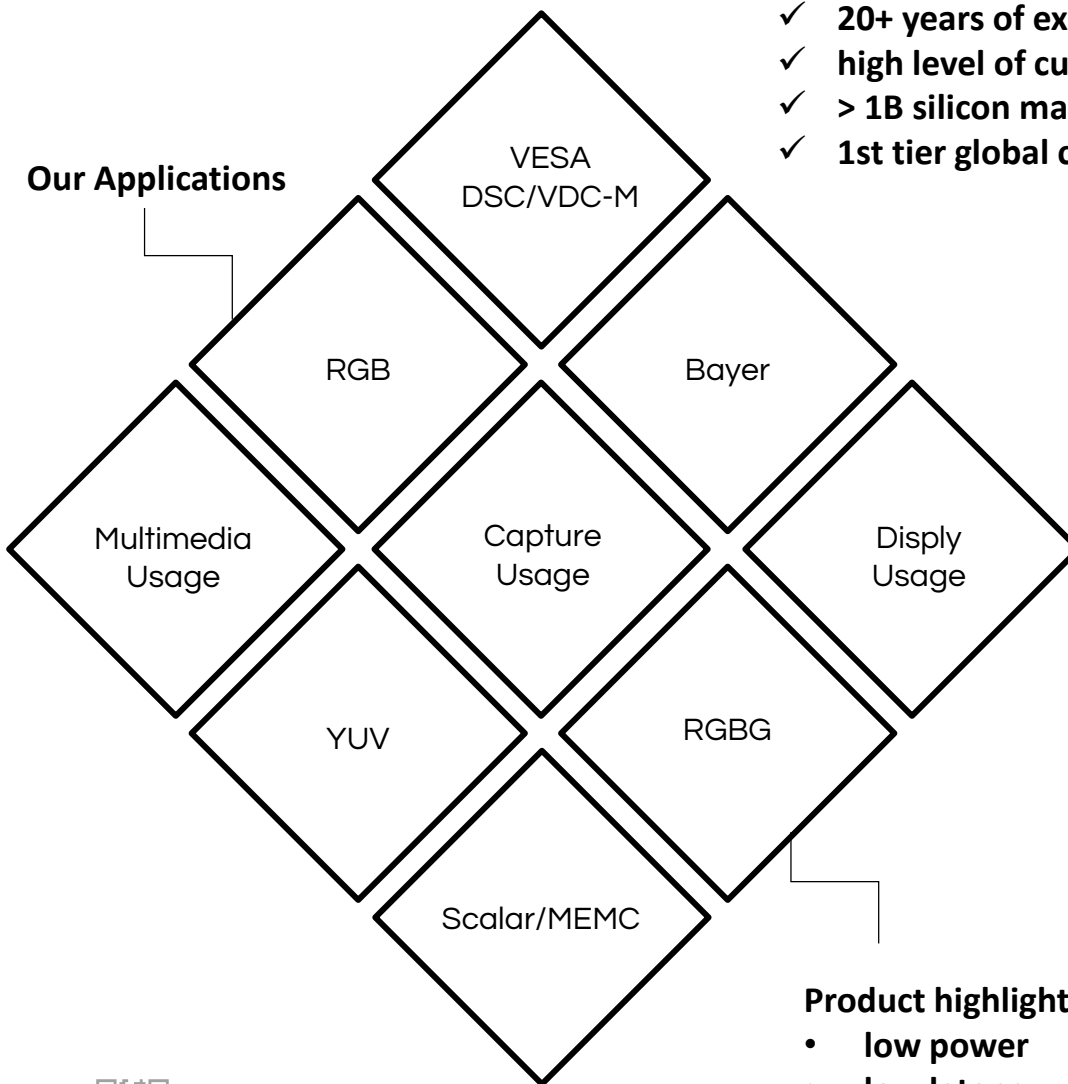


TITC

Image Compression IP specialist

- ✓ 20+ years of experience
- ✓ high level of customization
- ✓ > 1B silicon mass produced
- ✓ 1st tier global customers

Our Applications



Product highlight features:

- low power
- low latency
- small area



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TITC N-Series IP

Feature-map for AI

N-series IPs are collection of proprietary algorithm which are used for real-time compress/decompress featuremap data. These IPs/algorithm are designed for neural network(AI) device, which facilitate temporal storage efficiency of featuremap data. AI edge devices and end products embedded NPU may benefit from N-series IPs.

N-series IPs are featured by lossless/lossy bi-direction support, tiny hardware resources, friendly IP integration, and flexible access/store compressed bitstream. Feature support/algorithm are tailored for neural network architecture via TITC engineer team.

Classification

model: mobilenet v2
 dataset: ILSVRC2012/50-pics

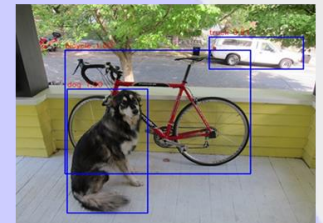
<lossy compression>
 *TITC/1.78X: ave.err=0.251%
 <lossless compression>
 *TITC: ave.rat=1.90X



Object Detection

model: tiny-yolo v2
 dataset: VOC2007/4952-pics

<lossy compression>
 *no compr. : mAP=48.05
 *TITC/1.78X: mAP=46.88
 <lossless compression>
 *TITC: ave.rat=2.36X



➤ TITC AI Inference Device IP

Usage / Series		capture / N-series
IP Name		featuremap v1
Data	Type	featuremap
	Bit-Depth	8-bit
Compression	Type	Lossy/Lossless
	Ratio(Lossy)	1.14~2X
	Unit	H4V4
Performance	Throughput	16-pix (per T)
Note		* lossless is encouraged * compression unit/ratio(lossy) can be customized

