NEC LinkBird-MX

Test Platform for Evaluation of Vehicular Communications Protocols

Features and Specifications

Hardware

- 64bits MIPS Microprocessor @ 266MHz
- 512MB NAND-Flash,16MB Nor-Flash and 128MB SDRAM
- Test program mode for hardware diagnosis
- Low power consumption
- Compliant to RoHS directive
- Compliance with the Automotive EMC directive (95/54/EC)
- Automotive Interfaces (See **Table.1**)

Software

- Linux kernel 2.6.19
- U-BOOT Boot Loader
- NEC C2X-SDK Communication System and API, providing geographical routing with advanced features, including example applications (See **http://c2x-sdk.neclab.eu**).

Environmental and power requirements

- Storage Temperature: -40ºC to +85ºC
- Operating Temperature: -20ºC to +65ºC
- 12VDC @ 400mA max (Typ.)

Network Interfaces

- Embedded Fast Ethernet 10/100 Base-T
- Embedded mini-PCI IEEE802.11p draft version D3.0 (See **Table.2**)
- Optional 1 x PCMCIA WLAN 802.11a/b/g

Dimensions

- 153.5mm(W)x118(D)x43mm(H) (See **Figure.3**)
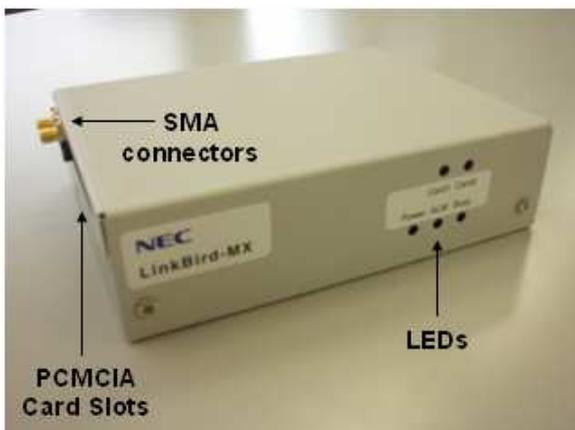
Front and Rear View
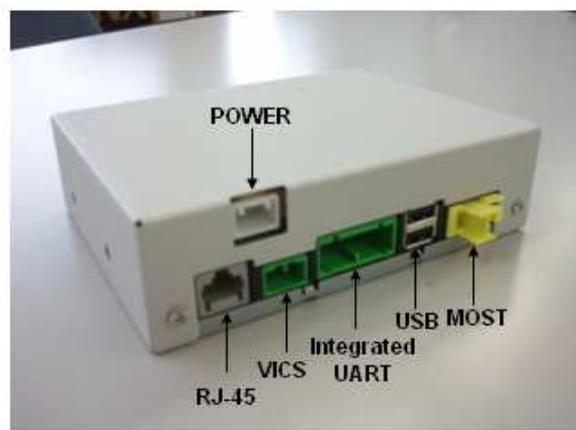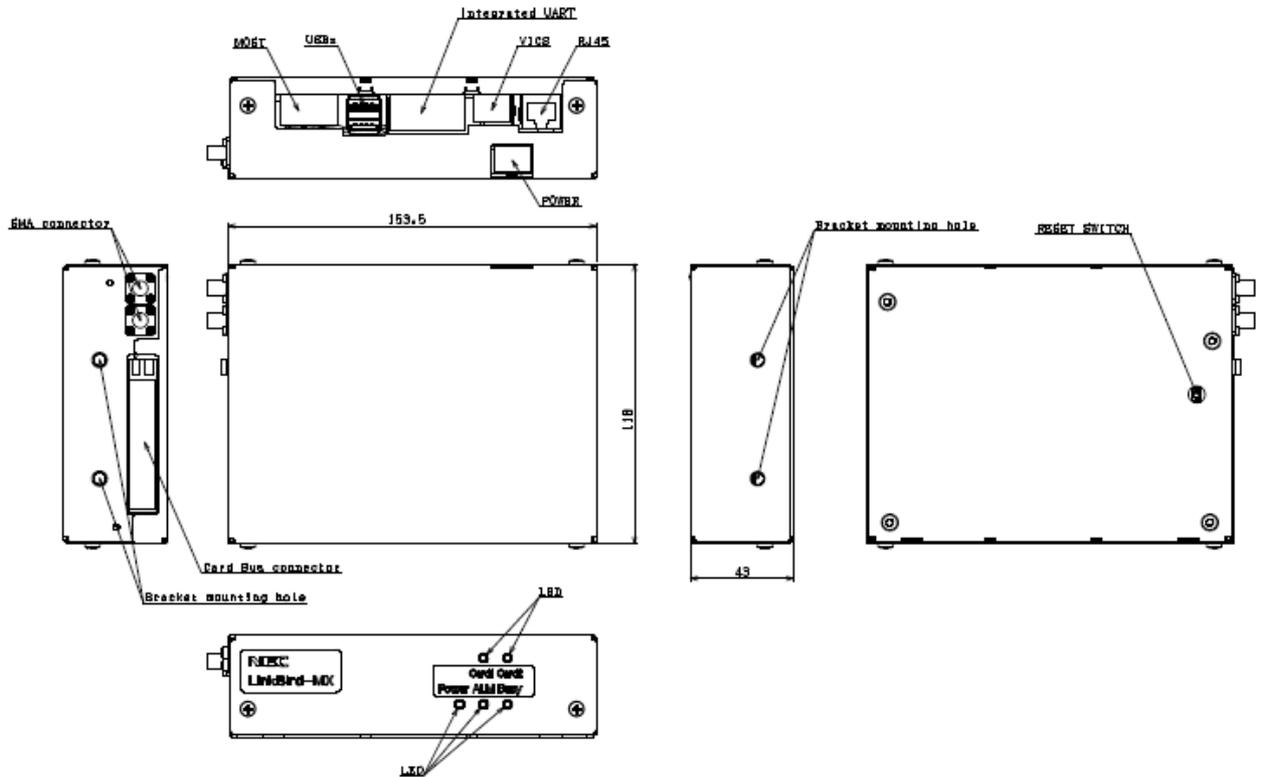

Figure1: LinkBird-MX Front View

Figure2: LinkBird-MX Rear View

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Dimensions

Figure3. LinkBird-MX Dimensions in (mm)

System Interfaces

Connector	Description
Ether Port	10/100Base-T (x1port)
RS232-C(VICS)	x1 port (for debug)
Integrated UART	GPS (x1), CAN #1(x1), CAN#2(x1 w/ *dongle) *If you want to use CAN#2, you need to buy a dedicated dongle.
USB	2 ch (ver2.0)
MOST	x1 port
SMA (Female)	2 connectors for WLAN antenna diversity
mini-PCI	x1 slot: embedded WLAN card (IEEE802.11 a/b/g/p) using SMA connector for antenna diversity
PCMCIA	x2 slots (free for usage of additional WLAN card)
Power	DC12 (x1 port)

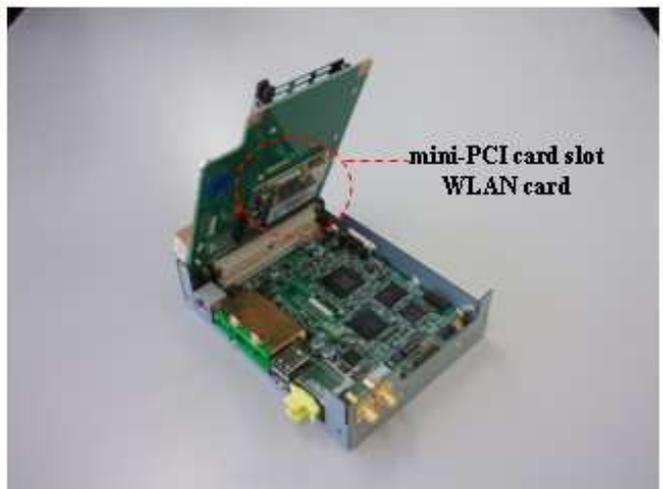**Table1. LinkBird-MX System Interfaces**

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WLAN module Specifications

Parameter	Details
Frequency/Channel	5725MHz(145CH) – 5925MHz(185CH)
Bandwidth	10MHz / 20MHz
Version	IEEE802.11p Draft 3.0, July 2007
Transmit power	MAX 21dBm
Bitrates	6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,36Mbps,48Mbps,54Mbps (in bandwidth 20MHz) 3Mbps,4.5Mbps,6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,27Mbps (in bandwidth 10MHz)

Table2. Characteristics of the 802.11p Network Interface

Configuration Image
Contact

Figure4:LinkBird-MX Configuration Image

Figure5:LinkBird-MX mini-PCI Card Slot w/ WLAN Card

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