

ASKEY COMPUTER CORP.

SUBJECT : Product Specification

MODEL : HNH010-D75

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● 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 ratio : 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 or exceed the requirement of UL 94.

➤ **Regulatory standards compliance**

The product must comply with all the following regulatory standards :

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