



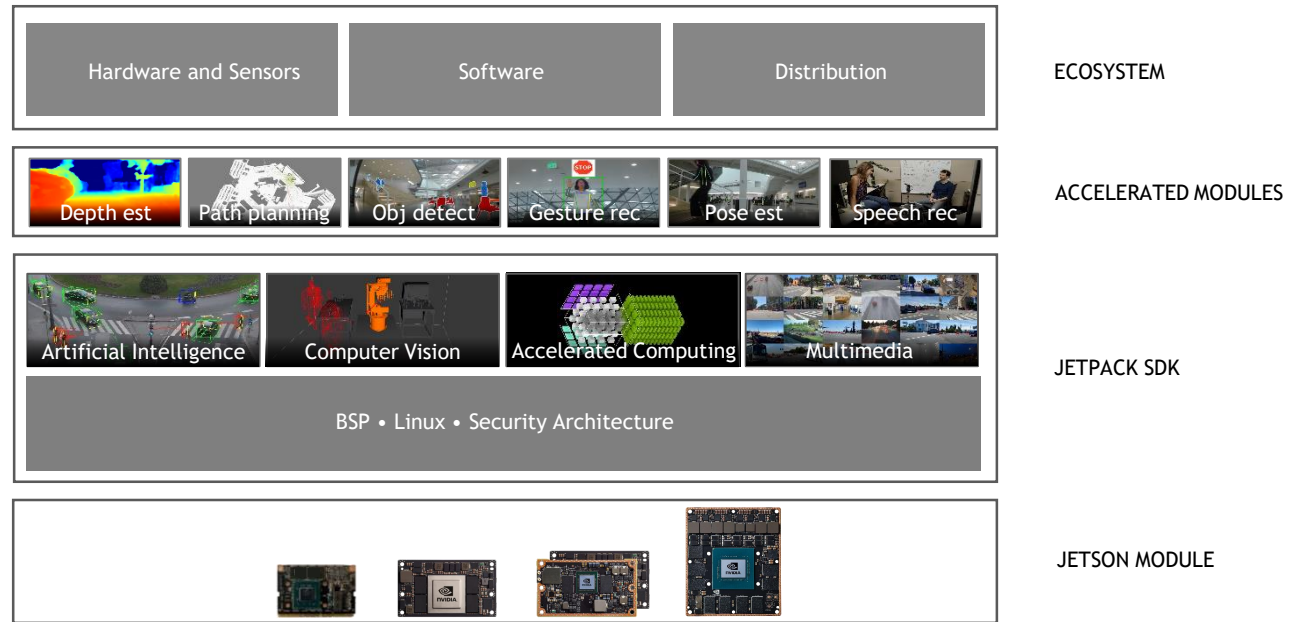
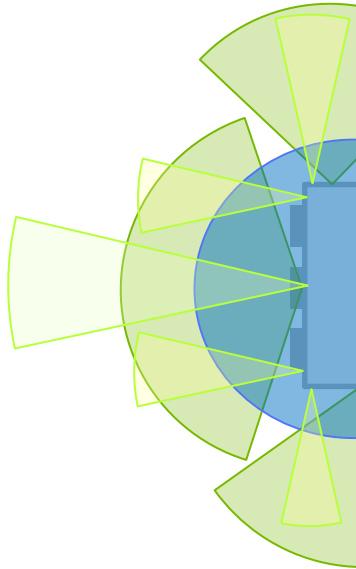
JETSON NANO

NVIDIA Confidential - Shared under NDA

NVIDIA JETSON

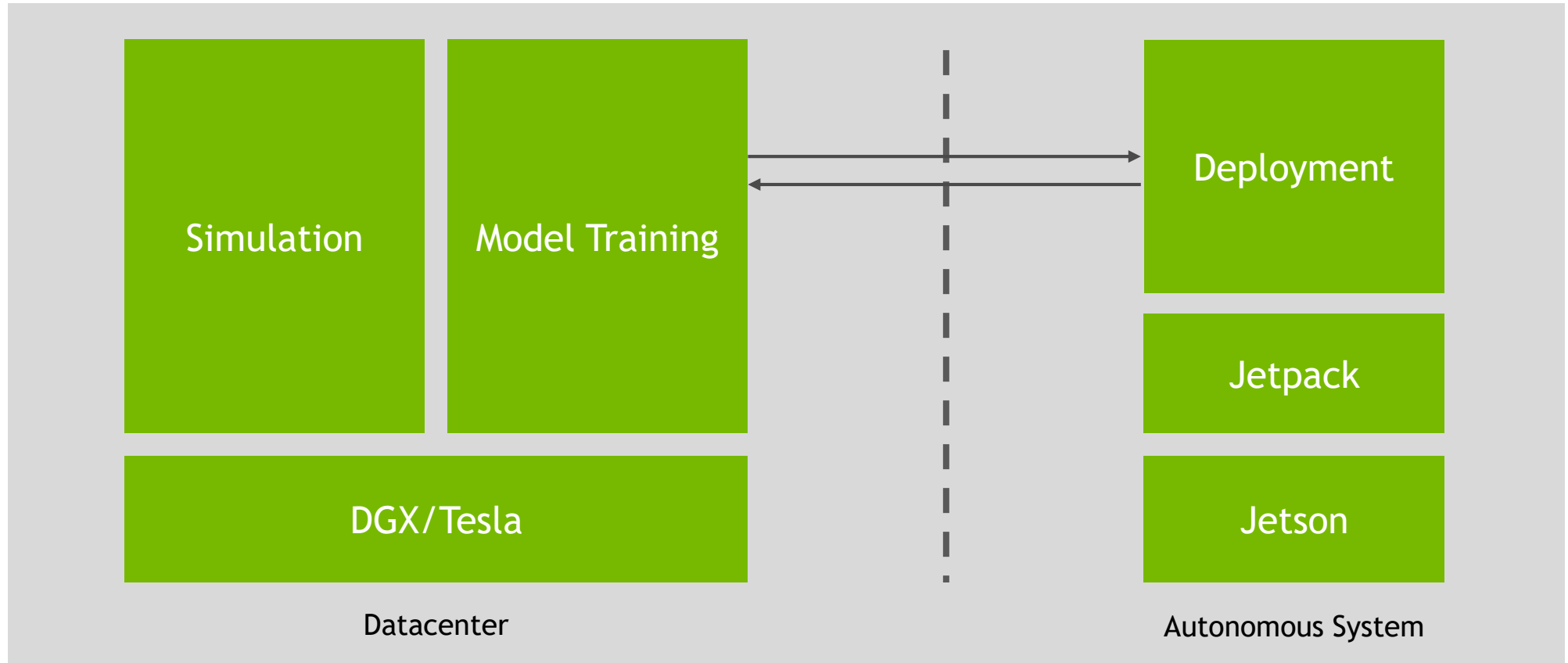
SOFTWARE-DEFINED AUTONOMOUS SYSTEMS

Powerful and efficient AI, CV, HPC | Rich Software Development Platform
Open Platform | 200K Developers

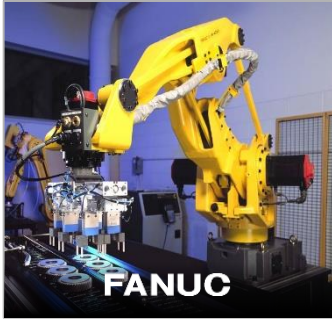


NVIDIA AI PLATFORM

From data center to machines



JETSON SUCCESS STORIES



Industrial



Aerospace/Defense



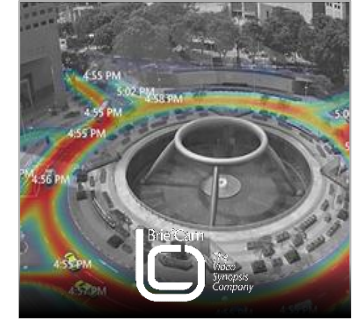
Construction



Agriculture



Healthcare



Smart City



Retail



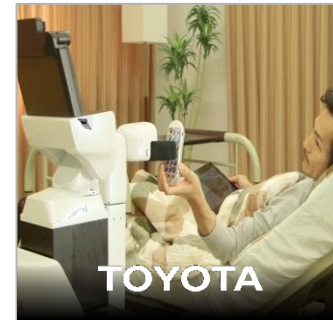
Logistics



Delivery



Inspection



Service



Collaboration

MASS-MARKET EDGE SYSTEMS NEED AI



NETWORK VIDEO RECORDER
200 million 1080p streams



MACHINE VISION/AOI
1 trillion product units per
year require visual inspection



HOME/SERVICE ROBOTS
175 billion hours per year
on household chores (US)



AIOT
80% of Enterprise IOT
projects will use AI by 2022

ANNOUNCING: JETSON NANO

Small, low-power AI Computer

128 CUDA Cores | 4 Core CPU

4 GB Memory

472 GFLOPs

70x45mm

5W | 10W

\$129

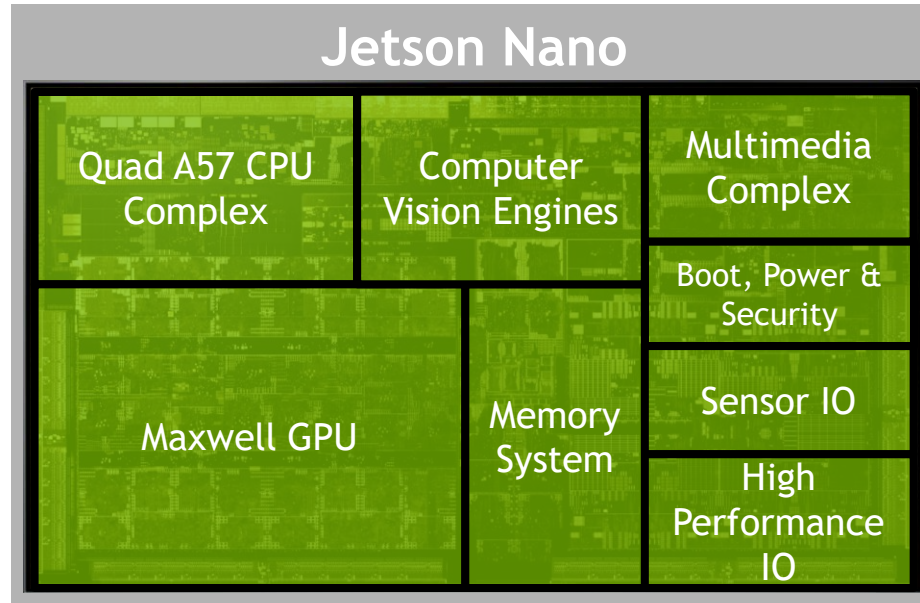


JETSON NANO

Small form factor, power efficient AI computer

Heterogeneous CPU Complex
Quad Cores A57 with 2MB L2
for multi-threaded operation
1.43Ghz

Maxwell Tensor Core GPU
128 CUDA Tensor Cores
472 GFLOPS (FP16)



Memory
4GB 64-Bit LPDDR4
Bandwidth 29.8GBps
16GB eMMC

Computer Vision Engines
ISP
Video Image Compositor

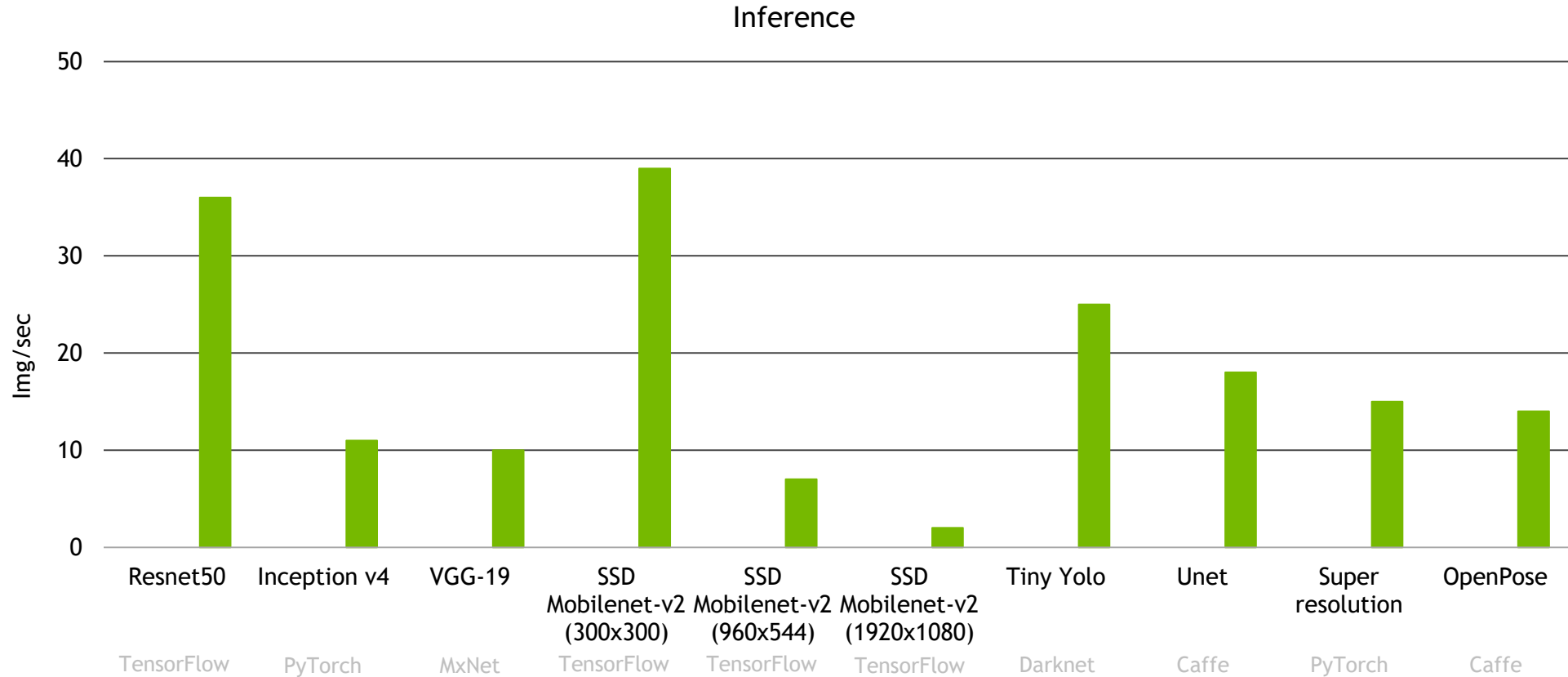
Multimedia Engines
Encode 4kp30, 4x1080p30, 9x720p30
Decode 4k60, 2x4k30, 8x1080p30, 9x720p30
JPEG encode & decode 250 and 500 MP/s
H.264, H.265, VP9, VP8, VC-1, MPEG-2
HDMI, DP and eDP Display support

Boot, Power & Security
Boot and power management
ARM TrustZone Secure

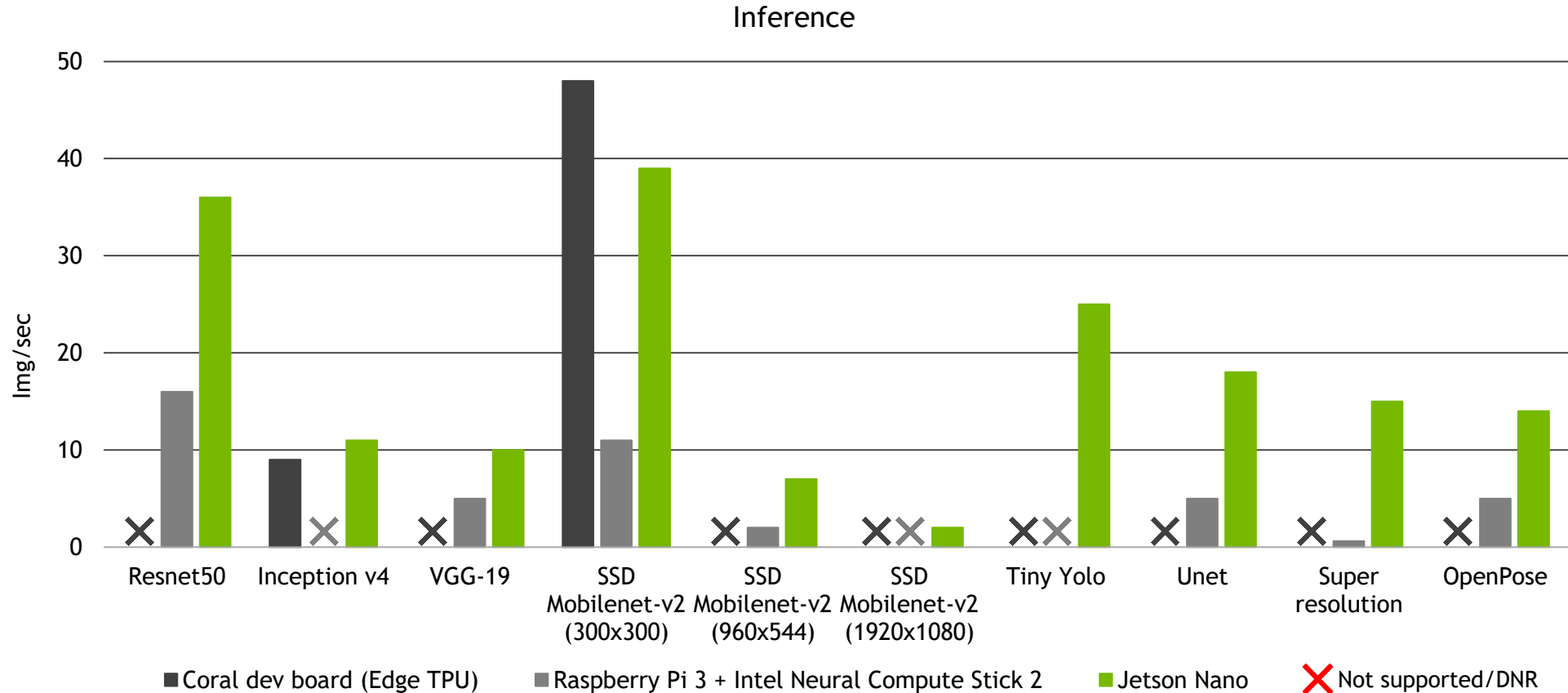
Industry Standard IO
GPIO, I²C, I²S, SDIO, SPI, UART
Support up to 12 CSI @1.5Gbps

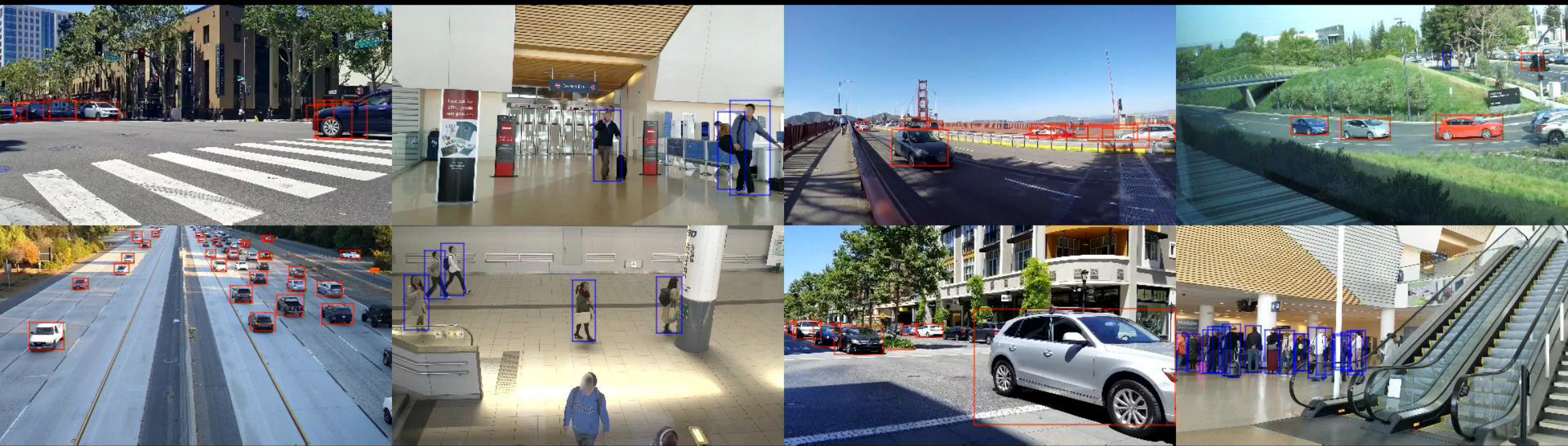
Industry Standard High-Speed IO
PCIe Gen2 rootport x1 | x2 | x4
12 lanes MIPI CSI-2 (D-Phy)
RGMII Ethernet
USB 3.0 and 2.0
USB 3.0 Gen2 Host and Device

JETSON NANO RUNS MODERN AI



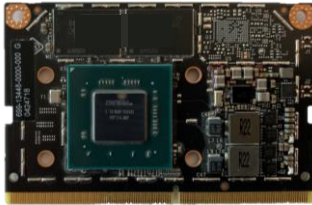
JETSON NANO RUNS MODERN AI





THE JETSON FAMILY

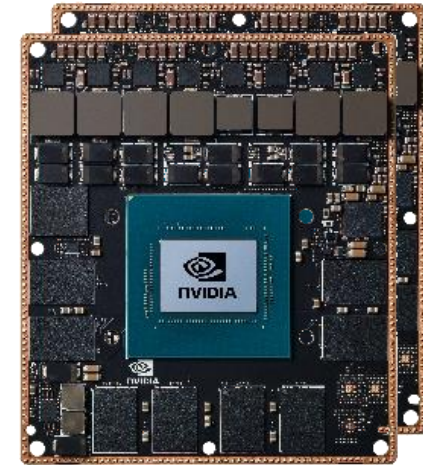
Design for AI at the Edge and Autonomous Systems



JETSON NANO
5 - 10W
0.5 TFLOPS (FP16)
45mm x 70mm
\$129



JETSON TX2 Series
(TX2, TX2 4GB, TX2i*)
7.5 - 15W*
1.3 TFLOPS (FP16)
50mm x 87mm
Starting at \$249



JETSON AGX XAVIER Series
(AGX Xavier 8GB, AGX Xavier)
10 - 30W
5.5 - 11 TFLOPS (FP16)
20 - 32 TOPS (INT8)
100mm x 87mm
Starting at \$599

AI at the edge

Fully autonomous machines

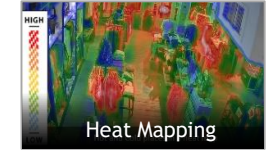
Multiple devices - Same software

Listed prices are for 1000u+ | Full specs at developer.nvidia.com/jetson

*i = for industrial environments

AI NVR WITH JETSON

ISV Applications



METROPOLIS APPLICATION FRAMEWORK



JETSON NANO

8x 1080p at 30 fps
41 images/sec (ResNet50)



JETSON TX2

16x 1080p at 30 fps
98 images/sec (ResNet50)



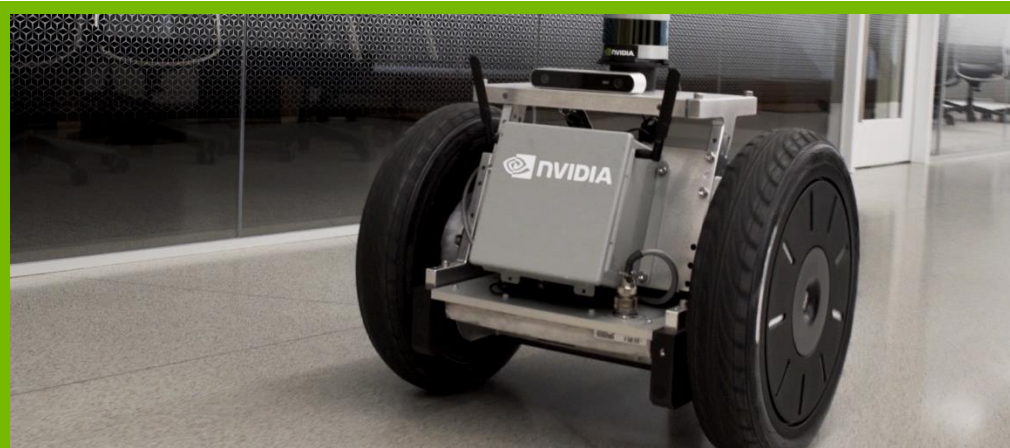
JETSON AGX XAVIER

16x 4K / 64x 1080p at 30 fps
1950 images/sec (ResNet50)

JETSON SDKS OVERVIEW



DEEPSTREAM SDK
FOR VIDEO ANALYTICS



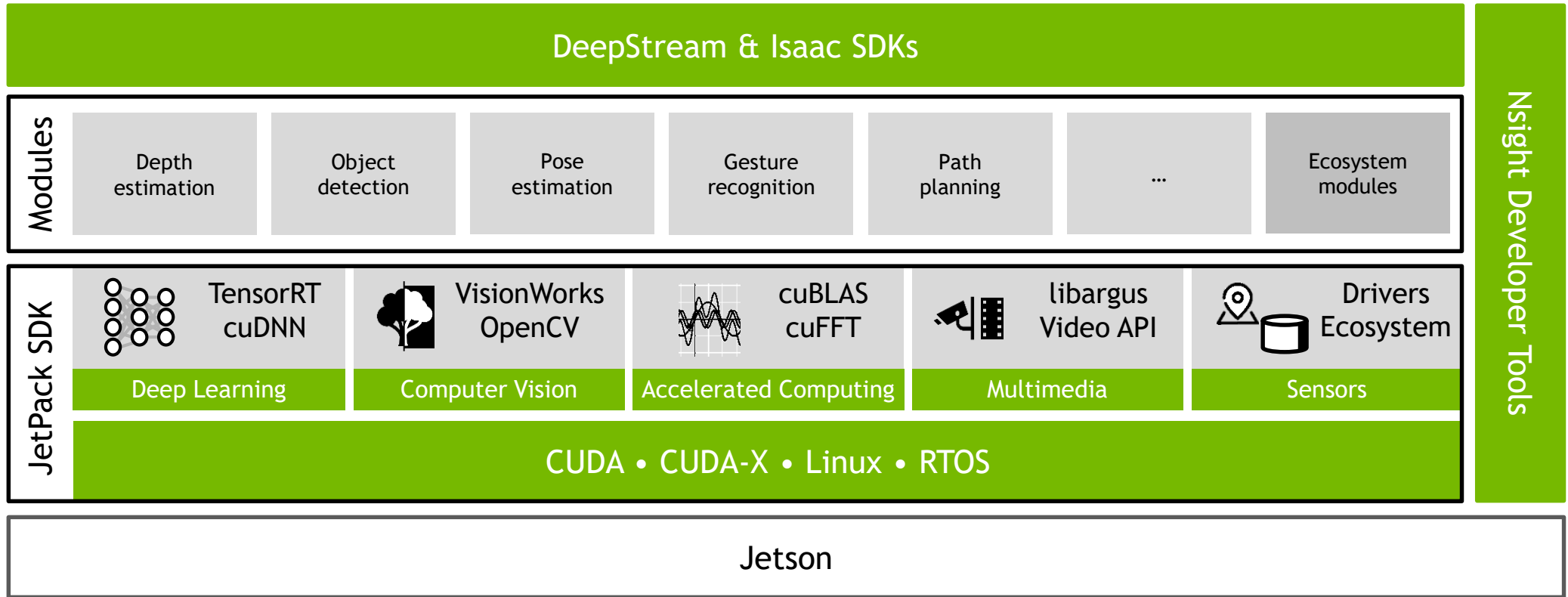
ISAAC SDK
FOR ROBOTICS

JETPACK SDK
FOR AI AT THE EDGE

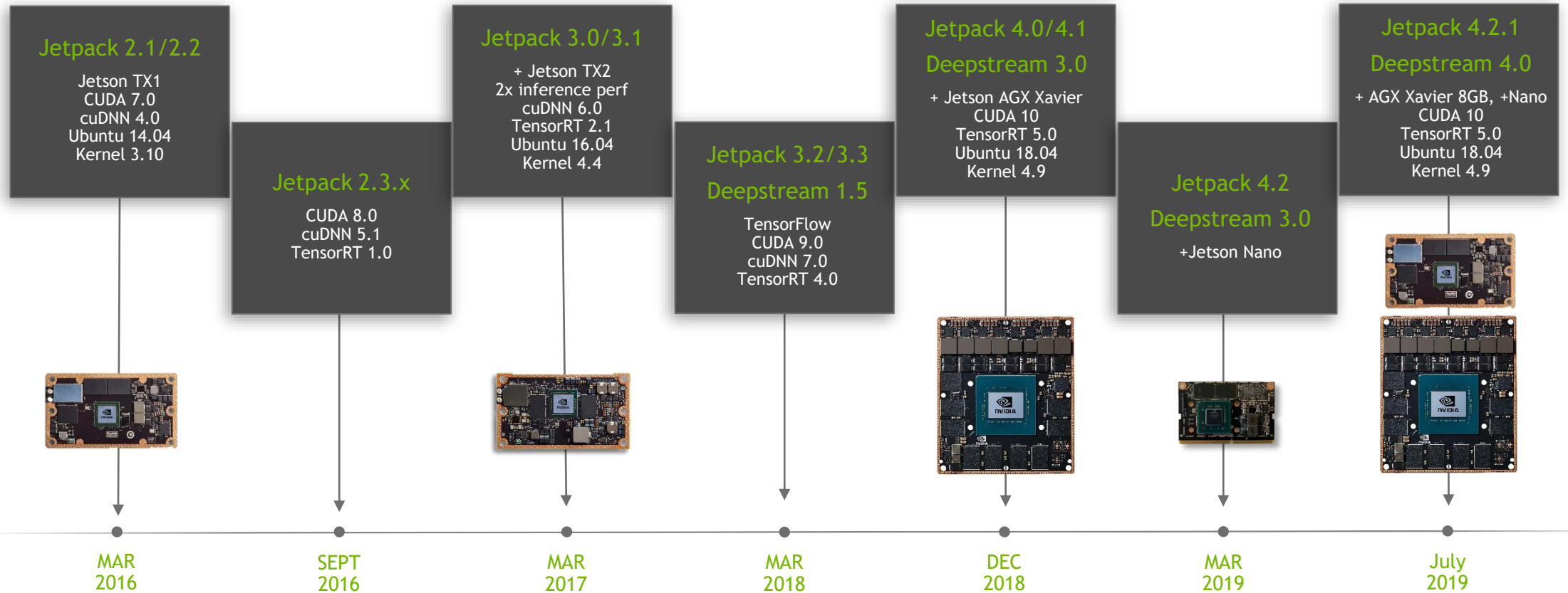


JETSON NANO

JETSON SOFTWARE



CONTINUOUS SOFTWARE INVESTMENT



JETSON NANO		JETSON TX2 SERIES (TX2, TX2 4GB AND TX2i*)	JETSON AGX XAVIER SERIES AGX XAVIER 8GB AND AGX XAVIER	
GPU	128 Core Maxwell 0.5 TFLOPs (FP16)	256 Core Pascal TX2 & TX2 4GB 1.33 TFLOPS (FP16) TX2i 1.26 TFLOPS (FP16)	384 Core Volta + NVDLA	512 Core Volta + NVDLA
			5.5 TFLOPS (FP16) 11.1 TOPS (INT8)	11 TFLOPS (FP16) 22 TOPS (INT8)
CPU	Quad-core ARM A57 (1.5 GHz)	Dual-core Denver and Quad-core A57 2GHz (2x) 2MB L2	6-core Carmel ARM CPU 1.3GHz (3x) 2MB L2 + 4MB L3	8-core Carmel ARM CPU 2.26GHz (4x) 2MB L2 + 4MB L3
DLA	-	-	4.1 TFLOPS (FP16) 8.2 TOPS (INT8)	5 TFLOPS (FP16) 10 TOPS (INT8)
Memory	4 GB 64-bit LPDDR4 29.8 GB/s	128-bit LPDDR4 TX2 60 GB/s, TX2 4GB & TX2i 51 GB/s	8GB 256-bit LPDDR4x 1333MHz - 85 GB/s	16GB 256-bit LPDDR4x 2133MHz - 137 GB/s
Storage	16 GB eMMC 5.1	TX2 4GB16 GB eMMC 5.1 TX2 & TX2i 32 GB eMMC 5.1	32 GB eMMC 5.1	
Video Encode	1x4K @30 2x1080p @60 4x1080p @30(HEVC)	1x4K @60 3x4K @30 4x1080p @60 8x1080p @30(HEVC)	2x4K @30 6x1080p @60 14x1080p @ 30(HEVC)	4x4K @60 8x4K @30 16x1080p @60 32x1080p @30 (HEVC)
Video Decode	1x4K @60 2x4K @30 4x 1080p @60 8x1080p @30 (HEVC)	2x4K @60 4x4K @30 7x1080p @60 14x1080p @30(HEVC)	2x4K @60 4x4K @30 12x1080p @60 24x1080p @30 (HEVC) 16x 1080p @ 30 (H.264)	2x8K @30 6x4K @60 12x4K @30 26x1080p @60 52x1080p @30 (HEVC) 30x1080p @30 (H.264)
Camera	12 lanes (3x4 4x2) MIPI CSI-2 D-PHY 1.1 lanes (1.5 Gbps)	12 lanes (3x4 6x2) MIPI CSI-2 D-PHY 1.2 lanes (2.5Gbps)	16 lanes (4x4 6x2 6x1) MIPI CSI-2 8 lanes SLVS-EC D-PHY 1.2 (2.5Gbps total up to 40 Gbps) C-PHY 1.1 (1.75Gsymb/s total up to 64 Gbps)	16 lanes (4x4 6x2 6x1) MIPI CSI-2 8 lanes SLVS-EC D-PHY 1.2 (2.5Gbps total up to 40 Gbps) C-PHY 1.1 (2.5Gsymb/s total up to 109 Gbps)
Power	5W 10W	7.5W 15W	10W 20W	10W 15W 30W
Mechanical	69.6mm x 45mm 260 pin edge connector	87mm x 50mm 400 pin connector	100mm x 87mm 699 pin connector	
Software	Jetpack SDK - Unified software release across all Jetson products			

JETSON ECOSYSTEM

DISTRIBUTION



SOFTWARE

ISV



TOOLS/SYSTEMS SW



CSP-IOT



SOFTWARE SERVICES



CAMERA AND SENSORS



HW AND SENSORS

HARDWARE AND DESIGN SERVICES



JETSON NANO DEVELOPER KIT

\$99 AI Computer

128 CUDA Cores | 4 Core CPU

472 GFLOPs

5W | 10W

Available from nvidia.com and
distributors worldwide



