# IBD190 USER GUIDE
## Ver. 1.0



**Features:**
- Form factor: Mini PCI-E interface
- Compliant with IEEE 802.3 Ethernet interface for 1000 Base-T, 100 Base-TX and 10 Base-T applications (802.3, 802.3u, 802.3ud)

**IBD190: Mini PCI-E LAN card with Intel I211-AT Ethernet controller, single port; used with IBLD170 RJ45 card**
**IBLD170: Card with transformer + RJ45 for LAN ports (includes 1  LCD112 cables)**

**\*Based on customers' chassis requirement, the RJ45**



**module can be separated as shown here.**
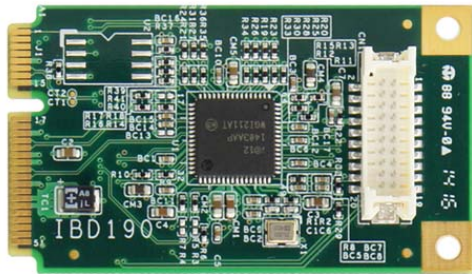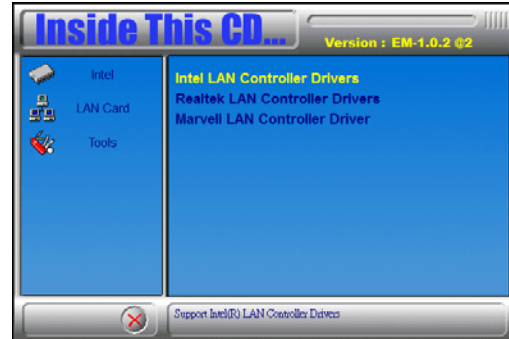
## Mini PCI-E Card Installation

To insert the Mini PCI-E cards, position it at 30° to the PCB and gently push it into the socket connector (Figure 1). The card will not fit when inserted at an angle of 45° or 15°. Once inserted, slowly press the card towards the PCB until it locks on both sides to the clips of the connector. Screw the card to the PCB to secure the installation. To remove the Mini PCI card, pull the 'clips' sideways as shown in Figure 2.

## Installing LAN Drivers for Windows 7/ 8 / 8.1

Follow these steps to install the Intel I211 LAN/Ethernet driver for Windows 7/ 8 / 8.1:
1. Insert the DVD that comes with the motherboard. Click *LAN Card* and then *Intel LAN Controler Drivers*.



2. Click *Inte(R) I21x Gigabit Network Drivers*.
3. When the Welcome screen appears, click *Next*.
4. Click *Next* to to agree with the license agreement.
5. In the Setup Options screen to select it and click **Next** to continue.
6. The wizard is ready to begin installation. Click *Install* to begin the installation.
7. When InstallShield Wizard is complete, click *Finish*.

**J2: Gigabit LAN Connector (used with IBLD170)**



| Signal Name | Pin # | Pin # | Signal Name |
|---|---|---|---|
| MDI0- | 2 | 1 | MDI0+ |
| Ground | 4 | 3 | Ground |
| MDI1- | 6 | 5 | MDI1+ |
| +1.8V | 8 | 7 | Ground |
| MDI2- | 10 | 9 | MDI2+ |
| MDI3- | 12 | 11 | MDI3+ |
| Ground | 14 | 13 | Ground |
| LINK_1000# | 16 | 15 | LINK_100# |
| Activity# | 18 | 17 | LINK_UP# |
| NC | 20 | 19 | NC |