

Date	Rev	Revision Record
07/05/2012	1	Initial Release
11/09/2012	2	New artwork and UPC
1/16/13	3	IMEI range updated
2/28/13	A	Artwork & Rev A release
5/14/13	B	ECN 72874
8/28/13	C	ECN 73122
10/15/14	D	ECN 73656

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This document contains artwork files.

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1.0 INTRODUCTION

1.1 PURPOSE/SCOPE

1.1.1 Purpose

This document describes and defines the label specifications for the ThurayaIP+ 9104 terminals. The 9104 terminal includes a core module board, an interface board, an internal antenna and a battery.

1.1.2 Scope

This document is limited in scope to the 9104 terminal marking specification.

1.2 REVISION HISTORY

Table 1-1: Revision History

Revision	Description
1	Initial Release
2	Updated artwork files and added UPC code
3	Updated the range of IMEIs for use with production terminals.
A	Updated artwork, released to rev A.
B	Add ITU GMPCS/MoU symbol to chassis and carton artwork.
C	ECN 73122: change serial number range from 010000-999999 to 010000-019999, added revisions to artwork figures.
D	Changed Production label artwork for new FCCID: K3YHNS9104

1.3 APPLICABLE DOCUMENTS

1.3.1 Applicable External Documents

Note: Please apply latest revision of document listed in Table 1-2.

Table 1-2: Applicable External Documents

Item #	Document #	Rev.	Description	Entity Controlling Document
1	Directive 2005/20/EC	Latest	DIRECTIVE 2005/20/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2005 amending Directive 94/62/EC on packaging and packaging waste	Europa - http://ec.europa.eu/enterprise/newapproach/standardization/harmstds/reflist.html
2	Directive 2002/95/EC	Latest	DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - http://europa.eu/eur-lex/pri/en/oj/dat/2003/l_037/l_03720030213en00190023.pdf
3	Directive 2003/108/EC	Latest	Directive 2003/108/EC of the European Parliament and of the Council of 8 December 2003 amending Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)	Europa - http://ec.europa.eu/enterprise/newapproach/standardization/harmstds/reflist.html

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1.3.2 Applicable Internal Documents

Note: Please apply latest revision of document listed in Table 1-3.

Table 1-3: Applicable Internal Documents

Item #	Document #	Description	Entity Controlling Document
1	1037304	Document Process Flow	Copies available from Configuration Management, Hughes Network Systems, LLC, 11717 Exploration Lane, Germantown MD 20876
2	1038512	COMPLIANCE ENGINEERING PROCEDURE	
3	1038660	HW ENG, Terms, Acronyms, and Definitions	
4	3500747	ThurayaIP+ (V2) 9104 Production Test Requirements	

Note: Copies of documents in this section can be requested from Hughes Network Systems, LLC, Purchasing Department.

1.4 TERMS, ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

Reference: 1038660 for approved entries to this section and additional terms, acronyms, and definitions.

Table 1-4: Terms, Abbreviations, Acronyms, and Definitions

Terms/Acronym	Definition/Descriptions
AFR	Annualized Failure Rate
Cpk	Process Capability index ('equivalent') taking account of off-centeredness: effectively the Cp for a centered process producing a similar level of defects - the ratio between permissible deviation, measured from the mean value to the nearest specific limit of acceptability, and the actual one-sided 3 x sigma spread of the process. As a formula, Cpk = either (USL-Mean)/(3 x sigma) or (Mean-LSL)/(3 x sigma) whichever is the smaller (i.e. depending on whether the shift is up or down). Note this ignores the vanishingly small probability of defects at the opposite end of the tolerance range. Cpk of at least 1.33 is desired.
CPL	Critical Part List
DOA	Dead on Arrival
DPMO	Defects per Million Opportunities
Desc.	Description
HBM	Human Body Model
HNS	Hughes Network Systems, LLC
JEDEC	Joint Electron Devices Engineering Council
LLC	Limited Liability Corporation
MAT	Material
MES	Material Engineering
MPN	Manufacturer Part Number
MVT	Manufacturing Verification Test
PBB	Polybrominated Biphenyls
PBDE	Polybrominated Diphenyl Ethers
PCBA	Printed Circuit Board Assembly
PCCP	Product Characteristic and Compliance Plan
ppm	Part Per Million – The Electrical and Mechanical failure rate, outgoing.
RMA	Return Material Authorization
SCD	Specification Control Document
SQC	Statistical Quality Control
WEEE	Waste Electrical and Electronic Equipment

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2.0 OVERVIEW

The core module CCA shall be assigned an IMEI prior to “packout” at the end of the production line. Each unit must be uniquely identified for in-plant process control, data collection, warranty return tracking, discrepant material, etc. All barcode labels shall be accompanied by human readable text. The labels shall be printed near real time under QMS control, applied, and verified to be a non-duplicate. All label content specified in this document and in the label artwork will be factory printed.

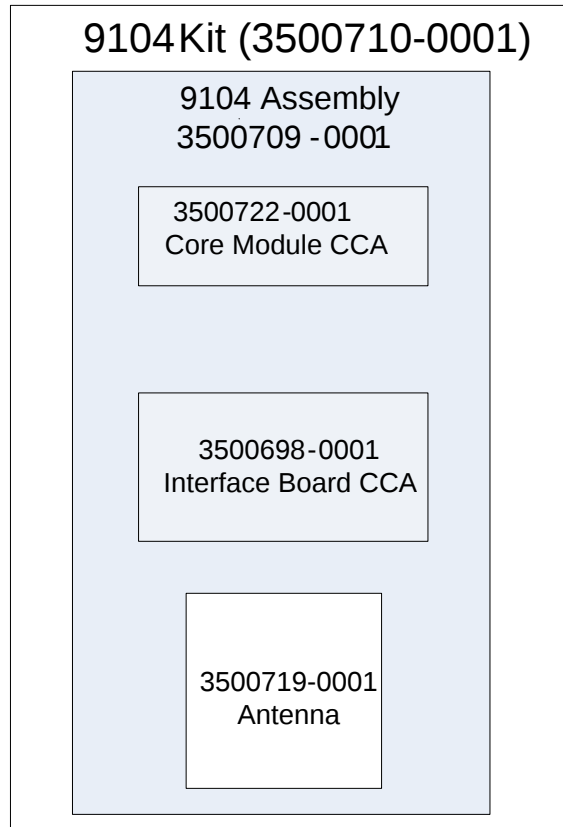


Figure 2-1: 9104 Kit breakdown

3.0 GENERAL

3.1 MARKINGS

All human readable markings must be clear and legible when viewed with normal vision at a distance of twelve inches from eye contact. All barcodes will be code 93 compliant. A minimum 200 dpi printer shall be used to print the labels.

3.2 FONT

All fonts, text height and line thickness shall be consistent with reference label drawings.

3.3 IMEI DEFINITION (PRODUCTION)

The production IMEI number has a length of 15 characters. The IMEI, from character position left to right, is defined in the table below. The 15th digit is the IMEI check digit which is to be calculated according to 3GPP TS 23.003. A dash separates each grouping of numbers when the IMEI is printed in human readable form.

Table 3-1: IMEI Definition (Production)

Terminal Assembly Part #	CM Board Part #	TAC (8 digits)	SN (6 digits) Range
3500709-0001	3500722-0001	35793201 (Hughes 9104)	010000 – 019999

3.4 IMEI DEFINITION (PRE-PRODUCTION)

The pre-production unit IMEI number has a length of 15 characters. The IMEI, from character position left to right, is defined in the table below. The 15th digit is the IMEI check digit which is to be calculated according to 3GPP TS 23.003. A dash separates each grouping of numbers when the IMEI is printed in human readable form. This is to be used for all pre-production units of all dash numbers.

Table 3-2: IMEI Definition (Pre-Production)

9104 Assembly Part #	CM Board Part #	TAC (8 digits)	SN (6 digits) Range
3500709-0001	3500722-0001	00440164	000001 - 500000

3.5 SERIAL NUMBER

The serial number is assigned in the factory and forms part of the IMEI number. The serial number of the module board (3500722-0001) that is assigned in the factory, can be located by looking at digits 5 through 14 of the IMEI number.

Example:

IMEI number 3579 3201011234 3

Module Board Serial Number 3201011234

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3.6 LABEL CONTENTS

The following table describes the label part number and artwork number to be used for the 9104 carton, the 9104 chassis assembly, and its core module and interface boards.

The physical label used for the 9104 carton is 3003218-0001, which is 4.150" by 2.165".

The physical label used for the 9104 chassis assembly is 3500147-0001, which is 2.756" (70mm) by 0.787" (20mm)

The 2 physical labels used for the core module CCA are 9500189-0001, which is 1.5" by 0.25", and 9500189-0002, which is 1" by 0.187"

The 2 physical labels used for the interface board CCA are 9500189-0001, which is 1.5" by 0.25", and 9500189-0002, which is 1" by 0.187"

Only the 9104 carton label and 9104 chassis assembly label contain artwork.

Table 3-3: Label Artwork Cross-Reference

Artwork	Uses blank label	Used on	Usage
3500746-0040 Rev. B	3500147-0001	3500709-0001	Thuraya 9104 Chassis Label (Pre-Production)
3500746-0041 Rev. C	3500147-0001	3500709-0001	Thuraya 9104 Chassis Label (Production)
3500746-0042 Rev. B	3003218-0001	3500710-0001	Thuraya 9104 Carton Label (Pre-Production)
3500746-0043 Rev. C	3003218-0001	3500710-0001	Thuraya 9104 Carton Label (Production)

3.6.1 9104 Product

All 9104 assembly product variants are defined in the table below:

Table 3-4: 9104 Product Variants

Model Number	Product MCN	Description	Wi-Fi and FCC Marking applicable
9104	3500709-0001	Main Assembly	Yes

3.6.2 Core Module CCA Label Contents

General Information		Fields to be Printed		Notes
Description	Blank Label MCN	Barcode Field	Human Readable Text Field	
Module board (both pre-production and production)	9500189-0001	Module board serial number per section 3.5	Module board serial number per section 3.5 3.5	
	9500189-0002	MCN (3500772-0001) and CCA revision number	MCN (35000772-0001) and CCA revision number	

Table 3-5: Core Module CCA Label Content

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3.6.3 Interface Board CCA Label Contents

General Information		Fields to be Printed		Notes
Description	Blank Label MCN	Barcode Field	Human Readable Text Field	
Interface board (both pre-production and production)	9500189-0001	7 digit alpha-numeric tracking ID	7 digit alpha-numeric tracking ID	
	9500189-0002	MCN (3500698-0001) and CCA revision number	MCN (35000698-0001) and CCA revision number	

Table 3-6: Interface Board CCA Label Content

3.6.4 9104 Assembly Chassis Label Contents

The following table describes the fields to be printed on the product label which is mounted on the chassis of the 3500709-0001 assembly

- “Model: 9104”
- MCN barcode
- MCN number and Rev number
- IMEI bar code
- IMEI number
- “Manufactured in the USA by Hughes.”
- "ThurayaIP+"
- "Use only power adapters listed in the user guide."
- Wi-Fi, WEEE and CE with alert symbol marking, for production assemblies only.
- FCC ID and FCC Part 15 rules, for production assemblies only.

Table 3-7: Chassis Label

General Information			Fields to be Printed	
Description	Artwork MCN	Blank Label MCN	MCN Barcode Field	IMEI Barcode Field
9104 Assembly (production)	3500746-0041	3500147-0001	3500709-0001	See section 3.3
9104 Assembly (pre-production)	3500746-0040	3500147-0001	3500709-0001	See section 3.4

3.6.5 9104 Carton Label Contents

The 9104 carton label shall include the following information:

- “Model: 9104”
- “Input 19V 3.4A”
- MCN barcode

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- MCN number and Rev number
- IMEI bar code
- IMEI number
- “Manufactured in USA by Hughes.”
- Wi-Fi, WEEE and CE with alert symbol marking, for production assemblies only.
- FCC ID, for production assemblies only.
- UPC bar code and UPC number “7 08986 21702 2”

Table 3-8: Carton Label

General Information			Fields to be Printed	
Description	Artwork MCN	Blank Label MCN	MCN Barcode Field	IMEI Barcode Field
9104 Assembly Carton (production)	3500746-0043	3003218-0001	3500710-0001	See section 3.3
9104 Assembly Carton (pre-production)	3500746-0042	3003218-0001	3500710-0001	See section 3.4

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3.6.6 Labels

Table 3-9: 9104 Series Label Artwork MCN List

Label Artwork MCN	Label Description	Label for Product MCN
3500746-0041	9104 Chassis Label, production	3500709-0001
3500746-0040	9104 Chassis Label, pre-production	3500709-0001
3500746-0043	9104 Carton Label, production	3500710-0001
3500746-0042	9104 Carton Label, pre-production	3500710-0001

Production Label for 9104 Chassis

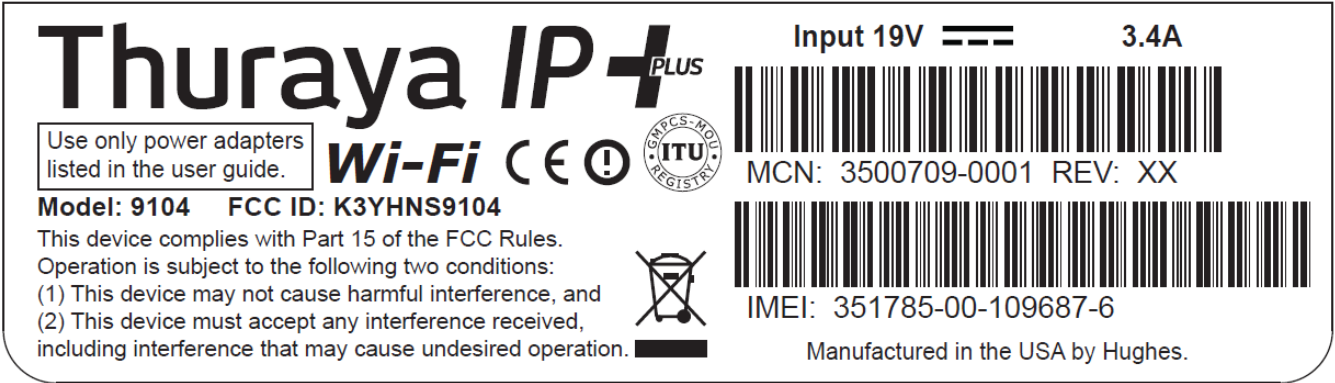


Figure 3-1: Artwork 3500746-0041 Rev C

Pre-Production Label for 9104 Chassis

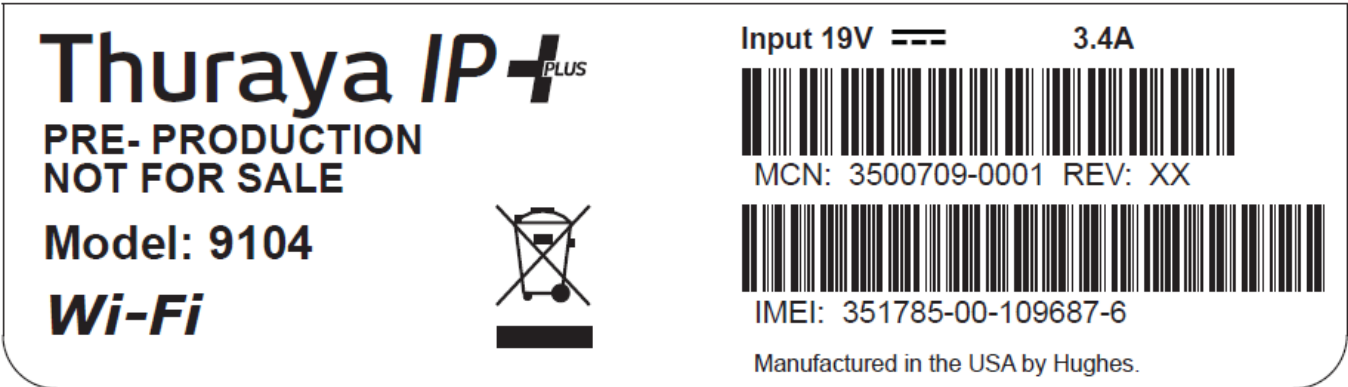


Figure 3-2: Artwork 3500746-0040 Rev B

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Production Label for 9104 Carton


MCN: 3500709-0001
REV: A


IMEI: 351785-00-109687-6
Model: 9104 FCC ID: K3YHNS9104


IMEI: 351785-00-109687-6

Manufactured in the USA by Hughes.

Thuraya *IP+* PLUS

Wi-Fi  

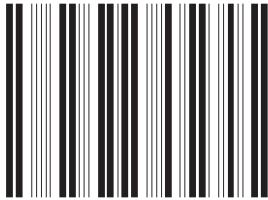

7 08986 21702 2

Figure 3-3: Artwork 3500746-0043 Rev C

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Pre-Production Label for 9104 Carton



MCN: 3500709-0001
REV: #



IMEI: 351785-00-109687-6
Model: 9104



IMEI: 351785-00-109687-6

Manufactured in the USA by Hughes.

Thuraya IP+^{PLUS}

**PRE-PRODUCTION
NOT FOR SALE**

Wi-Fi



7 08986 21702 2

Figure 3-4: Artwork 3500746-0042 Rev B

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