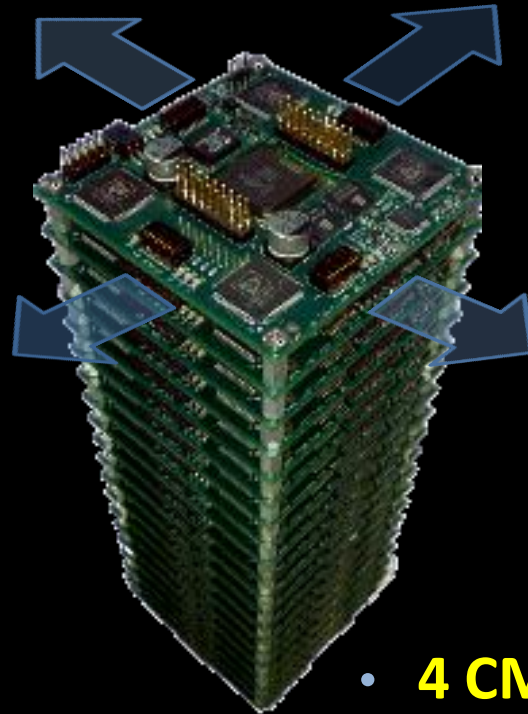
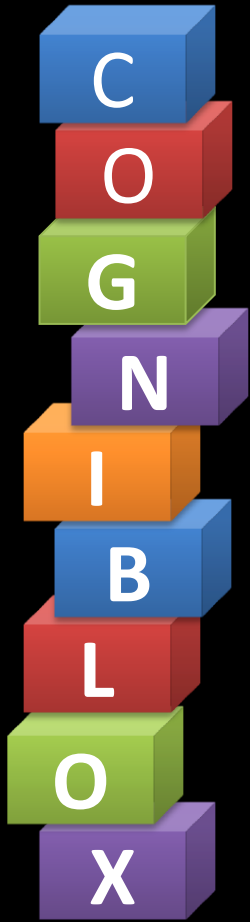


Identify one *important* pattern (up to 256 bytes) among
1K, 10K, 100K, 1,000K, or more

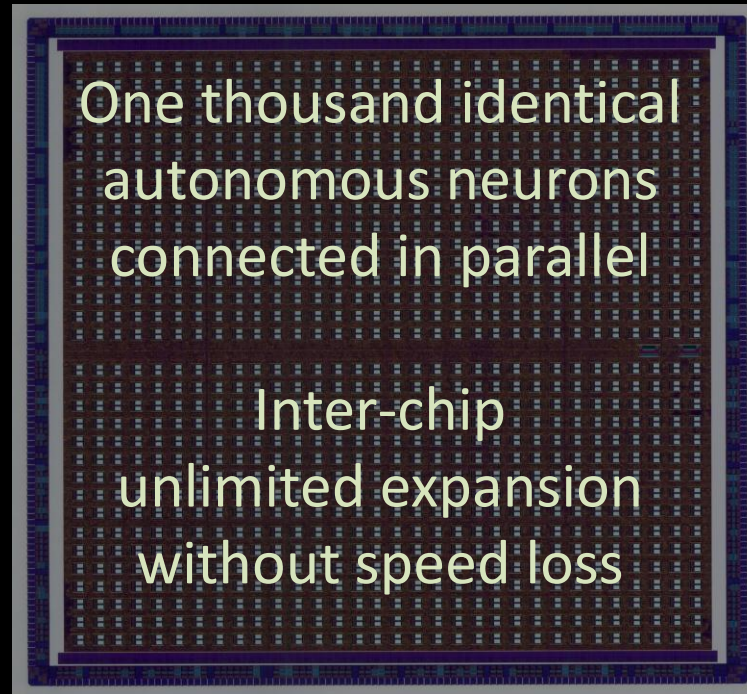


CogniBlox will do it
in **10 μ sec**
with 250 mW per
1,000 patterns

- **4 CM1K chips** or 4096 neurons per board
 - Stackable vertically
 - Expandable horizontally

Beyond Von Neumann...The CM1K chip

Find one
pattern
among one
million
in 10 μ S



The most practical approach to real time pattern recognition !

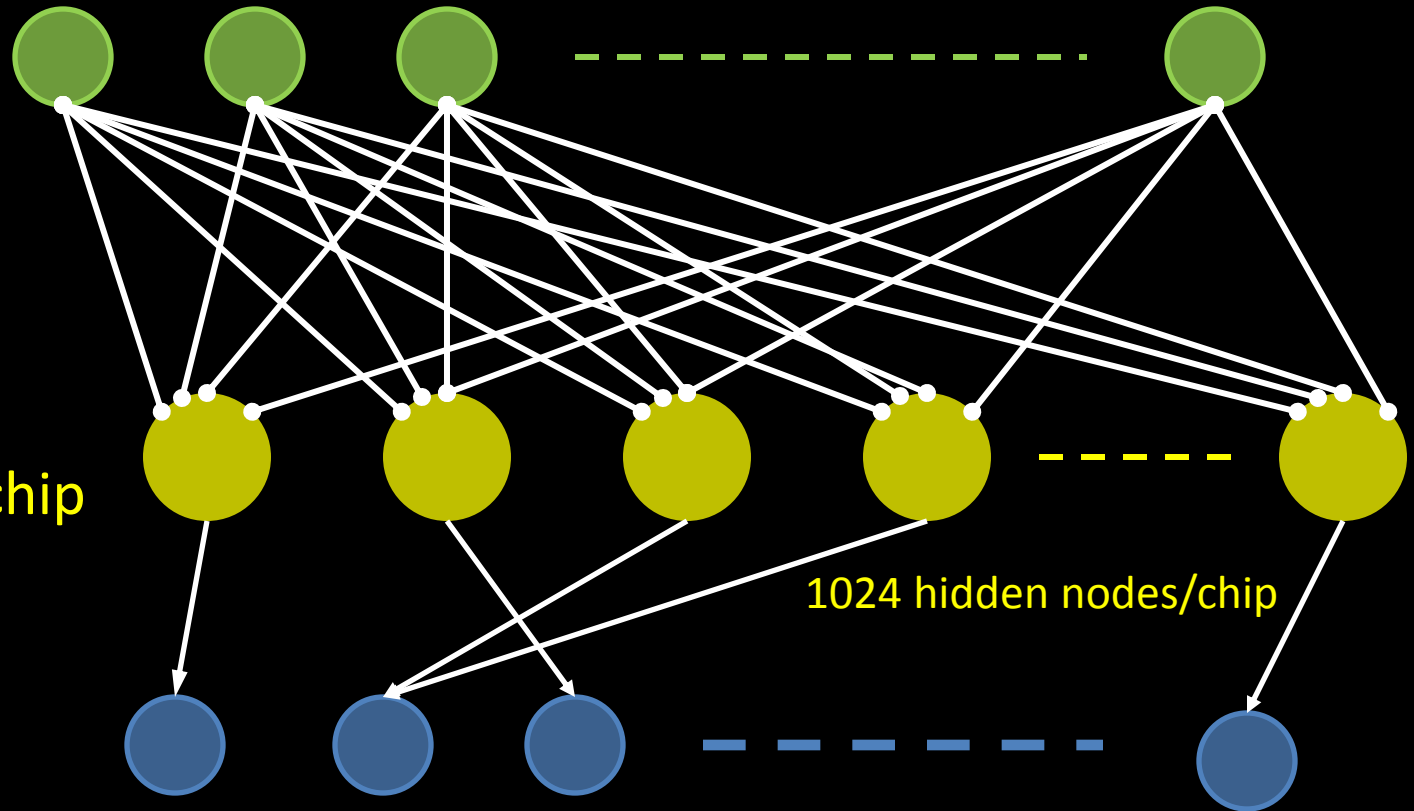
*Data Mining • Image Recognition
Signal Recognition • Video Analytics • More*

The CM1K Chip...available now!

256
inputs
of 8-bit

262,144
Synapses/chip

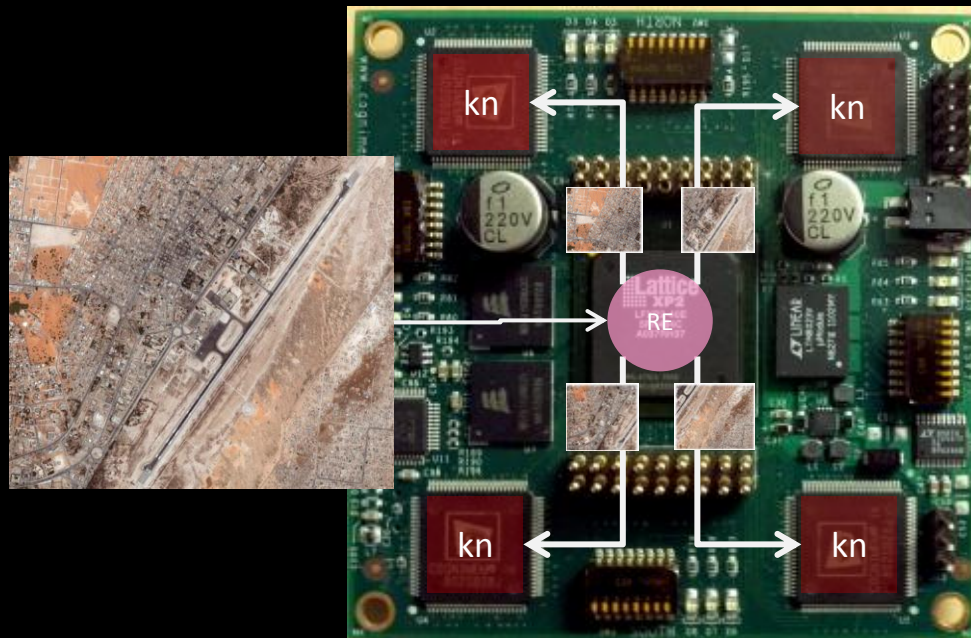
16,392
outputs



26 Billion connections updated per second @ 500 mW / 27 MHz

CogniBlox ...for High-Speed Video Analytics

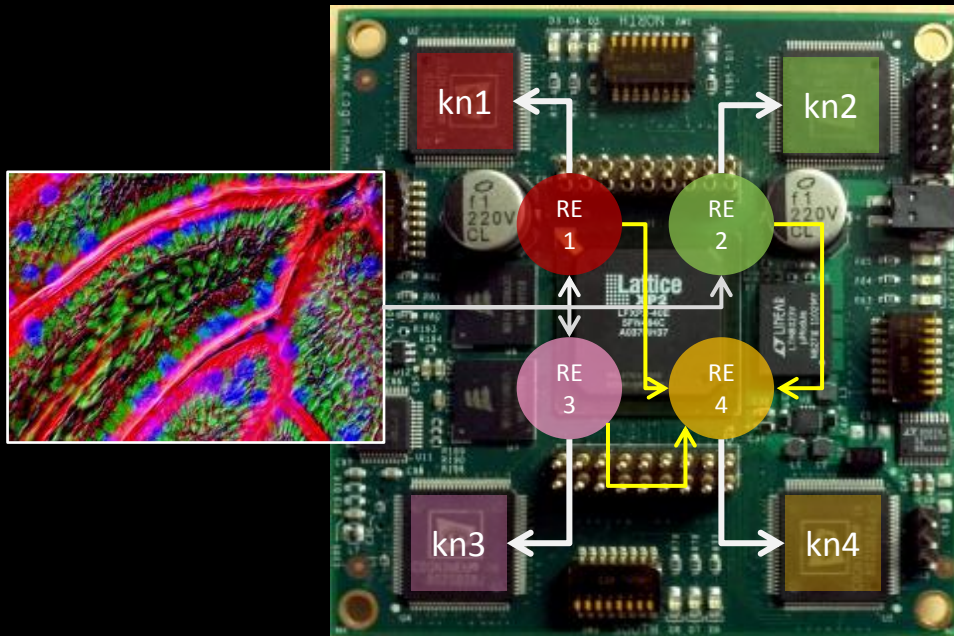
Process images N times faster by distributing the recognition to multiple CM1K chips



Example:
The four quadrants of the image are recognized in parallel. The same knowledge is loaded in the four CM1Ks.

CogniBlox ...for Complex Image Recognition

Build robust diagnostics using multiple recognition engines in parallel

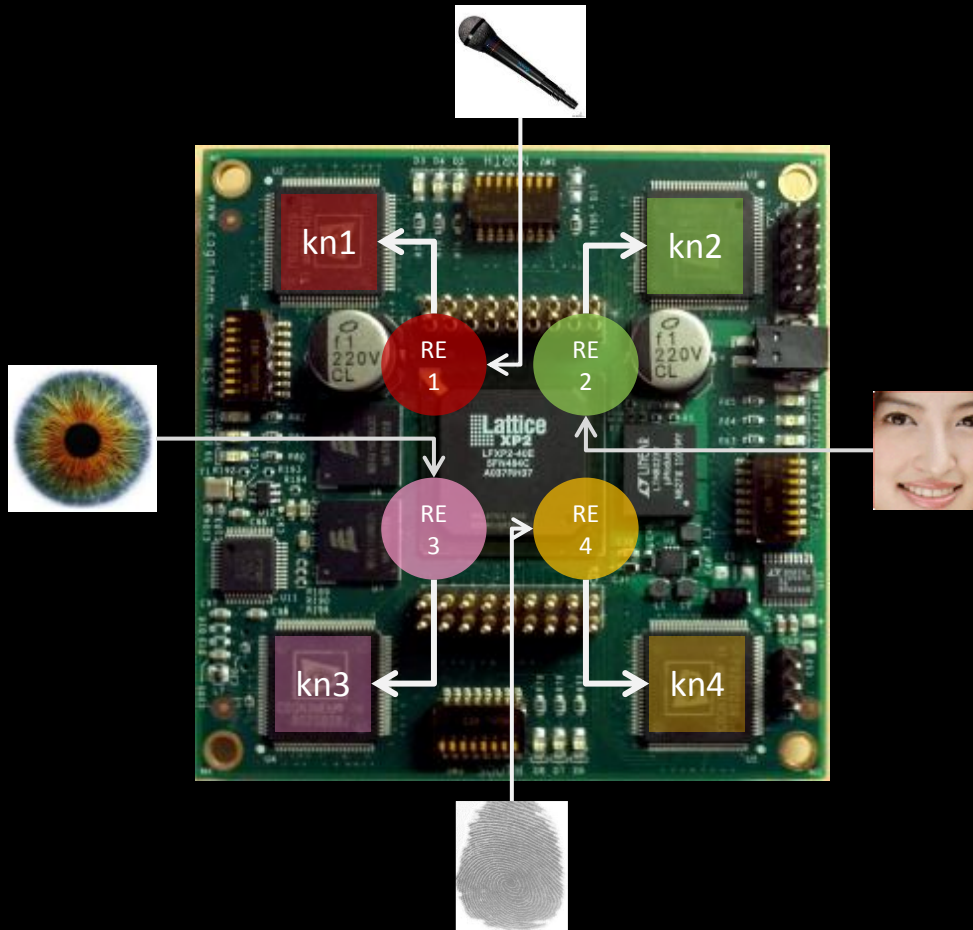


Example:

- Expert in color (RE1+kn1)
- Expert in texture (RE2+kn2)
- Expert in shapes (RE3+kn3)
- Expert in cell biology (RE4+kn4)

CogniBlox ...for Sensor Fusion

Multiple sensor inputs for composite recognition



Example:

Expert in voice (RE1+kn1)

Expert in face (RE2+kn2)

Expert in fingerprint (RE3+kn3)

Expert in iris (RE4+kn4)

CogniBlox ...for Data Mining

Find one pattern
among one million
in $10\mu\text{S}$



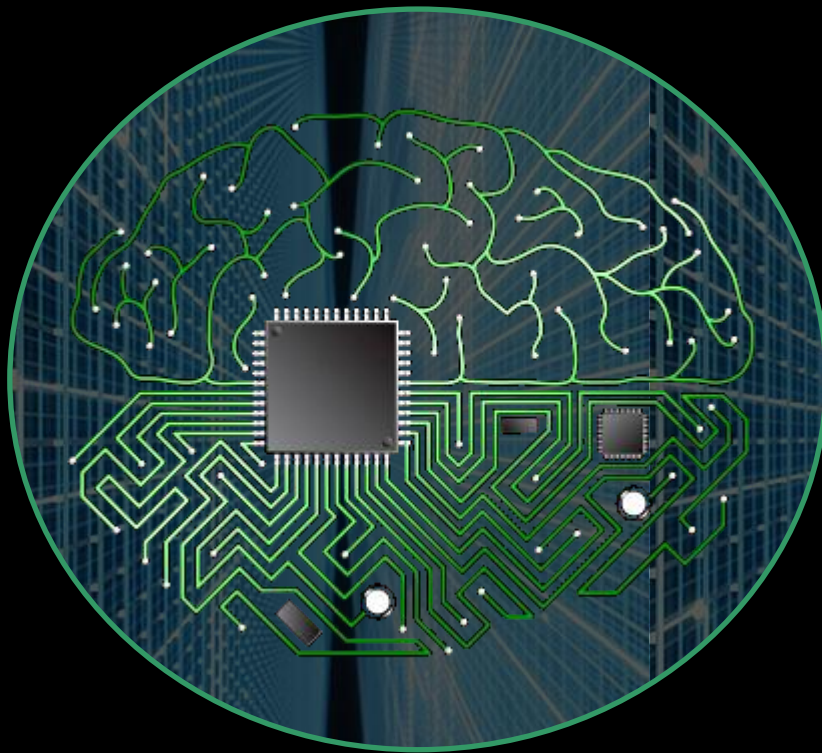
Horizontal &
vertical
expansion
up to
millions of
parallel
neurons



100,000 searches per second
among one million references

CogniBlox ...

for the Big Artificial Brain (BAB) Project



The BAB project is
funded in part by
French/German
Defense Research



Toward one million neurons in parallel
> .13 Peta operations per second equivalent