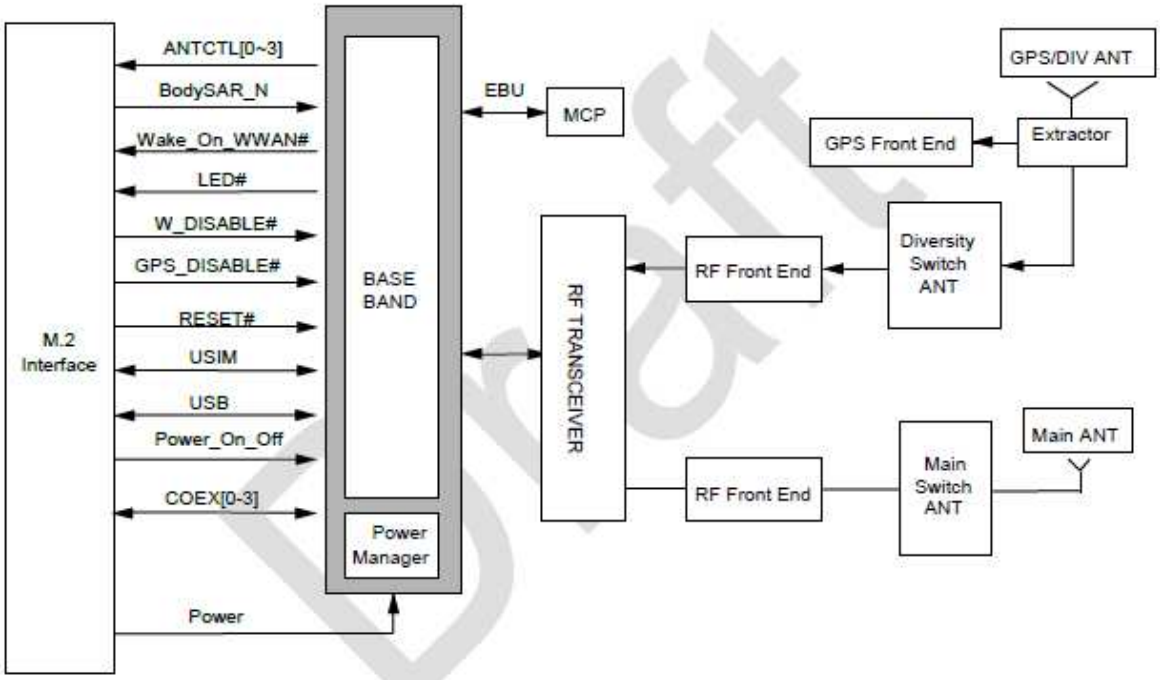
Huawei MU736 Approvals & Certifications

- CE
- FCC
- GCF
- PTCRB
- CCC
- NCC
- RoHS/Halogen free
- Global operator TA

3.9.2 LTE – Huawei ME936

Inari WWAN option LTB has LTE Modem Module Huawei ME936 for 2G/3G/LTE cellular data communication. There is a single flexible antenna for GSM, WCDMA & LTE and secondary receive diversity flexible antenna for GSM, WCDMA & LTE in Inari. ME936 have also GNSS option, but Inari will use own GNSS Module and therefore ME936 GNSS option is disabled.

Figure 9 below describes circuit block diagram of the ME936 module.



Huawei ME936, LTE Modem Module

- GPRS/EDGE: Multi-slot Class 12
- WCDMA PS: UL (384 kbps) / DL (384 kbps)
- DC-HSPA+: UL (11 Mbps) / DL (42 Mbps)
- LTE FDD: UL (50 Mbps) / DL (100 Mbps) @Bandwidth 20M (CAT3)

Supported bands

- GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900
- 3G (UMTS/HSPA/HSPA+/DC-HSPA+): 3G FDD I (2100), II (1900), IV (AWS), V (850) and VIII (900)
- Receiver Diversity: 3G FDD I, 3G FDD II, 3G FDD IV, 3G FDD V and 3G FDD VIII
- LTE (FDD): B1, B2, B3, B4, B5, B7, B8, B13, B17 & B20
- MIMO: LTE: DL 2*2 MIMO

Table 8. Supported Systems and Frequency Bands, sorted by TX frequency

GSM/GPRS /EDGE	3G	LTE (FDD)	Transmit Band [MHz]	Receive Band [MHz]	Duplex Dist. [MHz]
		B17	704 … 716	734 … 746	30
		B13	777 … 787	746 … 756	31
GSM850	FDD V	B5	824 … 849	869 … 894	45

		B20	832 … 862	791 … 821	41
GSM900	FDD VIII	B8	880 … 915	925 … 960	45
	FDD IV (AWS)	B4	1710 … 1755	2110 … 2155	260
GSM1800		B3	1710 … 1785	1805 … 1880	95
GSM1900	FDD II	B2	1850 … 1910	1930 … 1990	80
	FDD I	B1	1920 … 1980	2110 … 2170	190
		B7	2500 … 2570	2620 … 2690	120

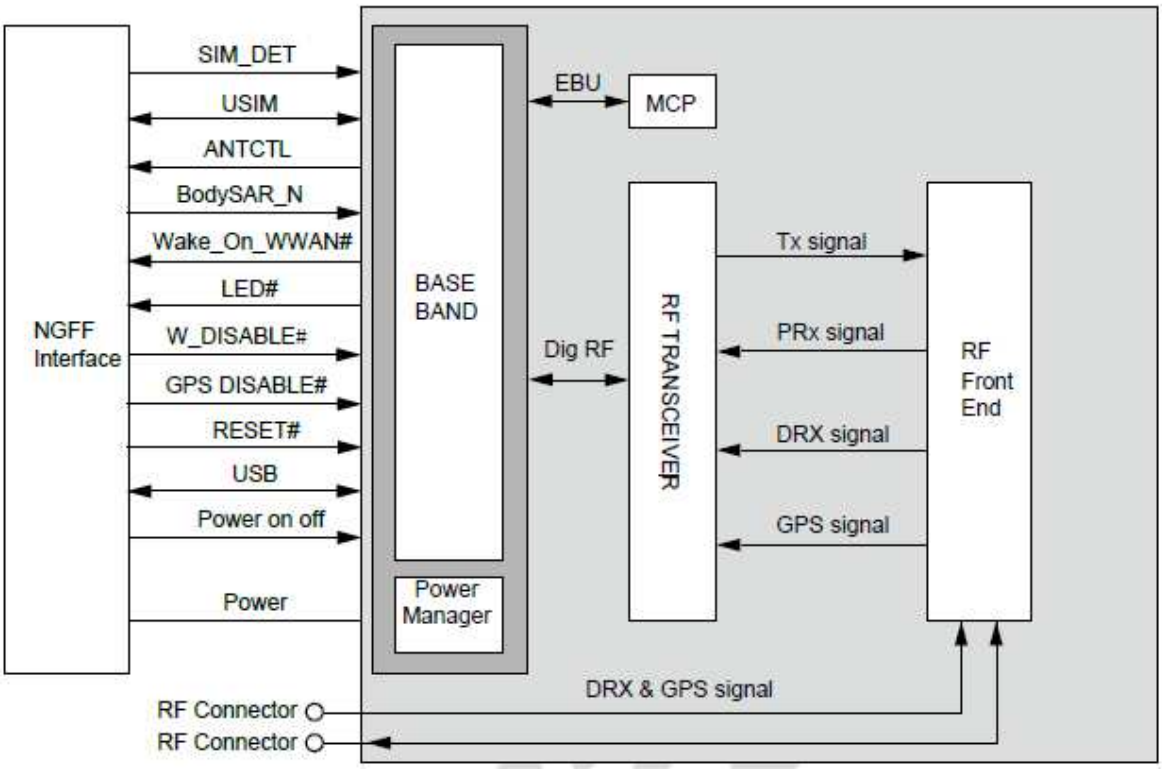
Huawei ME936 Approvals & Certifications

- FCC
- GCF
- PTCRB
- RoHS/Halogen free

3.9.3 LTE / Japan – Huawei ME906J with DoCoMo-FW

Inari WWAN option LTA has LTE Modem Module Huawei ME906J (with NTT DoCoMo Firmware) for 3G/LTE cellular data communication. There is a single flexible antenna for WCDMA & LTE and secondary receive diversity flexible antenna for WCDMA & LTE MIMO in Inari. ME906J have also GNSS option, but Inari will use own GNSS Module and therefore ME906J GNSS option is disabled.

Figure 10 below describes circuit block diagram of the ME906J module.



Huawei ME906J, LTE Modem Module (NTT DoCoMo Firmware)

- WCDMA PS: UL (384 kbps) / DL (384 kbps)
- DC-HSPA+: UL (5.76 Mbps) / DL (42 Mbps)
- LTE FDD: UL (50 Mbps) / DL (100 Mbps) @Bandwidth 20M (CAT3)

Supported bands (NTT DoCoMo Firmware)

- 3G (UMTS/HSPA/HSPA+/DC-HSPA+): B1, B5, B6 & B19
- Receiver Diversity: B1, B5, B6 & B19
- LTE (FDD): B1, B19 & B21
- MIMO: LTE: DL 2*2 MIMO

Table 9. Supported Systems and Frequency Bands for NTT DoCoMo-FW, sorted by TX frequency

3G	LTE (FDD)	Transmit Band [MHz]	Receive Band [MHz]	Duplex Dist. [MHz]

FDD V (B5)		824 … 849	869 … 894	45
FDD VI (B6)		830 … 840	875 … 885	45
FDD XIX (B19)	B19	830 … 845	875 … 890	45
	B21	1447,9 … 1462,9	1495,9 … 1510,9	48
FDD I (B1)	B1	1920 … 1980	2110 … 2170	190

Huawei ME906J Approvals & Certifications

- GCF
- TELEC/JATE
- Operator TA: KDDI, NTT DOCOMO
- RoHS/Halogen free

3.9.4 LTE / USA – Sierra Wireless EM7355

Inari WWAN option LTD has LTE Modem Module Sierra Wireless EM7355 for 2G/3G(WCDMA&CDMA)/LTE cellular data communication. There is a single flexible antenna for GSM, CDMA, WCDMA & LTE and secondary receive diversity flexible antenna for CDMA, WCDMA & LTE in Inari. EM7355 have also GNSS option, but Inari will use own GNSS Module and therefore EM7355 GNSS option is disabled.

Figures 11 and 12 below describes circuit block diagrams of the EM7355 module.

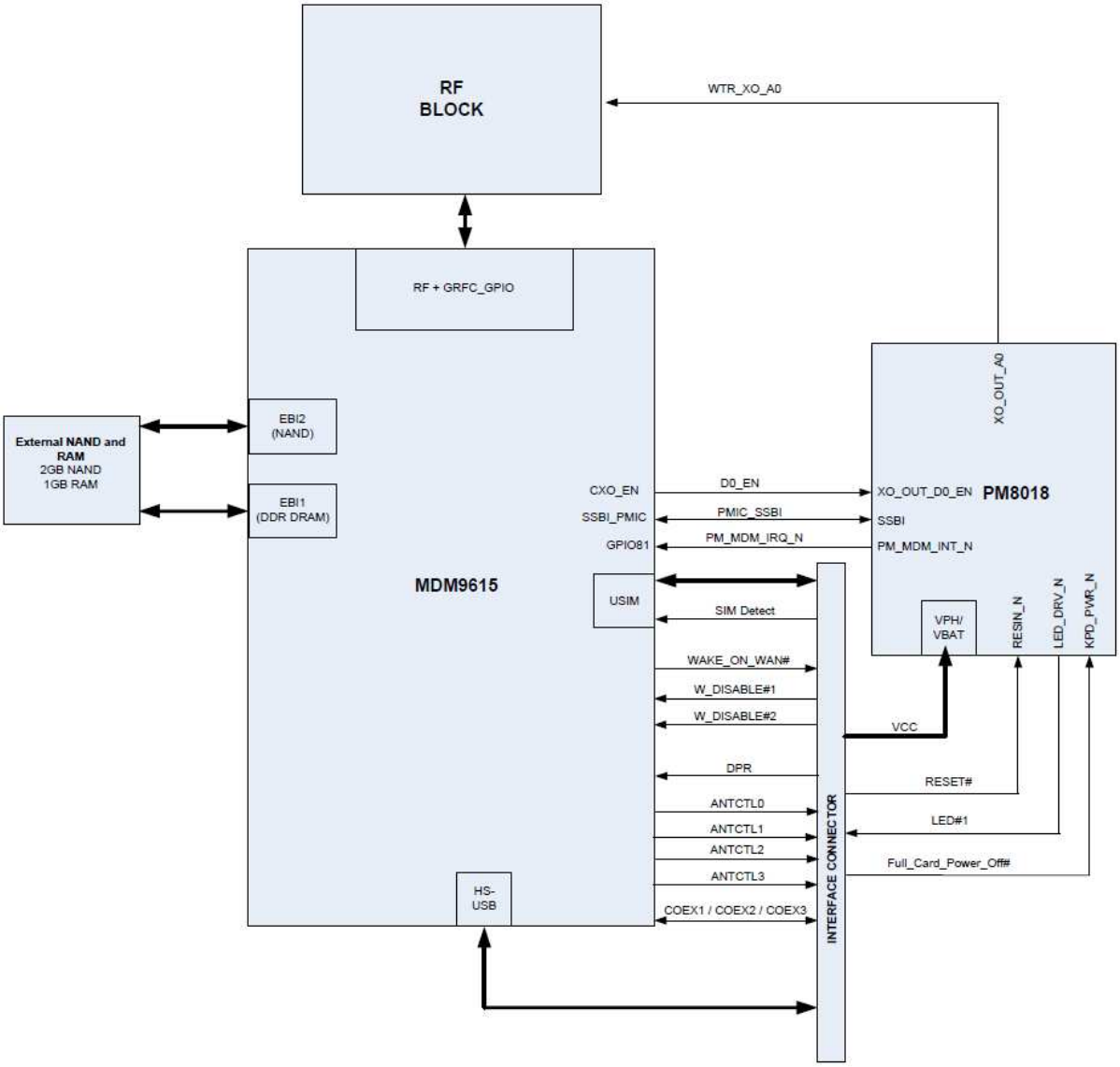


Figure 11: System block diagram

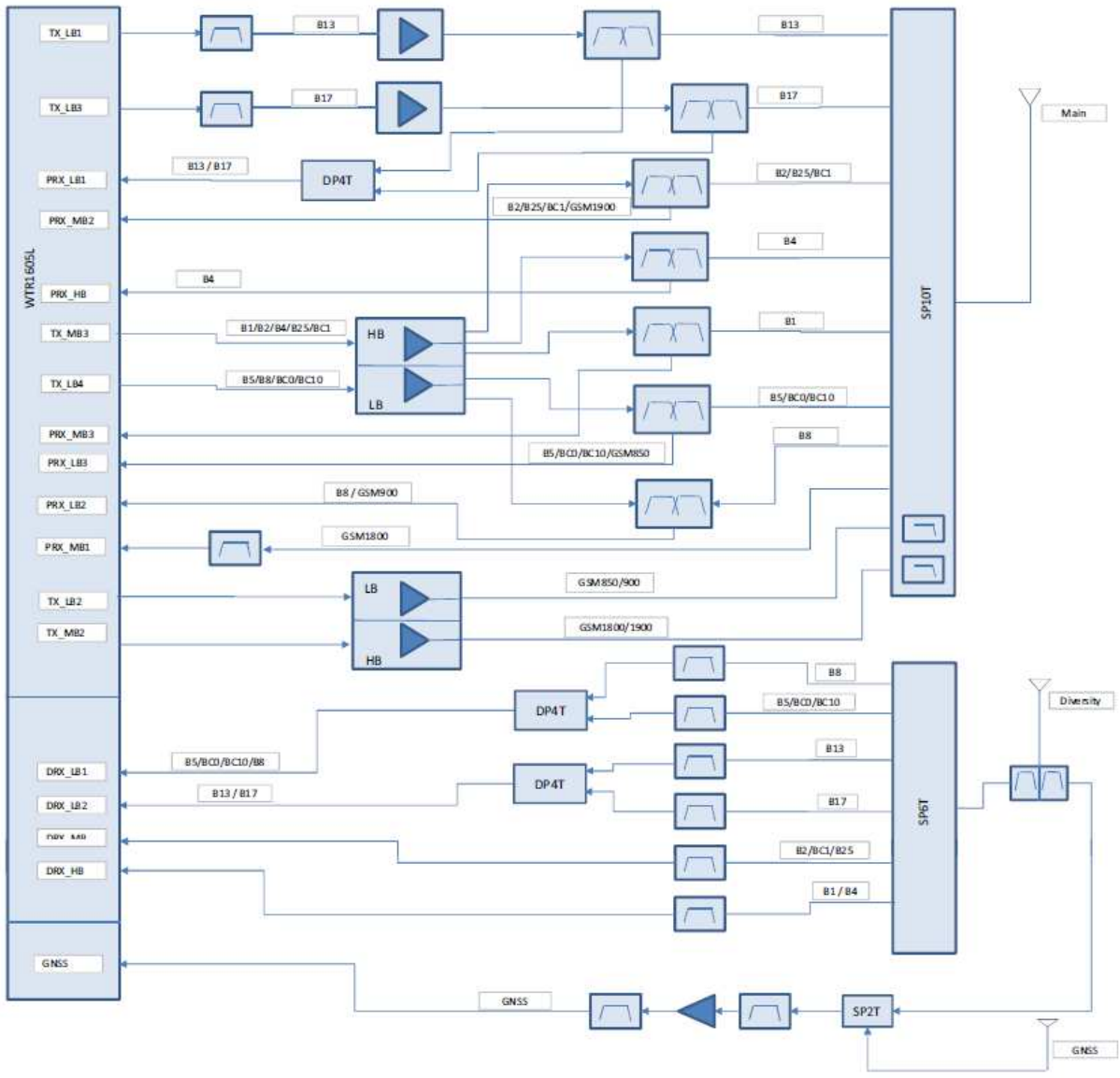


Figure 12: Expanded RF block diagram

Sierra Wireless EM7355 Modem Module

- EDGE: EDGE throughput up to 236 kbps
- DC-HSPA+: UL (5.76 Mbps) / DL (42 Mbps)
- CDMA IS-856 (1xEV-DO Release A)
  Up to 3.1 Mbps forward channel
  Up to 1.8 Mbps reverse channel
- CDMA IS-2000 Up to 153 kbps, simultaneous forward/reverse
- LTE FDD: UL (50 Mbps) / DL (100 Mbps) @Bandwidth 20M (CAT3)

Supported bands

- GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900
- 3G (UMTS/HSPA/HSPA+/DC-HSPA+): B1, B2, B4, B5 & B8
- 3G RX Diversity: B1, B2, B4, B5 & B8
- CDMA (EVDO Release 0 & EVDO Release A): BC0, BC1 & BC10
- CDMA RX Diversity: BC0, BC1 & BC10
- LTE (FDD): B2, B4, B5, B13, B17 & B25
- LTE MIMO: B2, B4, B5, B13, B17 & B25 / DL 2*2 MIMO

Table 10. Supported Systems and Frequency Bands, sorted by TX frequency

GSM/GPRS /EDGE	3G	CDMA (EVDO Rel 0 & A)	LTE (FDD)	Transmit Band [MHz]	Receive Band [MHz]	Duplex Dist. [MHz]
			B17	704 … 716	734 … 746	30
			B13	777 … 787	746 … 756	31
		BC10		817 … 824	861 … 869	45
GSM850	FDD V	BC0	B5	824 … 849	869 … 894	45
				832 … 862	791 … 821	41
GSM900	FDD VIII			880 … 915	925 … 960	45
	FDD IV		B4	1710 … 1755	2110 … 2155	260
GSM1800				1710 … 1785	1805 … 1880	95
GSM1900	FDD II	BC1	B2	1850 … 1910	1930 … 1990	80
			B25	1850 … 1915	1930 … 1995	80
	FDD I			1920 … 1980	2110 … 2170	190

Sierra Wireless EM7355 Approvals & Certifications

- FCC/IC
- NCC
- CE
- GCF
- PTCRB
- CDG2
- Operator TA: Verizon, AT&T, Sprint, Telus, Rogers

3. 10. Battery management

Inari has a removable battery with fuel gauge IC inside the battery pack. Battery can be charged at external charger and system has up-to-date charge status as soon as the battery is inserted to tablet device.

Inari battery charging is managed by microcontroller, which takes care of the charging IC initializations, fuel gauge monitoring and communication between CPU and charging subsystems. Inari supports standard micro-USB charger and Inari specific charging/docking stations.

Inari battery main specifications are listed in Table 10.

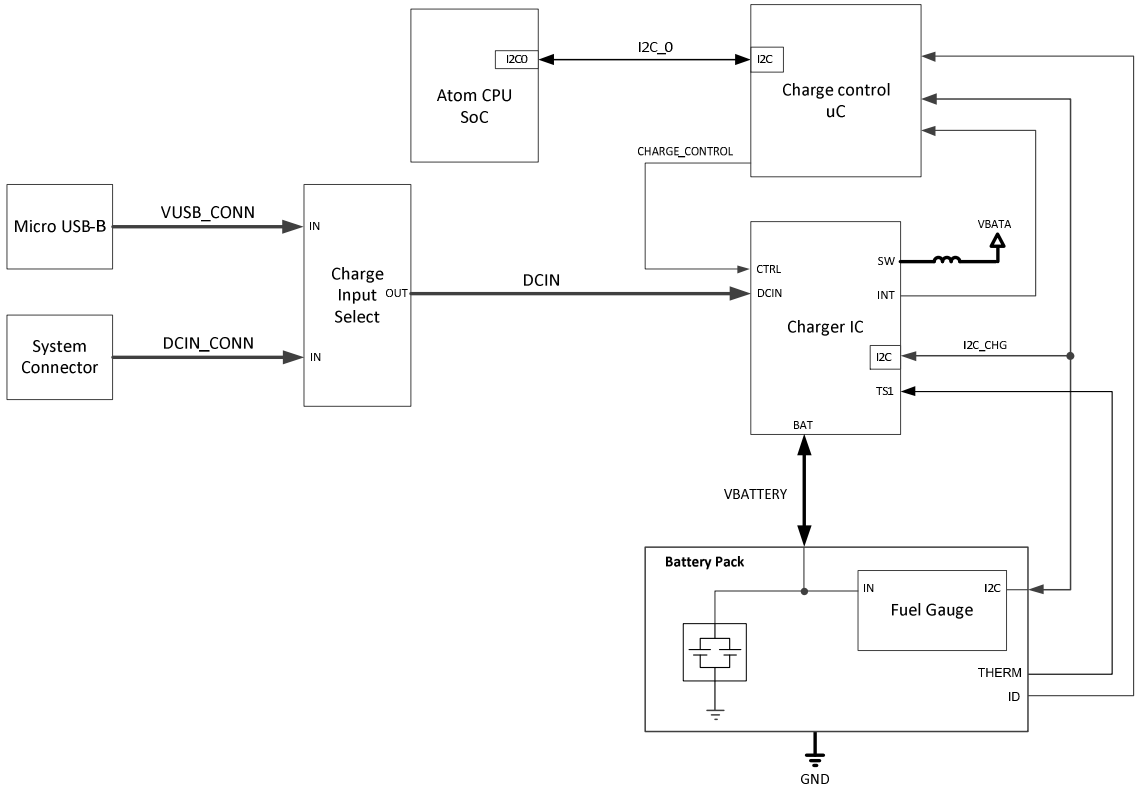


Figure 13. Charging subsystem

Table 11. Inari battery specification

Structure	1S2P Li-Po
Nominal voltage	3.8V
Capacity	5900 mAh / 22.1 Wh
Standard charge voltage	4.35 V
Charge temperature	0 to 45 °C

Operation temperature	-20 to 60 °C

3. 11. Thermal management

Thermal management of the unit consists of IC internal temperature measurement features and NTC resistors that monitor battery and PCB temperature at different locations.

Battery temperature is monitored by charging controller and charge current and discharge is limited based on battery and ambient temperature.

System thermal management adjusts screen brightness, charge current and CPU speed based on the temperature readings.

4. Features

Hardware	
Processor	Intel Atom Z3745 or Z3795 Quad-core CPU
Memory	LPDDR3 1067 MHz 2GB or 4GB
Storage	eMMC v4.5 32GB, 64GB or 128GB MiroSD memory card (SD3.0 / SDXC) up to 2TB
Power Management	Battery capacity : 22Wh, Removable Charging : Micro-USB 5V or Docking interface 5-17V
Connectivity	Connectors : Audio jack 3.5mm, USB 2.0 A-type, Docking connector 40 pin Bluetooth : Bluetooth 4.0 WiFi : WLAN IEEE 802.11 a/b/g and 2x2 802.11n NFC : Yes **3G version:** Huawei MU736 • GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900 • 3G (UMTS/HSPA/HSPA+): 3G FDD I (2100), II (1900), IV (AWS), V (850) and VIII (900) • Receiver Diversity: GSM850, E-GSM900, PCS1900, FDD I, FDD II, FDD V and FDD VIII **LTE versions:** Huawei ME936 (Global/EU) • GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900 • 3G (UMTS/HSPA/HSPA+/DC-HSPA+): 3G FDD I (2100), II (1900), IV (AWS), V (850) and VIII (900) • Receiver Diversity: 3G FDD I, 3G FDD II, 3G FDD IV, 3G FDD V and 3G FDD VIII • LTE (FDD): B1, B2, B3, B4, B5, B7, B8, B13, B17 & B20 • MIMO: LTE: DL 2*2 MIMO Huawei ME906J (Japan DoCoMo) • 3G (UMTS/HSPA/HSPA+/DC-HSPA+): B1, B5, B6 & B19 • Receiver Diversity: B1, B5, B6 & B19 • LTE (FDD): B1, B19 & B21 • MIMO: LTE: DL 2*2 MIMO Sierra Wireless EM7355 (US) • GSM/GPRS/EDGE: GSM850, E-GSM900, DCS1800 and PCS1900 • 3G (UMTS/HSPA/HSPA+/DC-HSPA+): B1, B2, B4, B5 & B8 • 3G RX Diversity: B1, B2, B4, B5 & B8 • CDMA (EVDO Release 0 & EVDO Release A): BC0, BC1 & BC10 • CDMA RX Diversity: BC0, BC1 & BC10 • LTE (FDD): B2, B4, B5, B13, B17 & B25 • LTE MIMO: B2, B4, B5, B13, B17 & B25 / DL 2*2 MIMO

Display and User Interface	Display Size : 8.3" Display Resolution : 1920 x 1200 Touch screen : Capacitive Multipoint-Touch
Cameras	Main camera : 8 Mpix Video call camera : 2.1 Mpix
Sensors	Ambient light 9-axis motion sensing (Accelerometer, Magnetometer, Gyroscope) Capacitive proximity
Location	GPS, Glonass
Dimensions	150.1 x 227.8 x 12.5 mm
Weight	555 g

Change History

Version (Rev X)	Date (YYYY-MM-DD)	Author	Change Reason or CR No.	Modify Contents and Location
Rev A				
Rev H	24 Feb 2014	Sami Kolanen		Chapter 3.8 updated
Rev I	24 Mar 2014	Toni Honkanen		Figure 1 updated
Rev J	4 Apr 2014	Marko Paasila		Chapter 3.9.2 updated
Rev K	20 Aug 2014	Marko Paasila	New LTE Modem module added for Japan market	Figure 1 updated & Chapter 3.9.3 added
Rev L	14 Jan 2015	Marko Paasila	New LTE Modem module added for USA market	Figure 1 updated & Chapter 3.9.4 added
Rev M	26 Feb 2015	Marko Paasila		Chapter 4 (connectivity) updated