

iCN700 Series

FCC

List of contents

	Page / section
Contents	Page 1
Make [Trade name of manufacturer]	Page 2
Product type and general commercial descriptions	Page 2
Name and address of manufacturer	Page 2
Location and method of affixing the EEC approval mark	Page 2
Addresses of assembly plants	Page 2
ESA comment	Page 2
Any restrictions of use and conditions of fitting	Page 2

Appendix 1

ESA types, variants and labeling	Section A1
Rated voltage and grounding/polarity requirements	Section A2
Circuit / block diagrams, and PCB layout	Section A3
Casing material and shape	Section A4
Type and length of wiring loom	Section A5
Identification of component	Section A6
Details of filters, screening to improve EMC performance	Section A7
Clock frequencies	Section A8
Differences between ICN720 and ICN750	Section A9

Make [Trade name of manufacturer]

Navman NZ Limited

Product type and general commercial descriptions

Navman's iCN700 Series is a GPS (Global Positioning System) in vehicle road navigation device with 2D and/or 3D (dimensional) map display and turn by turn visual and voice instructions. The iCN700 Series is supplied with windscreen mount hardware and a 12Vdc cigarette lighter plug supply. See Appendix 1 for further variant information..

Name and address of manufacturer

Navman NZ Limited, 17 Kawana St, North Shore, Auckland, New Zealand

Location and method of affixing the EEC approval mark

The EEC approval mark will be affixed to the main body of the unit

Addresses of assembly plants

Group Sense PDA Ltd
Cai Wu Industrial Park,
Wusha Chang An,
Donguan, P.R.C.

Tel: (0769) 554 6828

ESA comment

The ESA shall be approved as a component.

Any restrictions of use and conditions of fitting

Appendix 1

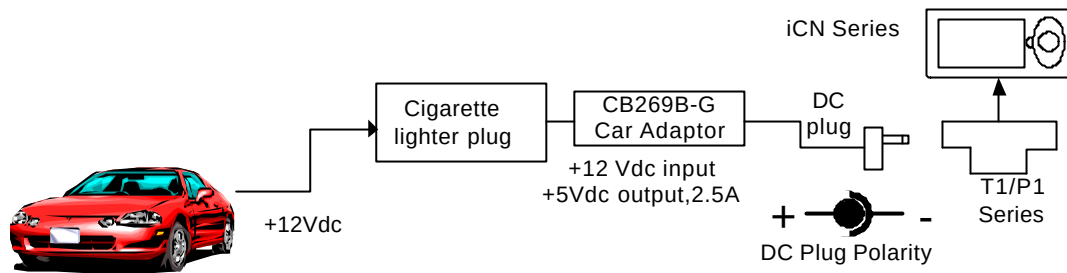
Section A1 ESA types, variants and labeling

The electronic sub-assemblies for the iCN700 Series product are the following: -

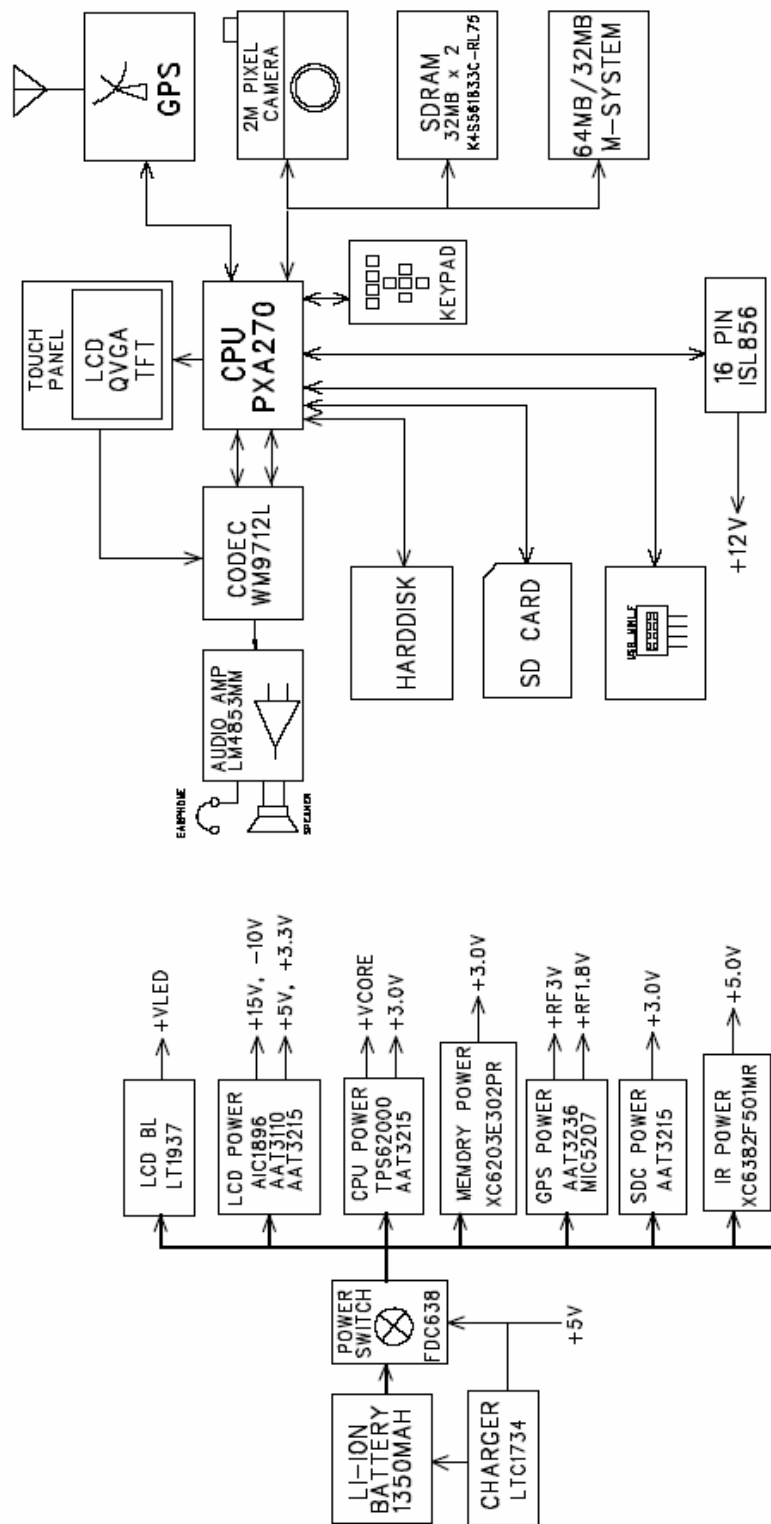
- iCN700 Series System Board
- 1803 GPS Module
- 3.7V 1890mA/hr Li-ion rechargeable battery
- LCD screen – Samsung LTP400WQ-F01 4” TFT
- Speaker 4Ω 1W
- Camera module 1.3Mp
- Seagate Hard Drive 4Gig
- GPS Antenna flag
- iCN700Series will be imprinted on the front panel of all units. The units in this series will be technically and functionally identical although carry differing sub designations iCN7?? (for example iCN720, iCN750) depending on a couple of features that will be listed in a table at the end of this document.

- Appendix 1 [continued]

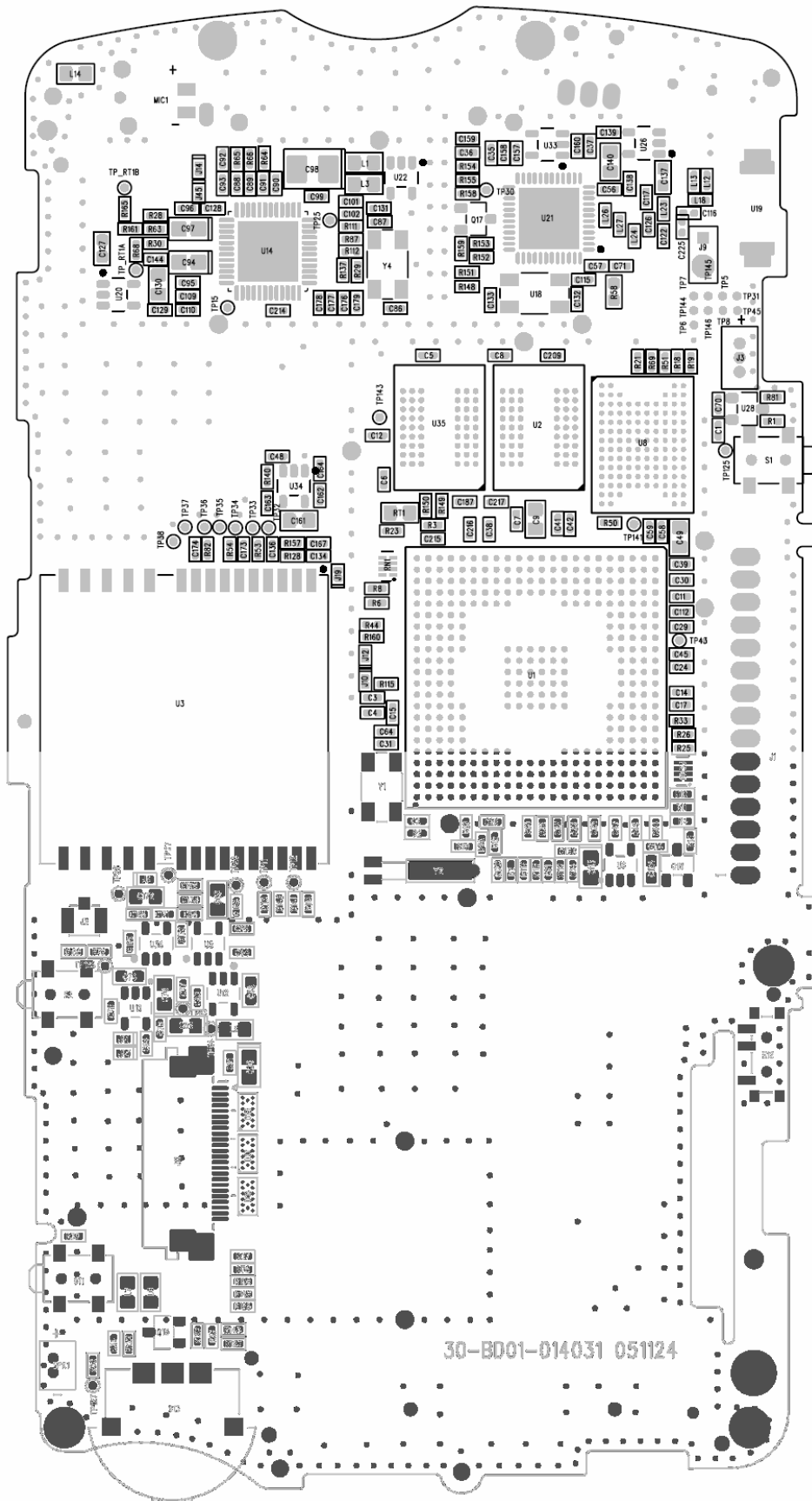
Section A 2 Rated voltage and grounding/polarity requirements



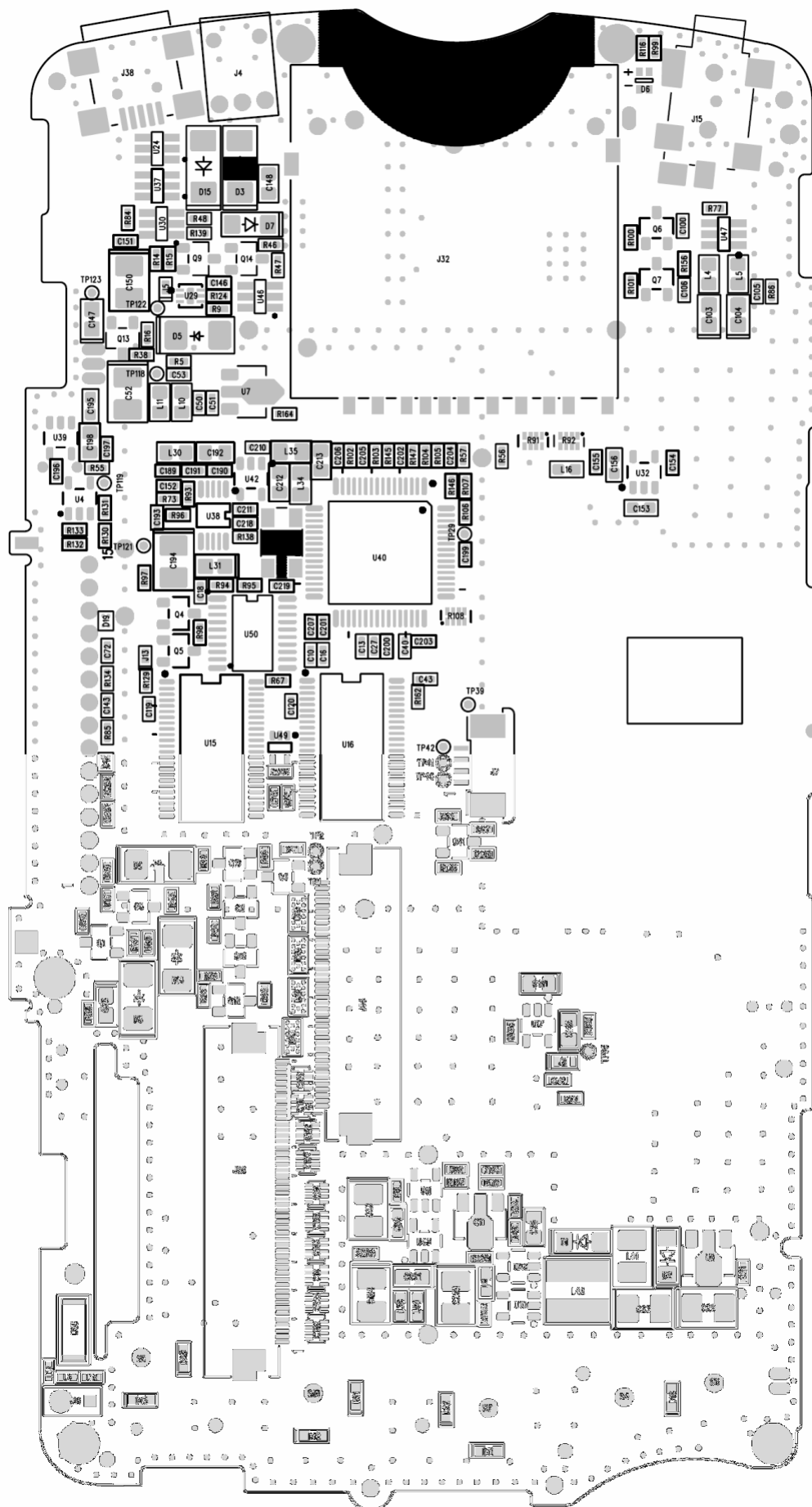
Appendix 1 [continued] Section A3 Circuit / block diagrams, and PCB layouts



Layout



PCB, Topview



Appendix 1 [continued]

Section A4 Casing material and shape



Case Material:

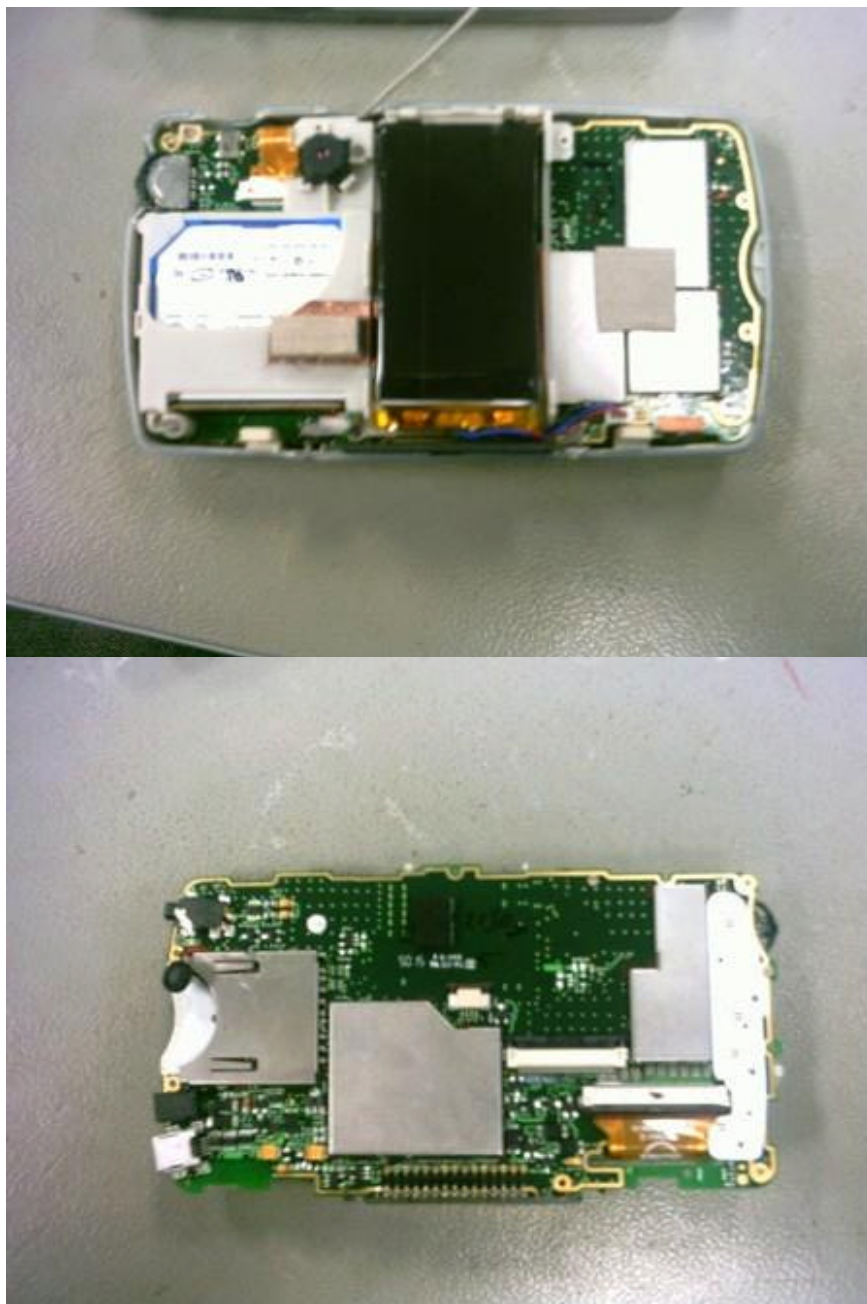
Plastic and Metal panels

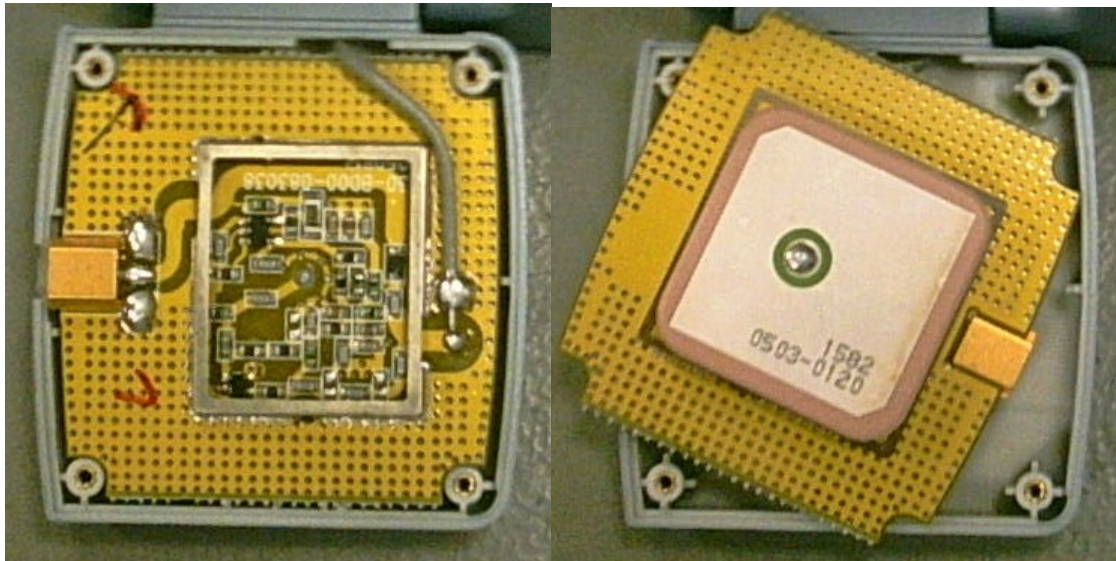
Appendix 1 [continued]

Section A5 Type and length of wiring looms

Not applicable.

Section A6 Identification of components





GPS Antenna



GPS Receiver Module

Appendix 1 [continued]

Section A7 Details of filters, screening to improve EMC performance

The following circuit design principles and components were used to minimize EMI on the iCN700:-

- Slowest clock rate and risetime for acceptable performance.
- All components used are surface mount components and IC sockets were avoided.
- Multiple RF bypass capacitors were used on all power supply pins.
- Solid power and ground planes were used on the PCB.
- High speed tracks were buried inside the board.
- The address, data and high-speed control lines were implemented as transmission lines and terminated with the characteristics impedance.
- RF beads, low pass filters and overvoltage transient protection components protected external I/O lines.

The length of cables and connectors was minimized.

EMI shielding was achieved in the iCN700 by the following measures: -

- Vias were used to stitch the top and bottom layer ground planes together on PCB.
- Shield cans were used to cover potential EMC producing components.

EMI reduction techniques used in the iCN700 PCB design include: -

- Multi layer PCB used.
- Multiple power supply bypass capacitors.

Pre-compliance testing to CE and e-Mark standards performed prior to product qualifications.

Appendix 1 [continued]

Section A8 Clock frequencies

1803 GPS Module Clocks

TCXO Frequency	24.5535 MHz
First LO	1565.97 MHz
Receiver Frequency	1575.42 MHz (commonly referred to as L1)
1 st IF	9.45 MHz
Real Time Clock crystal	32.768 KHz.

iCN700 Series System Board Clocks

Microprocessor Frequency	312MHz
SDRAM Clock Frequency	104MHz
Base Clock Frequency	13MHz
Audio Codec	24. 576MHz
USB Crystal	30MHz
RTC	32.768KHz
DOT_CLK	9MHz.

Section A9 Differences between ICN720 and ICN750

	iCN720	iCN750
Labels	ICN720	ICN750
Mass Storage	CF card	Hard drive
Battery	1350mAh	1890mAh
USB 2.0	No (only USB 1.1)	Yes