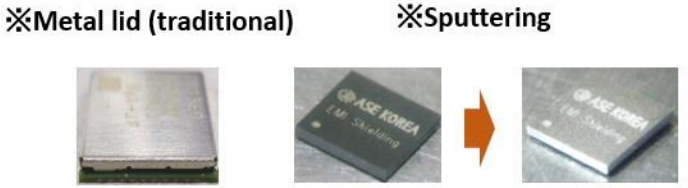
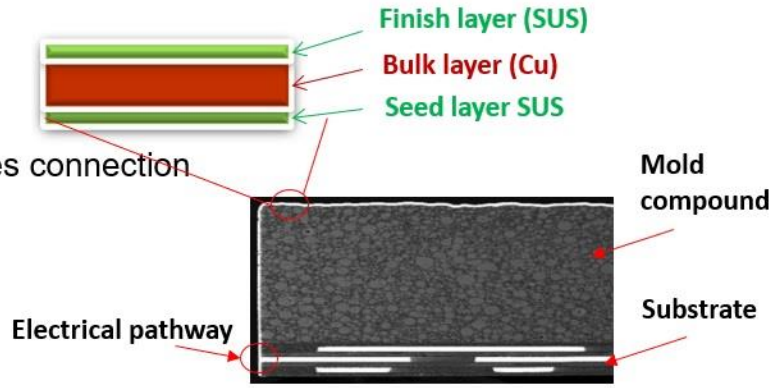
EMI shielding solution

Sputtering technology

Package conformal shield is essentially a true package-scale technology since the resulting size is same with original one. Sputtering process on epoxy mold compound is the majority conformal shielding method in assembly process



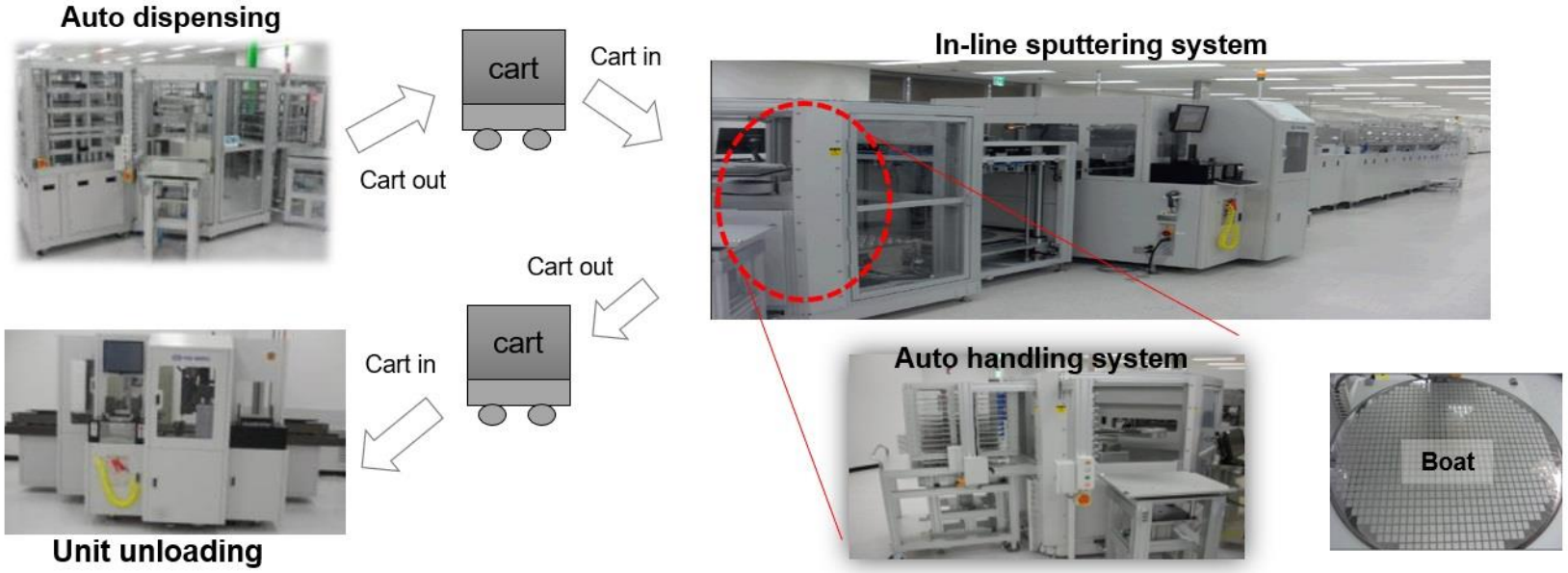
Technology solution



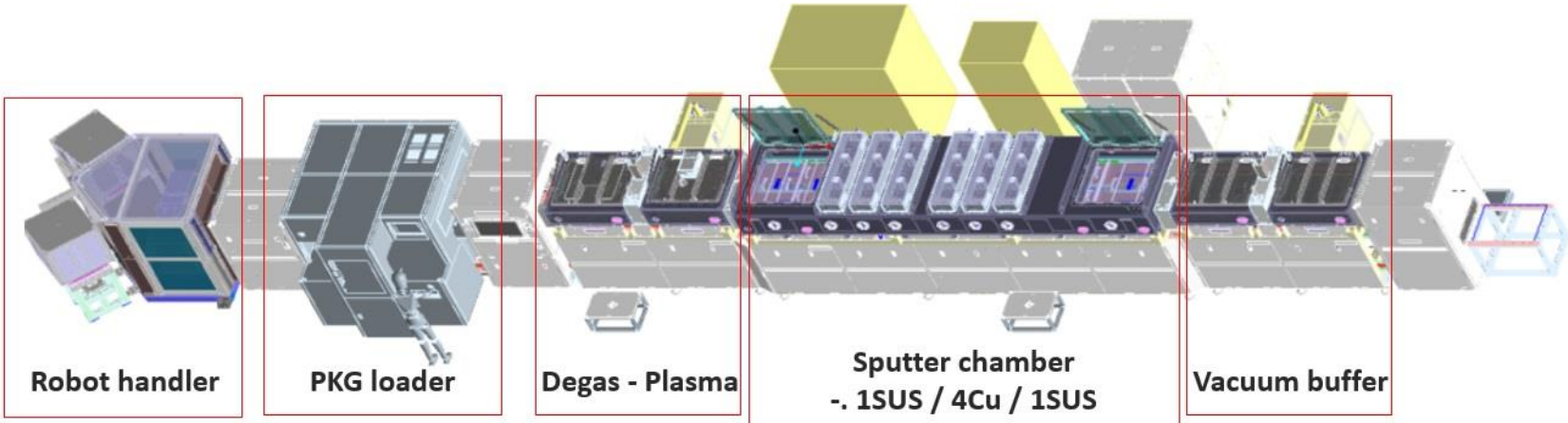
- Thin sputtered shield on top and 4 sides of package makes connection with vias or metal traces at the edge of the package
- Typical thickness : Side > 1um, Top > 3um
- Stack definition of sputtered metal
  - SUS as seed layer for adhesion (about 0.3um)
  - Cu as conductive layer (1~3um on sidewall)
  - SUS as final layer for cosmetic quality and durability (about 0.3um)
- Process flow

Machine configuration

- **Full automation for all shielding process**
  - Auto dispensing & Auto boat loading system
  - Auto Unit loading & off-loading by using only Pick & Place system
  - In-line sputtering system (Pkg loading - Plasma cleaning – Sputtering)



Sputter system layout



Boat loading & unloading system

Pkg loading on boat

Mold surface cleaning

Buffer chamber

Sputter metal deposit (Sus – Cu – Sus)

Process flow