

NAO⁶

ANNEX



NAO

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Motherboard

- ATOM Z530 **1.6 GHz**
- CPU **Bi core**
- **1 GB** RAM
- **2 GB** Flash memory + 8 GB Micro SDHC

- ATOM E3845 **1.91 GHz**
- CPU **Quad core**
- **4 GB** DDR3 RAM
- **32 GB** SSD



Camera

- Field of view : 72.6°DFOV (60.9°HFOV,47.6°VFOV)
- Focus range: 30cm ~ infinity
- Focus type : **Fixed focus**

- Field of view : **68.2°**DFOV (57.2°HFOV,44.3°VFOV)
- Focus range : 30cm ~ infinity
- Focus type : **Autofocus**



Audio

- Cardioid microphones (-12dB)
- Loudspeakers: Foxconn Amato

- Omnidirectional microphones (-12dB) + Audio codec
- Loudspeakers: Seltech 40S19 custom



Motor

- New motors with a lifetime improvement



Color

- Red, blue, light grey

- Dark grey

NAO6 vs. NAO Evolution (1/2)

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NAO⁶ Performance *

Boot time	131.7 s	51 s	~3x faster
System upgrade time	22' min	4'24" min	~5x faster
Ethernet performance	Download 162 Mbit/s Upload 138 Mbit/s	Download 657.54 Mbit/s Upload 652.01 Mbit/s	~4x faster ~4x faster
Wi-Fi performance	Download 13 Mbit/s Upload 15.5 Mbit/s	Download 124.45 Mbit/s Upload 83.90 Mbit/s	~10x faster ~5x faster
Disk memory	Read speed 4.6 MB/s Write speed 1.9 MB/s Effective user dedicated space 15 GB	Read speed 73 MB/s Write speed 67 MB/s Effective user dedicated space 23 GB	~16x faster ~35x faster ~2x better
CPU	Effective user dedicated CPU 33%	Effective user dedicated CPU 58%	~2x more effective
RAM	Effective user dedicated RAM 600 MB	Effective user dedicated RAM 2.8 GB	~5x more effective

* May 2018 tests results - Confidential

	NAO	NAO ⁶	NAO ⁶ Performance *
Fan Noise @ 1m (100% / 60%)	40,7 dB(a) / 38,8 dB(a)	50 dB(a) / 36 dB(a)	Better cooling performance
Worst case CPU temp (fan 100%)	84°C	74°C	Better cooling performance
WER in quiet environment : → ambient 50dB / voice 70dB	90%	10%	~9x understanding
WER in public environment : → ambient 73dB / voice 76dB	80%	30%	~2.5x understanding
Speaker volume	80dB(c)	89dB(c)	~2x louder
Microphone saturation (from speakers in %)	N/A	74 %	Allow Acoustic Echo Cancellation
Camera resolution	Top : 1280 x 960 @ 5fps Bottom : 1280 x 960 @ 5fps	Top : 2560x1920 @15fps Bottom : 1280x960 @ 15fps	~2x on Top camera / similar on bottom
Dual Mode Camera	Not stable	Yes	⇒ New feature
Camera Auto-focus	Not available	Yes	⇒ New feature