ASKEY COMPUTER CORP.

SUBJECT **:** **Product Specification**

MODEL **:** **HNH010-D75**

REV **:** **02**

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CONTENTS :

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TABLE OF CONTENTS

● Introduction

The specification defines the product requirement for the HNH010-D75 modem module. The modem is a Home LAN + Controller-less design using Conexant RS7112/RHP56LD chipset for PCI interface that provides HomePNA, Data and Fax communication features described as following:

● Product Specification

➢ Function Requirement

- Home LAN Communication
* Protocols : HomePNA 1.0 Specification
* Data Speed : 1Mbps data rate
* AFE type: Integrated AFE

- Data Communication
* Protocols : V.90, V.34, V.32bis, V.32, V.23, V.22bis, V.22, V.21, Bell212A and Bell103
* Error Correction : V.42, MNP2-4
* Data Compression : V.42bis, MNP5
* Command set : Enhanced TIA/EIA-602 command set
* DTE Speed : 300 to 115200 bps
* Data Format : 10 bits, including start bit, stop bit and parity

- Fax Communication
* Protocols : V.17, V.29, V.27ter, V.21 ch 2
* Fax type : Group 3 compatible
* Command set : TIA/EIA-578 class 1 Fax command set

- Diagnostics Capabilities
* Analog loopback and analog loopback selftest
* Remote digital loopback and remote digital loopback selftest

- Modem operational Characteristics   Under FCC Spec.

* Transmit Level : less than -11 dbm +/- 2 dBm W/O AGC
* Receive sensitivity : -35 dBm +/- 2 dBm Under V.34 mode
* Guard Tone : 550 or 1800 Hz +/- 20 Hz
* Answer Tone : CCITT 2100 Hz +/- 15 Hz
* Bell 2225 Hz +/- 10 Hz
* Dialing Method Under FCC:

    1) Tone dialing

        (A) Symbols : 1 2 3 4 5 6 7 8 9 0 # * A B C D

        (B) Frequency : within +/- 1.5%

        (C) High Group Level : -6 dBm +/- 2 dBm

        (D) Low Group Level : -8 dBm +/- 2 dBm

    2) Pulse dialing

        (A) Duration : 10 pps +/- 2 pps

        (B) M/B ration : 39 +/- 10% or 33 +/- 10%

* Call Progress Tone Detection : 340Hz ~ 640 Hz @ 0 dBm ~ -38 dBm
* Ring detection : 15Hz~68Hz, 30Vrms~150 Vrms, 1~3 sec ON/3~5   sec OFF
* Modem bit error rates : error less than 10E-5 at nominal SNR
* Power consumption :

    1) Sleep mode : 50mW @ +5VDC +/- 5%

    2) Idle mode : 500mW @ +5VDC +/- 5 %

    3) Connection mode : 800mW @ +5VDC +/- 10 %

- Operating Systems

* Windows 2K
* Windows 95 & OSR2
* Windows 98
* Windows NT 4.0
* Windows NT 5.0

- Compatibility Requirements

The modem must reliably connect to popular data modems and fax machines.

- Customer requirements

* Auto dial and auto answer
* ACPI power management
* User selectable country setting through driver

➢ Interface Specification

- DTE interface
The modem provides PCI bus as following definition.
- *PCI SIG Specification 2.2
- *PCI SIG Specification 2.1
- *Meets PC99 Requirements
- *5V and VAUX power Auto switch

- Telephone Network Interface
The RJ-11C type telephone jack.

- Power Management Interface
- *ACPI power management meets PC99
- *PCI SIG Power Management Specification 1.1A
- *D3 cold function supports
- *Supports PME signal to wake up the system when Receives ring signal.

➢ Product Reliability
The calculated MTBF shall be greater than 50000 hours. The calculation shall be made under following assumptions :
Ambient Temperature : 40 degree C, inlet air temperature

➢ Operating Environment
- * Operating temperature : 0 to 50 degree C
- * Shipping and storage temperature : -40 to 65 degree C
- * Operating Humidity : 8% to 80% none-condensing
- * Altitude : 0 to 10000 feet

➢ Mechanical Characteristics

- Dimensions

The modem assembly consists of one 2 layer PCB assembly. The modem is approximately 68.5mm x 145mm.

- Assembly

The polymeric materials used in the modem assembly meet of exceed the requirement of UL 94.

➢ Regulatory standards compliance

The product must compliance with all the following regulatory standards :

* UL1950 3rd Edition
* CSA
* DOC
* FCC part 15 and FCC part 68
* JATE