

The eGaN[®] FET
Journey Continues

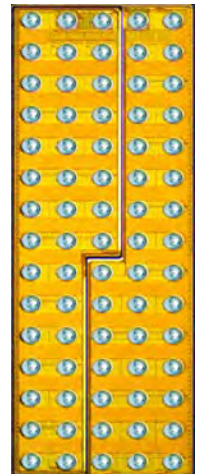
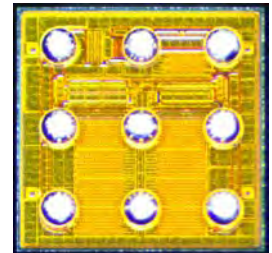
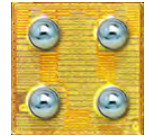
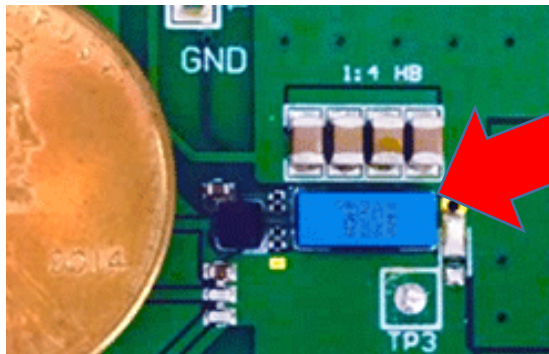
Efficient Power Conversion

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November 2016

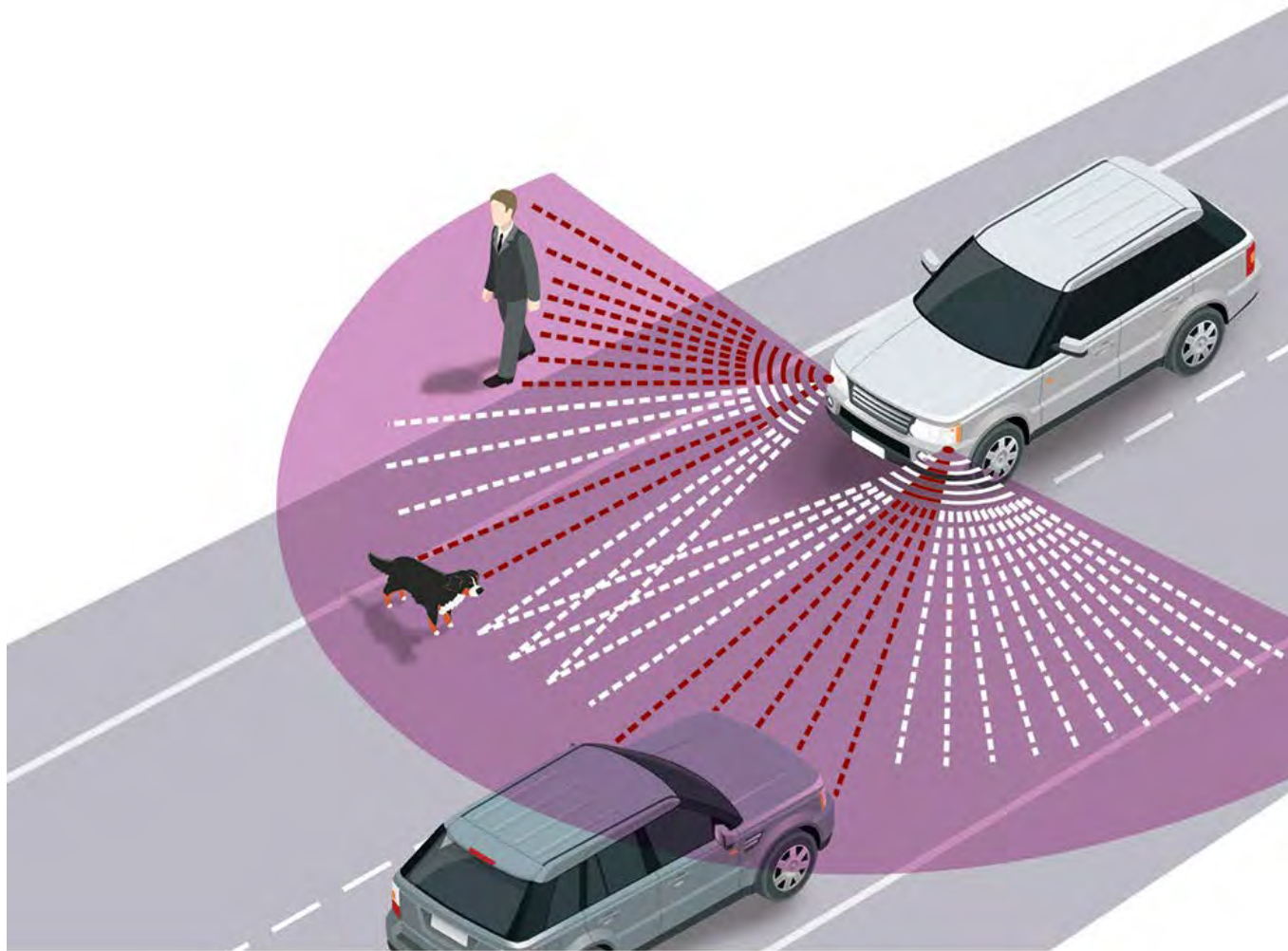
What is GaN and Why is it Displacing Silicon?



- Gallium nitride (GaN) is *100+ times faster* than silicon...***but costs less to produce***
- Efficient Power Conversion (EPC) is *the world's largest producer of GaN power transistors and integrated circuits*
- EPC's eGaN[®] devices are *used by hundreds of customers in applications including:*
 - medical
 - aerospace
 - consumer
 - telecom
 - automotive



How Does LiDAR Work?

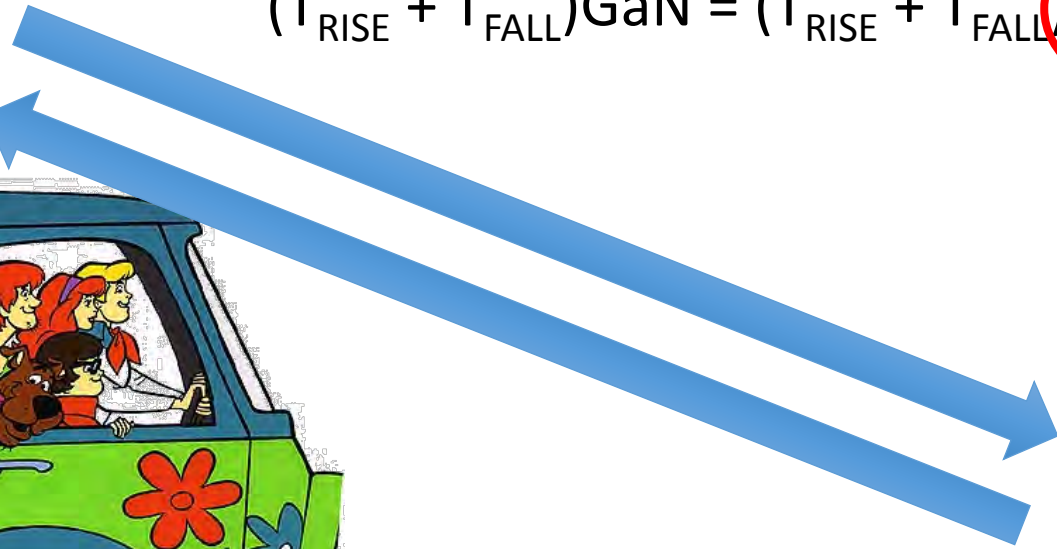


Why is GaN Used for LiDAR in ADAS?

$$\text{Resolution} = k(\Delta T_{\text{MIN(laser)}} \times C)/2$$

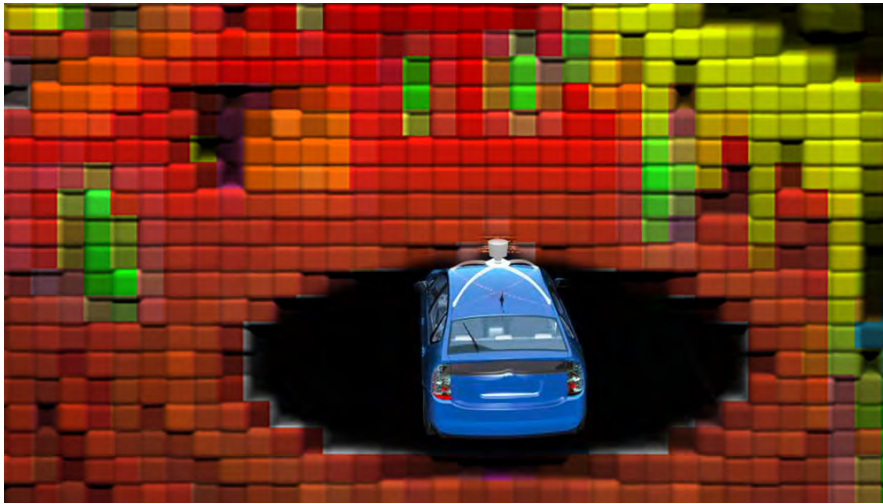
$$\Delta T_{\text{MIN(laser)}} = (T_{\text{RISE}} + T_{\text{FALL}})$$

$$(T_{\text{RISE}} + T_{\text{FALL}})_{\text{GaN}} = (T_{\text{RISE}} + T_{\text{FALL}})_{\text{Si}}/100$$

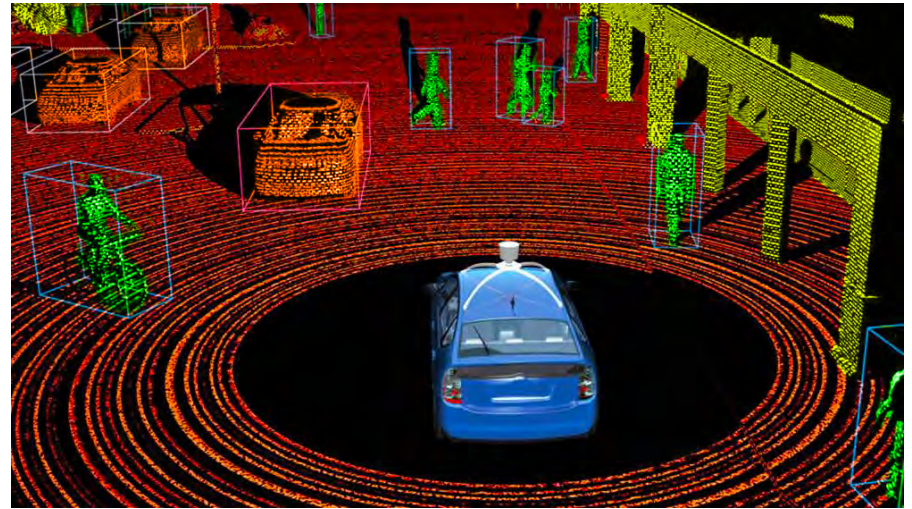


GaN Makes LiDAR Superior to Radar for ADAS

Silicon Laser Driver

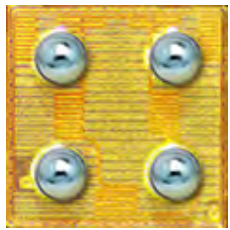


GaN Laser Driver



Which would you prefer for your autopilot or autonomous car?

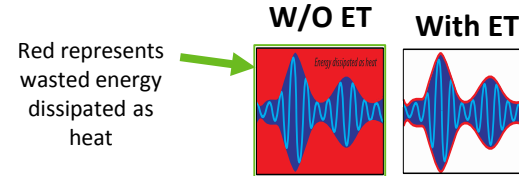
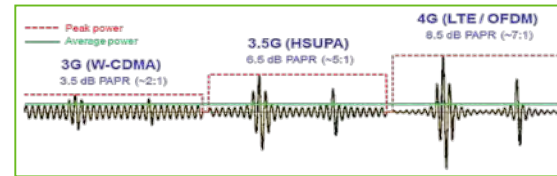
How Does EPC Fit Into the Supply Chain?



- **LiDAR manufacturers integrate EPC's GaN devices into their systems**
- **EPC's aggressive cost reduction and integration strategy helps LiDAR systems achieve costs necessary for mass adoption**

How Else is GaN Used in Vehicles?

- LED headlamps
- Infotainment
- Wireless Charging
- Communications



Thank You

Questions?

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