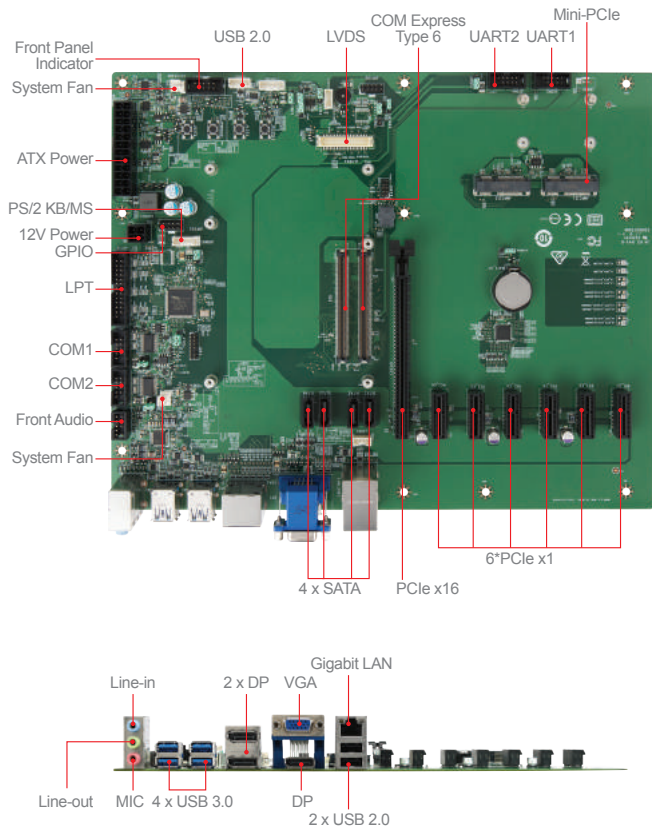


# MS-9988

## COM Express Type 6 Carrier Board



### Features

- Supports VGA, LVDS, and 3 DP ports
- 1 RJ45 for COM Express module board
- 4 USB 3.0, 4 USB 2.0, 2 COM ports and 2 UART
- Supports 4 SATA ports, 6 PCIe x1, 2 Mini-PCle, and PCIe x16

### Ordering Information

| Part Number  | Description   |
|--------------|---|
| 919-9988-002 | MS-9988 20 COM Express Carrier M/B, 1*PCle x16, 6*PCle x1, 2*Mini-PCle, 3*DP, 1*VGA, 1*LVDS, 4*SATA3.0, 1*LAN, 4*USB3.0, 1*USB 2.0, 2*COM, 2*UART |

### Packing List

| Part Number     | Description                |
|-----------------|----------------------------|
| K14-1018004-V03 | COM port cable, 510mm      |
| K18-1025011-V03 | Parallel port cable, 300mm |
| K1D-1008261-V03 | SATA Cable, 500mm          |

### Specifications

|                       |                        |   |
|-----------------------|------------------------|---|
| <b>Processor</b>      | CPU                    | N/A   |
|                       | BIOS                   | AMI   |
| <b>Display</b>        | Controller             | N/A   |
|                       | LVDS                   | Dual channel 24-bit (depends on module board)   |
|                       | VGA                    | 1   |
|                       | DisplayPort            | 3   |
|                       | Multiple Display       | 3 independent displays  |
| <b>Ethernet</b>       | Controller             | 1 x RJ45 for COM Express module board   |
|                       | Controller             | Realtek® ALC887 HD Audio Codec  |
| <b>Super I/O</b>      | Controller             | Fintek F81866   |
|                       | Watchdog Timer         | 256-level Watchdog Timer  |
| <b>H/W Monitor</b>    | Smart Fan              | Yes   |
|                       | Controller             | Pin header  |
| <b>I/O Interface</b>  | USB                    | 4 x USB 3.0 (4 x rear)<br>4 x USB 2.0 (2 x rear; 2 x internal)  |
|                       | Serial                 | 2 x COM ports<br>COM1 RS-232/422/485, 0V/5V/12V<br>COM2 RS-232, 0V/5V/12V<br>2 x UART ports (From COM Express module board) |
|                       | Parallel               | 1   |
|                       | PS/2                   | 1 (wafer connector)   |
|                       | GPIO                   | 8-bits (4 x GPI; 4 x GPO), 5V   |
|                       | PCIe x16               | 1   |
| <b>Expansion Slot</b> | PCIe x1                | 6   |
|                       | M.2                    | N/A   |
|                       | Mini-PCle              | 2 x Full-size   |
| <b>Storage</b>        | SATA                   | 4 x SATA  |
|                       | DC                     | N/A   |
| <b>Power Supply</b>   | ATX                    | ATX-24P, 12V-4P   |
|                       | Operating Temperature  | 0 ~ 60°C  |
| <b>Environment</b>    | Operating Humidity     | 10 ~ 90%, non-condensing  |
|                       | Storage Temperature    | -20 ~ 80°C  |
|                       | Storage Humidity       | 10 ~ 90%, non-condensing  |
| <b>Form Factor</b>    | Dimensions (W x D x H) | 305 x 244mm (ATX)   |
|                       | Weight                 | 0.60 kg   |
| <b>Certification</b>  | EMC                    | FCC, CE, RCM, VCCI, BSMI  |
|                       | OS Support             | Depends on CPU Module Board   |