



# Lena family: PCI Express MiniCard Data Module

## Product Description:

The new generation of Lena series is designed for M2M applications in partnership with Gemalto M2M, the worldwide leading supplier of wireless modules for the cellular machine-to-machine (M2M) communication market. This series of devices is based on the miniPCI Express Mini Card standard with a USB 2.0 interface. With a variety of advanced air interfaces supported, Lena series enables any mobile computing device to be a communication tool! It comes two product families: Lena\_M & Lena\_X.

## Key Features:

- Supports various OS: Windows®8, Windows®7, Windows® Vista, Windos®7, Windows® Embedded Handheld™, Windows®EC, Linux, Android
- Optional SIM card holder for M2M and vertical applications
- Java™ enable



## Specifications:

•3GPP Rel.7 Compliant Protocol Stack

•Air Interface:

- GSM/GPRS/EDGE
  - Worldwide SKU: Quad Band
  - US & Europe SKU: Dual Band
- WCDMA/UMTS/HSPA
  - Worldwide SKU: Penta Band
  - US & Europe SKU: Dual Band

•Connectors:

- Antenna: U. FL 50 Ohm for 2G/3G
- Main Connector: 52-Pin Edge
- Micro-SIM card connector (Option)

•Interface:

- USB 2.0
- USIM/SIM
- Reset

• Dimension

- Full size form factor
- 51.0 mm (L) × 30.0 mm (W) × 4.75 mm (H)

• Weight

- < 6g

• Electrical data

- DC Power supply : 3.0~3.6V

• Environmental :

- Operation Temperature : -30°C to +85°C (board temperature)

•Java Open Platform

- 3.2 client runtime
- Secure data transmission with HTTPS/SSL
- Multi-Threading programming & Multi-Application execution

•OTA Firmware upgrade

•Secured TCP/IP


## Applications:

- Fleet management
- Asset Tracking
- Utility metering
- Vending machines

## Support & Service:

- Evaluation board are available
- Connection Manager
- RIL support

## High Level Specification

miniPCI Express Data Card: LenaX (LX)			
<b>Product Name</b>	LX_6W	LX_5U	LX_5E
<b>Gemalto PN</b>	EH6	EH5-US	EH5-E
			
<b>Air Interface</b>	HSUPA	HSUPA	HSUPA
<b>Data Speed</b>	DL: 7.2Mbps UL: 5.76 Mbps	L: 7.2Mbps UL: 5.76 Mbps	L: 7.2Mbps UL: 5.76 Mbps
<b>Frequency band (MHz)</b>			
<b>GSM/GPRS/EDGE</b>	850/ 900/ 1800/ 1900	850/ 1900	900/ 1800
<b>HSPA+/UMTS</b>	800/ 850/ 900/ 1900/2100	850/ 1900	900/ 2100
<b>Antenna</b>			
<b>Connector</b>	50 Ohms	50 Ohms	50 Ohms
<b>Special features</b>			
<b>Real time clock with alarm</b>	✓	✓	✓
<b>Informal network checking</b>	✓	✓	✓
<b>Java</b>	Java™ ME 3.2	Java™ ME 3.2	Java™ ME 3.2
<b>Voice</b>			
<b>Voice</b>	Option	Option	Option
<b>SIM Card Holder</b>			
<b>SIM Card Holder</b>	Option	Option	Option
<b>Control options</b>			
<b>Control options</b>	AT command	AT command	AT command
<b>Embedded memory</b>			
<b>Embedded memory</b>	6MB RAM+10MB Flash file system		
<b>OS compatibility</b>			
<b>OS compatibility</b>	Windows®8, Windows®7, Windows® Vista, Windos®7, Windows® Embedded Handheld™, Windows® EC, Linux, Android		

### Ordering information

Please email to [innocomm@innocomm.com](mailto:innocomm@innocomm.com) or call +886-3-5781868 for more information.

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