



The Future of Commercial Unmanned Aircraft Systems (UAS)

The background features several abstract blue graphics: a large location pin icon, a thumbs-up icon, and several concentric dashed circles of varying radii, all set against a solid blue background.

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VP Engineering
Qualcomm Technologies, Inc.
May 11th , 2017



30

years of driving
the evolution of
wireless

#1

fabless
semiconductor
company

#1

in 3G/4G
LTE modem

#1

in wireless
semiconductors



Source: Qualcomm Incorporated data. Currently, Qualcomm semiconductors are products of Qualcomm Technologies, Inc. or its subsidiaries IHS, Jan. '16 (wireless ASSP/ASIC total); Strategy Analytics, Dec. '15 (modem, AP), The McClean Report, Feb. '16 (fabless semiconductors)

Enabling safer, more autonomous drones



1 4G/5G cellular and on-board intelligence enable safe, consumer and commercial drone deployments

2 Optimizing LTE networks for safe drone operation beyond visual line-of-sight

3 5G will enable wide scale deployments of mission-critical drone use cases

Qualcomm's application processor and communications expertise bring critical technologies to drones

Cellular connectivity



Safety enhancement for autonomous operation



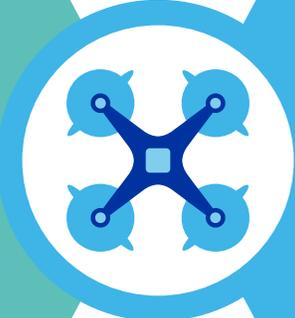
Media sharing and payload status updates



Safety and operational communication for beyond operator's visual line of sight (BLOS)



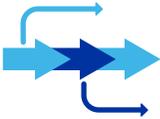
Redundant link within the operator's visual line of sight



On-board intelligence

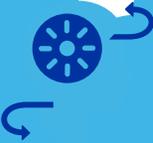
4K

Professional videography



Autonomous navigation

Machine Intelligence



Computer vision



High-fidelity sensor processing

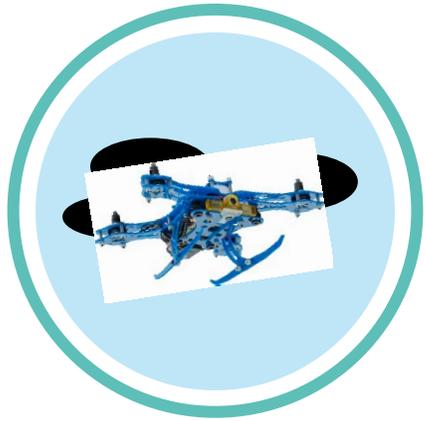


Precise localization



Enabling

A growing set of consumer and commercial drone use cases



Flying cameras

Consumer flying cameras

Movies and news media

Real estate



Delivery

Package delivery

Transport of medicines and vaccines



Public safety

Emergency services

Cellular coverage for first responders

Search and rescue



Agriculture

Crop visual inspections

Automated planting

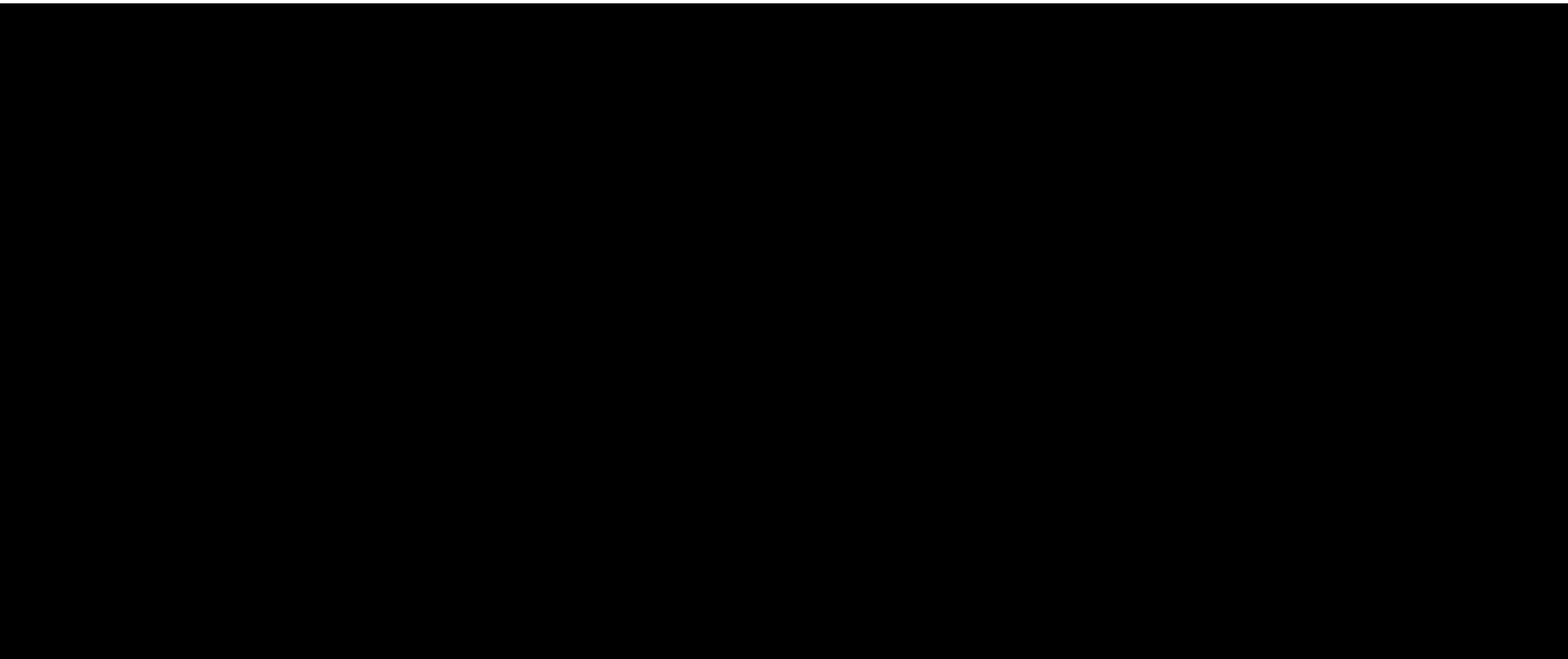
Livestock tracking



Inspection

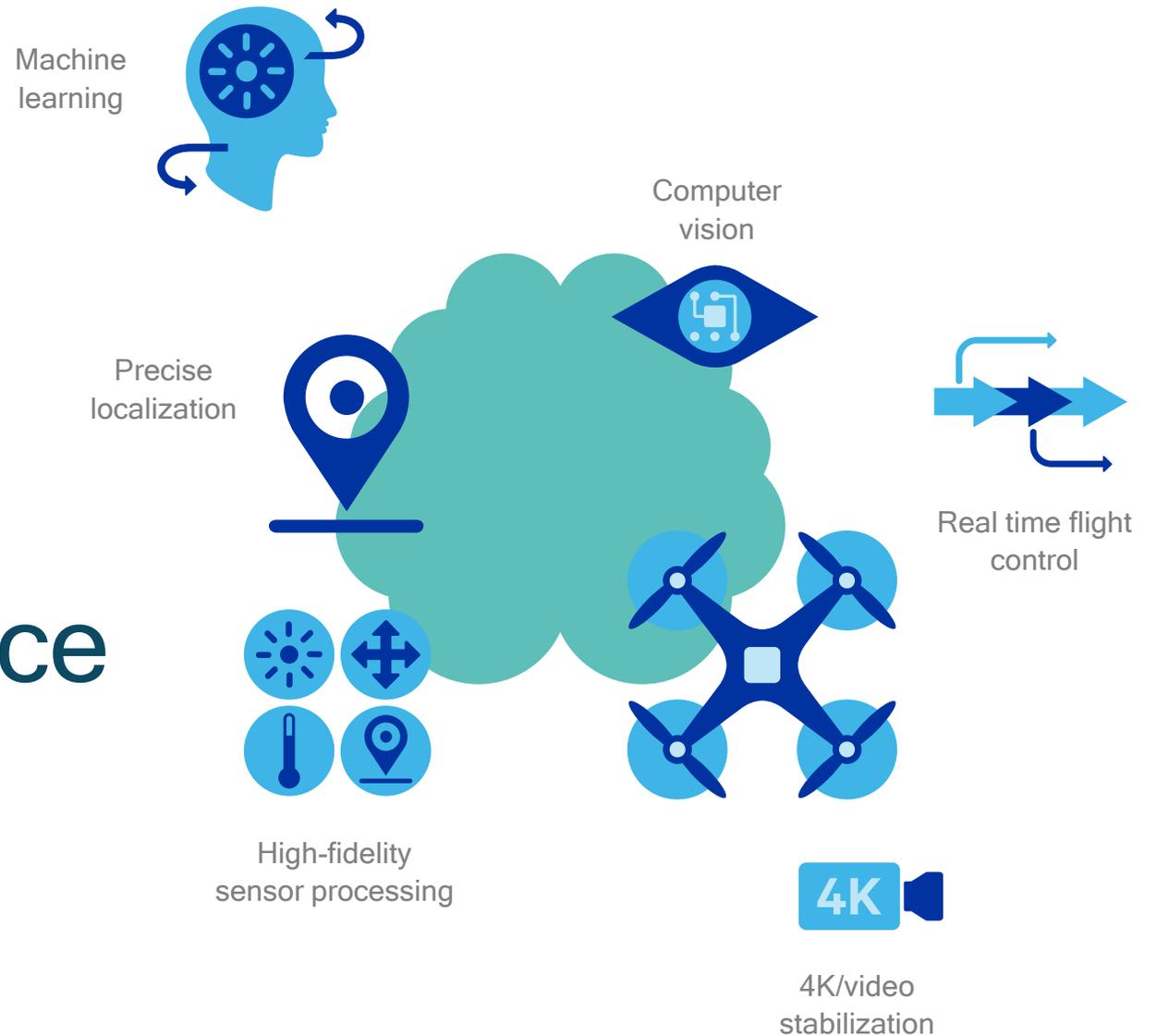
Critical infrastructure inspection (e.g. cell towers, bridges)

Inspection of hard-to-reach assets (e.g. oil & gas, wind turbines)



Delivering new levels of on-board intelligence and integration

Bringing cognitive technologies to life



Onboard Obstacle Recognition & Avoidance



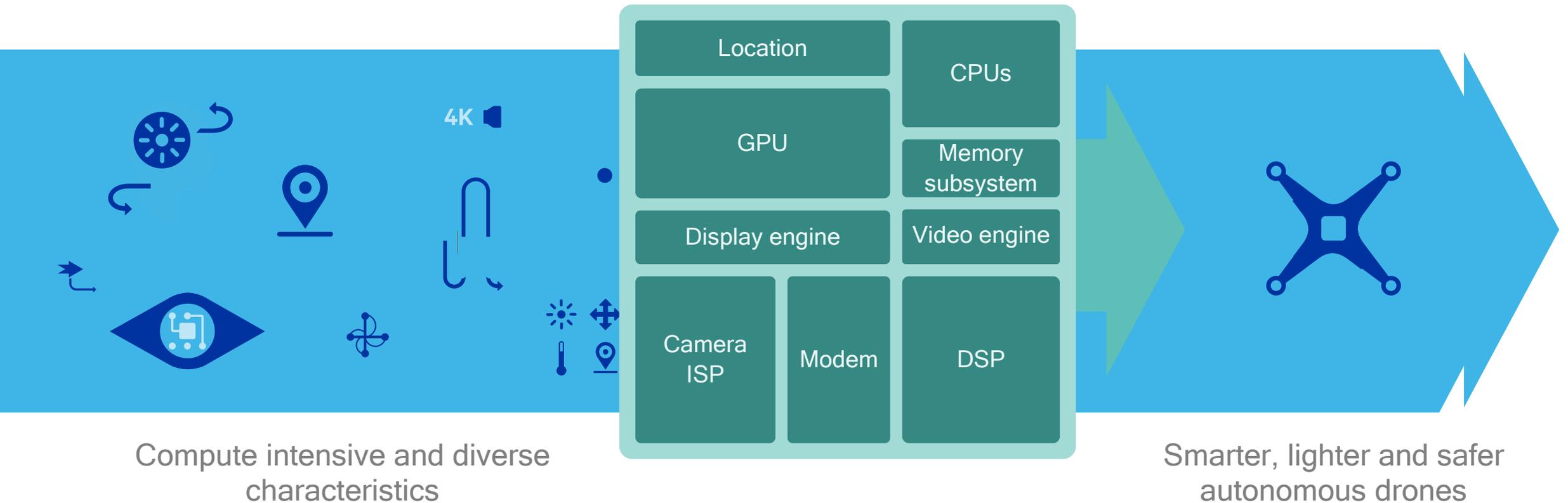
LADDER

Using Commercial Cellular Networks for UAS Connectivity at 400 feet AGL

Bringing together essential technological innovations

On a highly optimized heterogeneous computing platform

Heterogeneous platform



Thank you

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