

Fujitsu to manufacture leading-edge FPGA products for Lattice

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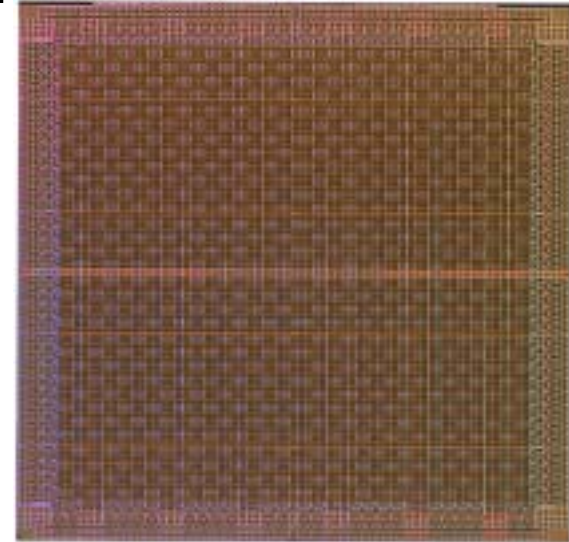
Group President

Electronic Devices Business Group

Fujitsu Limited

Agreement Overview

- **Fujitsu will manufacture Lattice Semiconductor's next-generation FPGA**
 - **90nm technology**
 - **130nm technology**
 - **130nm embedded flash technology**
- **Lattice plans to invest in Fujitsu's new 300mm fab**



**Lattice FPGA
device on
Fujitsu 130nm
technology**

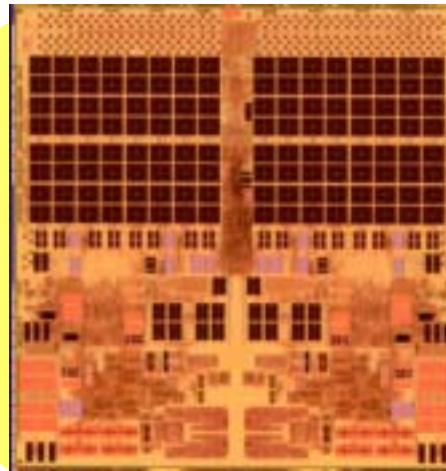
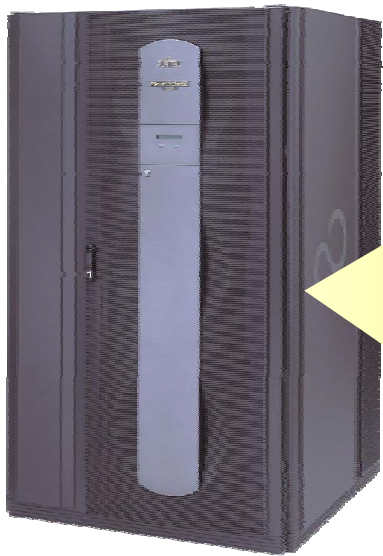
Why Lattice chose Fujitsu

- **Advanced Technology Leader**
(high performance, high reliability, high yield)
- **Customized Process Supplier**
- **Total Solution Supplier**
- **Production Capacity with 300mm Fab**

Advanced Technology Leader

- High performance,
High reliability

90nm Mass production started!
To be used in High-end product !



**Next generation
High-end MPU**
✓ 18mm × 18mm
✓ Gate length:40nm

**World's top class mission critical server
PRIMEPOWER**

Advanced Technology Leader

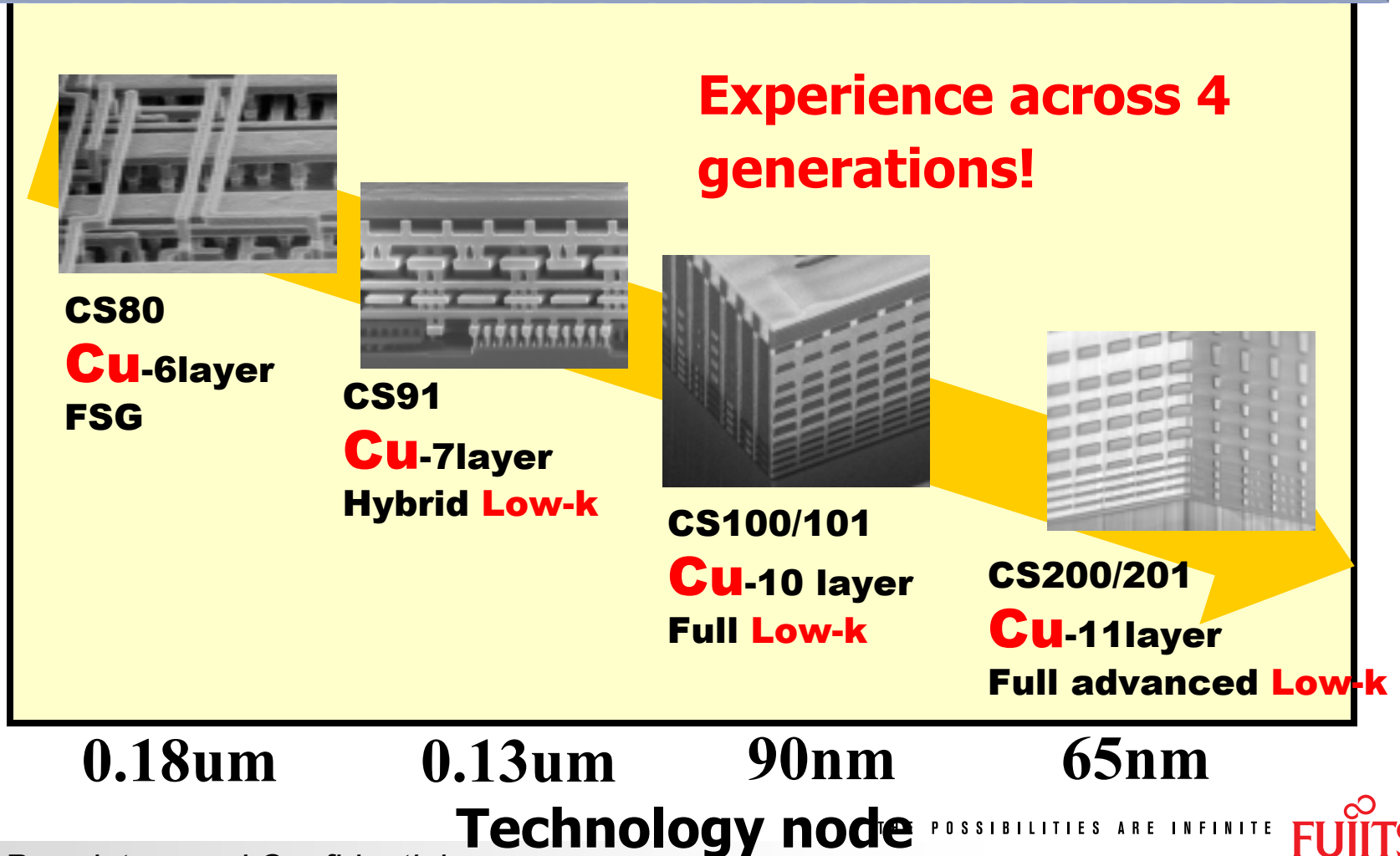
■ Benchmark results on 90nm technology

Speed and Power Comparison	Standard Foundry (90nm)	Fujitsu (90nm)
Speed	100	125
Active Power	100	75
Stand-by Power	100	21

- Benchmark results showed Fujitsu's technology has higher performance and low power consumption compared with standard foundry technologies

Advanced Technology Leader

■ Excellent Cu & Low-k Interconnect

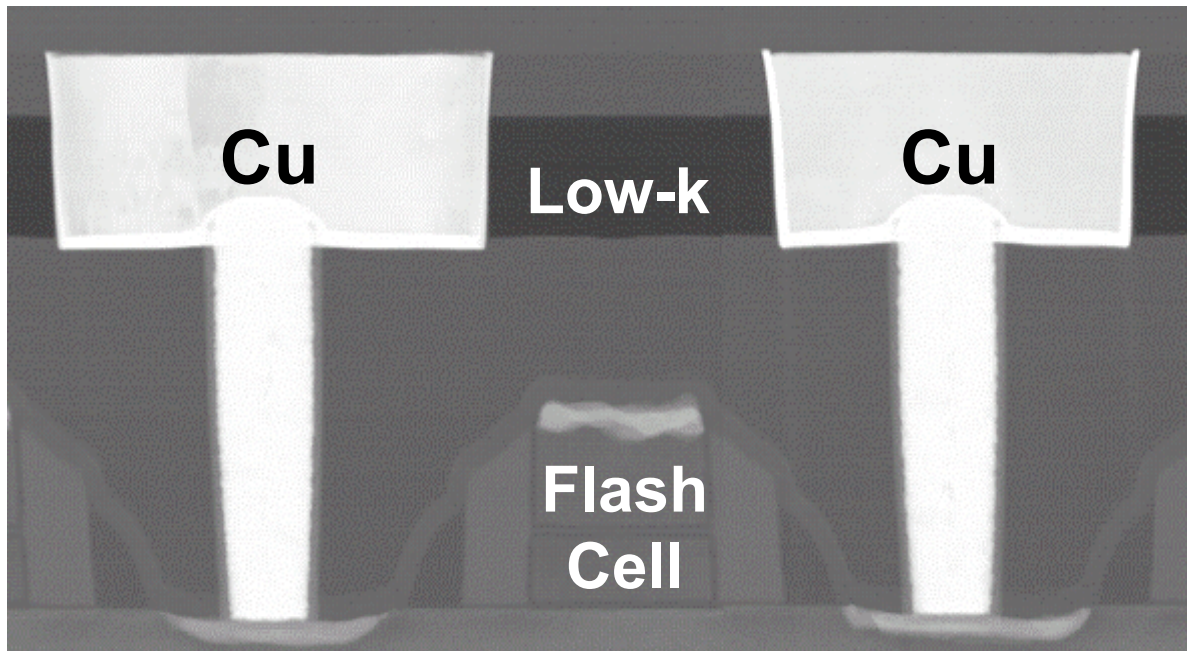


POSSIBILITIES ARE INFINITE



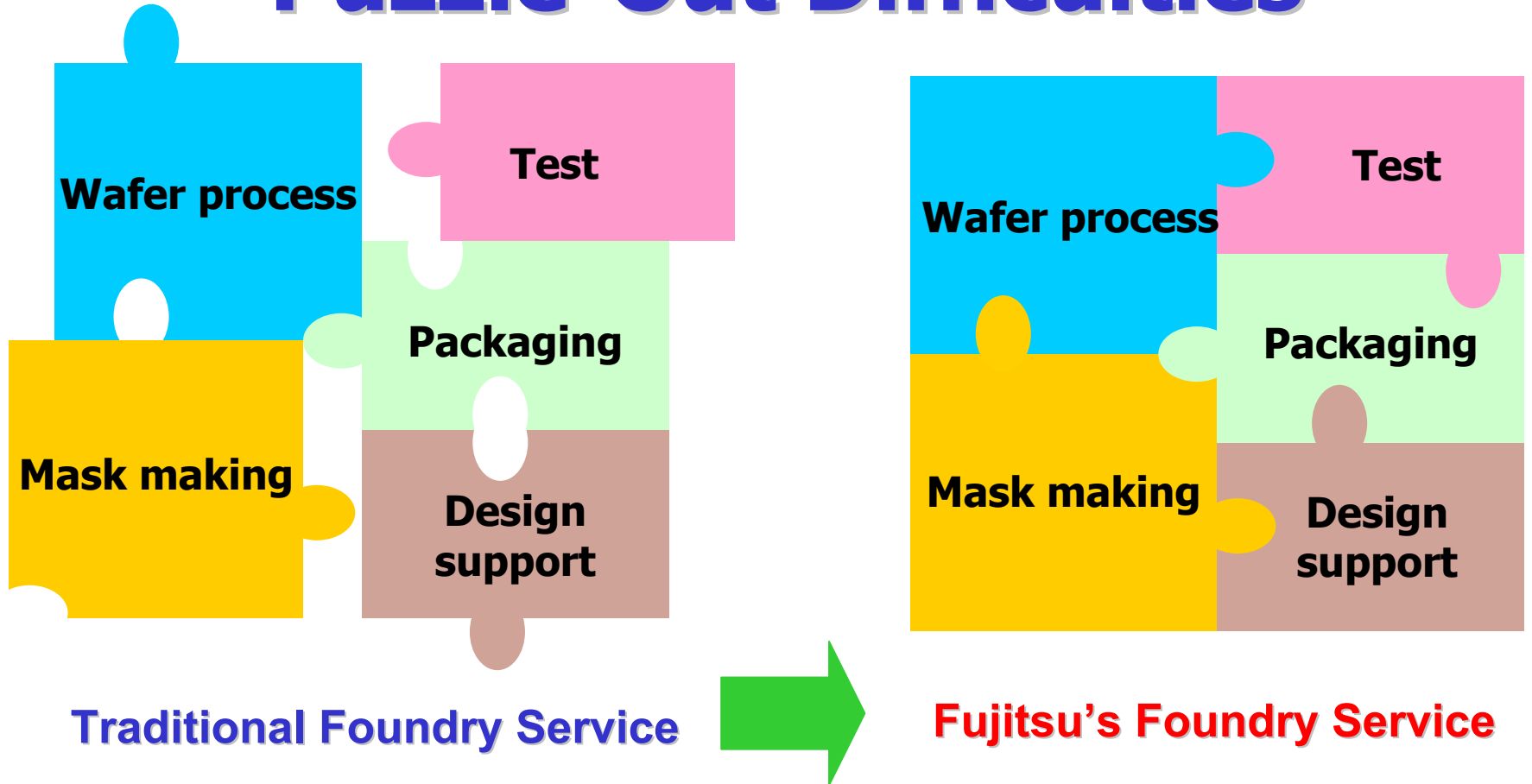
Customized Process Supplier

- Fujitsu and Lattice jointly developed world's first 130nm embedded flash CMOS technology with Cu Low-k(<3.0) BEOL.



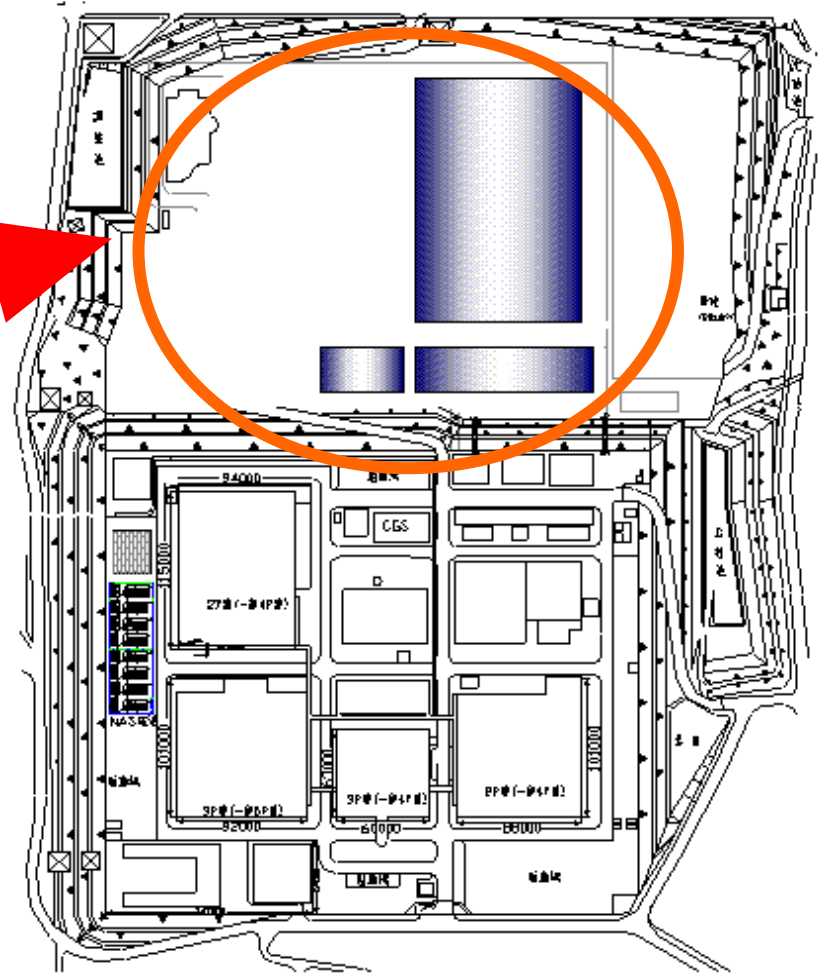
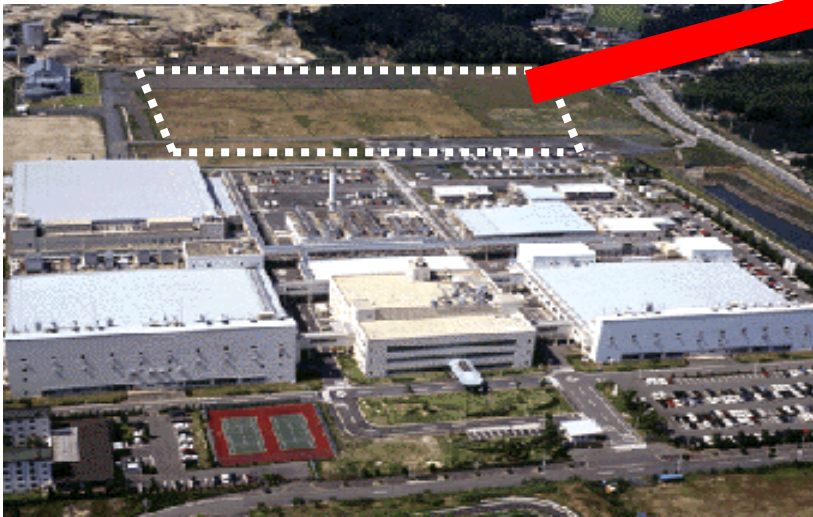
Total Solution Supplier

Puzzle-Out Difficulties



Production Capacity with 300mm Fab

■ 300mm Fab Floor plan in Mie plant

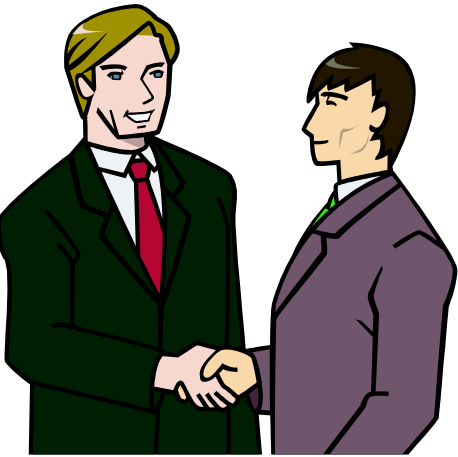


Production Capacity with 300mm Fab

■ Outline of new Fab

- **Place** : 1500 Mizono, Tado-cho, Kuwana-city, Mie prefecture
- **Technology** : 90nm/65nm CMOS logic
- **Wafer size** : 300mm
- **Area of clean room** : 12,000m²
- **Capacity** : 13,000wafers/month
- **Production system** : Minimum control unit is one wafer, Multi parts operation
- **Clean room building** : Hybrid quake absorbing structure
- **Schedule** : Operation start in April , 2005
Shipment start in September,2005

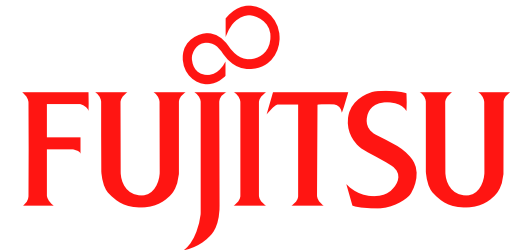
Expand foundry business with strategic customers



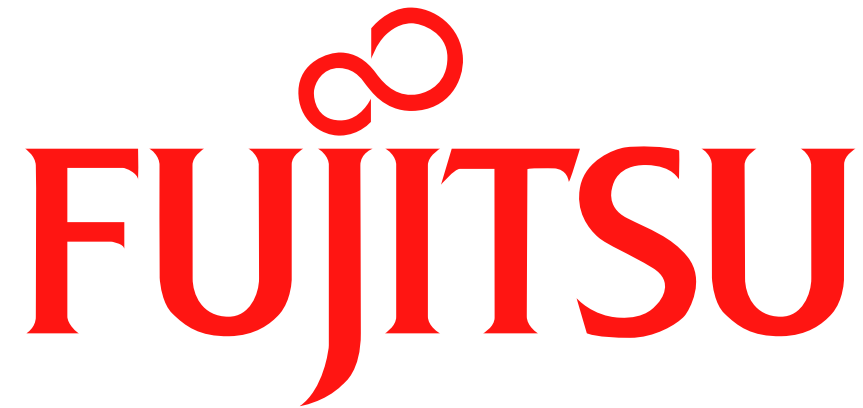
- Fujitsu will strengthen and expand its leading-edge semiconductor foundry business with various strategic customers, including Lattice.



Bringing The Best Together



THE POSSIBILITIES ARE INFINITE



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