Facebook Server
Intel Motherboard 3.0

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Facebook
Compute Server Design
## Agenda

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Overview: Compare with MB 2.0

MB 2.0
- On-board Ext. PCIe conn. removed
- On-board mSATA/M.2 conn. added
- PCIe x16 slot => x24 slot
- Next Gen Intel Xeon CPU
- Mounting hole shifted

MB 3.0

Same 6.5”x20” Form Factor

Power Blade changed to AirMax PWR+Signal
New Feature: BMC

- **Aspeed AST1250**
  - **Out-of-Band connection**
    - I2C to 10G Mezzanine, to use current OCP 10G Mezzanine
    - RMII to 10G Mezzanine, to support NC-SI Sideband
    - RMII option to I210 LOM, to both front RJ45 and rear AirMax
  - **Dual BIOS images**
    - Select primary and backup BIOS image for boot
    - Update BIOS image through OOB
  - **Serial-over-LAN**
    - Support UART selection from Host, BMC and Mid-plane
New Feature: New Rear Airmax Conn

MB 3.0 has. Others are reserved and shared with Micro Server System
New Feature: mSATA/M.2

- Co-layout on board mSATA/M.2 connector
  - mSATA
  - M.2
    - Connector Key ID= M and H4.2 type, for 2242 and 2260 form factor
    - PCIe x4 and SATA connected

- Adaptor for M.2
  - Adaptor direct plug into USB+SATA
    - No cable, direct plug. Power from USB, Signal from SATA port
    - Support all M.2 form factor
New Feature: Others

- TPM connector to support TPM module
  - LPC Interface
- Up to 3x PCIe (x8) slots through riser
  - 2x PCIe + 3.5” HDD
    - Same as MB 2.0 system
    - Same mechanical tooling
  - 3x PCIe + mSATA/M.2