



# Precision, climate-controlled shipping

What does it take to safely transport climate-sensitive semiconductor equipment from Austin, USA, to Taipei, Taiwan? Our complete, end-to-end solution got the job done—here's how it worked.



## Case study

### Precision, climate-controlled shipping

**Customer:** A semiconductor equipment manufacturer

**Challenges:**

- A 7,827-mile air journey from the USA to Taiwan
- 26 oversized, top-heavy crates that needed to be protected from:
  - Tilting
  - Shocks
  - Temperature and humidity changes
- The use of crates with passive temperature control
- Specialized air-ride enclosed trucks/trailers
- Freighter aircraft equipped with custom-built main deck ULDs
- Careful monitoring of the shipment at every handover stage

**Solution:** Reliable delivery of delicate semicon manufacturing tools and equipment.



## Scope of work

Advanced photomask etching systems are critical for semiconductor manufacturers. Shipping lithographic photomask etching tools is a significant risk for semiconductor companies. Transporting these types of tools can only be done by a logistics company that understands how to control and mitigate associated risks. Given our client's stringent requirements, we delivered a complete end-to-end transportation solution in line with SemiconChain working instructions for capital equipment, climate control specifications included. This is how we delivered a dependable solution that ensured quality and stability:

- The shipment was trucked via a semicon-approved temperature-controlled carrier
- Trained staff closely supervised the loading of the shipment and provided conformity confirmation at the airport handover, following handling instructions
- The shipment was transported and routed on a semicon-approved B747 freighter aircraft
- Our team completed checklists, took pictures, and uploaded them into the semiconductor-specific digital checklists app
- Document sharing and milestone monitoring through myKN gave the client complete visibility at every stage of the shipment

Despite the considerable challenges, our extensive infrastructure, expertise and network ensured the safe and effective transport of our client's delicate semiconductor manufacturing equipment.

## Results

Our certified semiconductor solution enabled us to provide our customer with climate-controlled shipping, safeguarding their shipment at all times. We delivered on this because we:

- Provided constant, climate-controlled shipping, which ensured the safety of highly temperature-sensitive goods
- Gave our client access to real-time temperature monitoring over the shipment's entire journey, thus enhancing our service's reliability
- Ensured meticulous protection for oversized, top-heavy crates using specialised trucks, passive temperature control and custom-built ULDs on cargo aircraft

This approach, along with our team of experts, guaranteed that our client's equipment arrived in perfect condition and precisely on schedule. It demonstrates our expertise and capabilities to deliver unmatched excellence in semiconductor logistics.

**Are you looking for reliable climate-controlled shipping solutions?**

→ **Contact us today to learn how you can safeguard your semiconductor supply chain.**

# Ensuring the integrity of temperature-sensitive semiconductor equipment, step-by-step:

Semicon Region Leads oversee end-to-end logistics to enhance service quality and minimize risk.



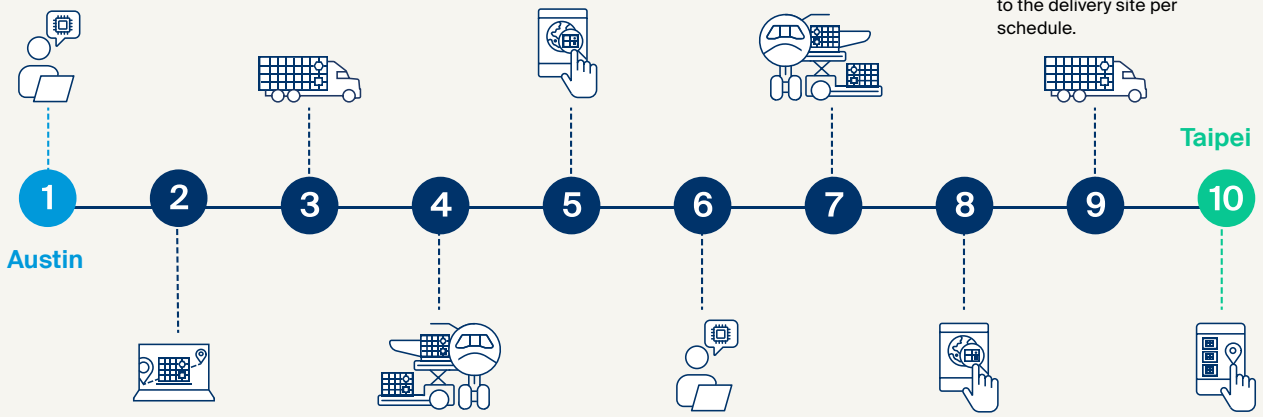
**The shipment commences**  
Trained staff arrange the shipment at a semicon-certified controlling station.

Secure pick-up and drop off  
Shipment pick-up is performed by a SecureChain audited, semicon-approved trucking supplier.

Shipment condition is confirmed  
Semicon Checklist app provides visibility of shipment handovers.

Airside inspection on arrival  
Shipment inspected for shipment integrity before delivery.

Direct transport to consignee site  
A SecureChain audited, semicon-approved trucking supplier picks up the shipment and transports it directly to the delivery site per schedule.



Carrier space is arranged  
Semicon approved air carrier accommodates the high-value, oversized equipment and center load position shipment.

Airside inspection on departure  
To ensure shipment integrity, an airside inspection is performed at the origin station before departure.

Continuous monitoring in transit  
Dedicated staff monitor the shipment in transit against key milestones.

Shipment condition is reconfirmed  
The shipment's condition is recorded and documented using the Semicon Checklist app.

**POD is completed**  
The carrier completes the POD with shipment photos for complete visibility.