ESCCON
SUPPLY CHAIN PANEL

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

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Goal

- short "statement“ from each or some of us on the market view (max 2 – 3 slides) to introduce each ones view
- we should develop 2 or 3 guiding headlines / questions we would want to us to drive the discussion where each of us could have

PANEL SESSION on Supply Chain Robustness

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Manufacturers View – The Situation

- **Shortage Main Reasons :**
  - **Chip demand outstrips supply by 30% - Shortage could last 1 year**
    - Pandemic hit certain customers as Automotive, expectation is HIGH in 2021 on this market (40% of car Manufacturing cost is Electronic)
    - Trade war US/China => Huawei ordered by anticipation as much as possible
    - AMD increasing his demand : PS5 still in shortage, Xbox…
    - Growth of IOT (Mainly in 200mm Wafer Fabs)
    - Apple renewing his portfolio
    - Increasing demand for consumer electronic products and chip usage of 5G mobiles phones (30% more than 4G phones)

- **Consequences Front-end (Wafer Fabs)**
  - Wafer Fab : Capacity constraint first coming from Wafer Fab capacity limitation (TSMC/UMC/…)
    - Lead times increasing
    - Start only on orders
  - **Situation for Aerospace and Defense**
    - Low volume – High ASP
    - Often treated as engineering lots (Low volume, specific follow-up) and Engineering is now 2nd priority in all External Wafer FABs
  - **Microchip case** : diversified/high volume/wide portfolio range => capability to INFLUENCE on Wafer Fab to start lot for Engineering and A&D

- **Consequences Back-end (Package & Test)**
  - Plastic capacity issue in OSATs : ANAM-ASE-… => delays
  - Microchip anticipated and has invested in more capacities Plastic & Ceramic in his Microchip plants in Thailand
  - Ceramic : high risk of delays (Ceramic Demand increased for Automotive, reduced number of players)
  - Microchip recommended to all customers to provide a clean forecast
  - Microchip A&D Final Test : No capacity issue All IN HOUSE

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Manufacturers View – Consequences & Advices

- **General Consequences :**
  - The entire global semi-conductor supply chain is struggling as it has **never** in the **past**
  - From material, to wafer Fab, assembly, test, everyone is fighting to respond to this **extremely high** demand
  - Chip shortage has caused **prices to rise** for certain semiconductors, **delays** in filling orders and auto makers to idle factories
  - Wafer FABs are **ending discounts** and increasing wafer prices
  - **Consumers** may see delays in getting new cars and some electronic devices, and possibly higher prices.
  - Many manufacturers have announced **extended lead times** and products on **allocation**
  - Microchip today less impacted due to its **internalization** strategy and added capacity installed in the “Covid Storm crisis”
  - **Prices increases**
    - Almost all manufacturers sent some **price increase** notices to customers (Renesas Electronic, Microchip , NXP Semiconductors, …)

      => due to increase in raw material and packaging costs

- **Advices**
  - Work in close **collaboration** with your key suppliers
  - **Be curious** to uncover the exact Supply Chain in place
  - Sign letter of **engagement**
  - Commit on a **clean backlog** - NCNR
  - Give visibility by booking 1 year **ahead**
  - Be clear on your **priorities**
  - Be **Proactive** instead of **Reactive** !

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Microchip Announces Industry's First Space-Qualified COTS-Based Radiation-Tolerant Ethernet Transceiver and Embedded Microcontroller

https://www.microchip.com/pressreleasepage/microchip-space-qualified-cots-based-radiation-tolerant-transceiver-and-microcontroller

Thank You

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