

Tobii for CDNLive China

Aug 2017



## The Tobii Group in brief

- World leader in eye tracking
- Founded 2001
- Headquartered in Sweden, with offices in the US, China, Japan, South Korea, Taiwan, Germany, Norway and UK
- +800 employees worldwide (of which 250 in R&D)
- Listed on Nasdaq Stockholm since April 2015

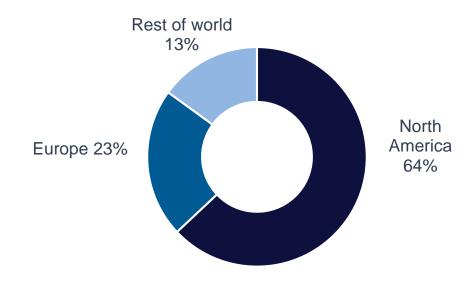


## The Tobii Group in brief

### Net sales 2007-2016

#### SEK million

### Sales per region





### Three strong, independent business units



Global leader in assistive technology for communication

**tobii** dynavox



Global leader in eye-tracking solutions for research

tobiipro



Leading eye-tracking technology for integration into consumer devices and other volume products

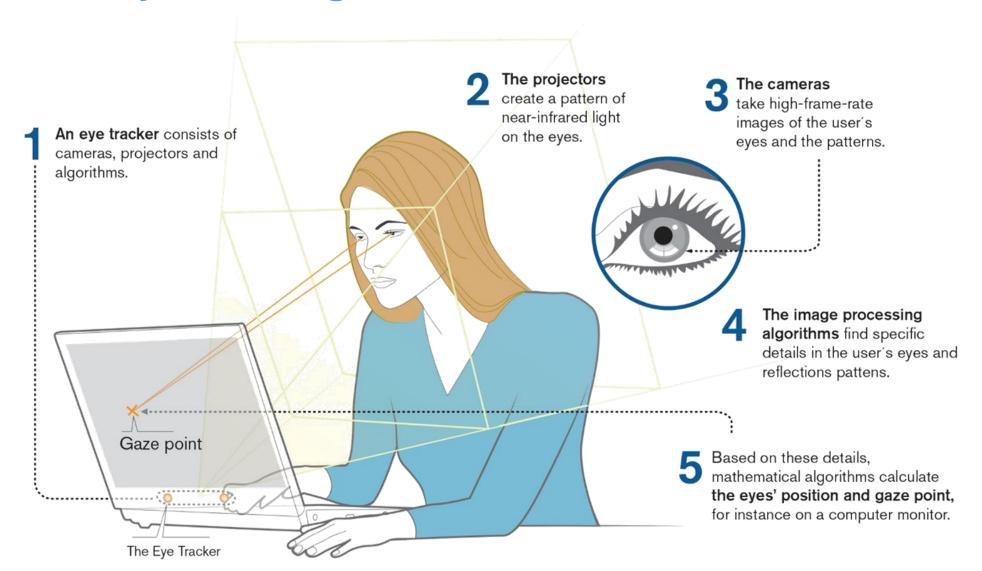
tobiitech







## How eye tracking works





## Eye tracking provides benefits in many fields

#### **Assistive technology**



Provides the ability to communicate to people with special needs

#### Research



Unique insights into human behavior and consumer responses

#### Gaming



Raise game immersion and intensity to new levels for a large set of enthusiast gamers

#### VR & AR



Optimize VR graphics, and enable new interactive experiences

### **Smartphones**



Create smart interfaces that adapt to the attention of the user

#### **Mainstream computers**



New user interfaces for computers and tablets with built-in eye tracking

#### **Automotive**



Monitor and warn drivers for drowsiness and inattention

#### **Specialty applications**



Numerous new areas such as diagnostics, process industry and security



# products & technologies



# tobii eyeCore®





### world's most advanced and most deployed eye tracking algorithm core

developed over 16 years and 6 generations | trained on millions of eyes | in millions of consumer devices (2017)

the only eye-tracking core available across all device types ... AR, VR, desktop, laptop, smartphone, specialty

available in tobii eyeChip ® or ported under license to industry leading platforms









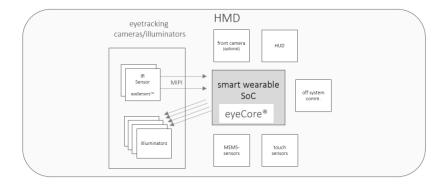




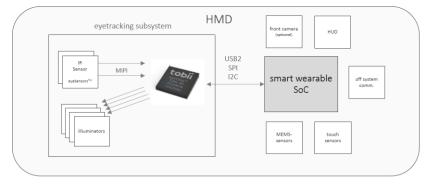
# tobii eyeCore® in VR/AR



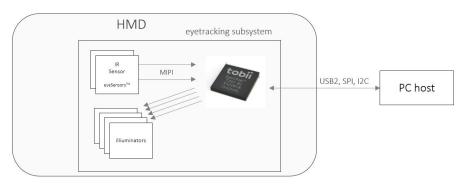
VR and AR standalone/mobile architecture with eyeCore® ported to SoC



VR and AR standalone/mobile archictecture with eyeChip®



VR host tethered architecture with eyeChip®





# tobii eyeChip®



## worlds first and only dedicted eye-tracking ASIC

### implements tobii eyeCore®

absolute state-of-the-art eye-tracking in single chip
low power design with low power DDR memory in package for minimal impact on host
no host processing | 15x less power consumption
1000x less bandwidth to host
USB2, I2C or SPI data



real-time ROI processing	
adaptive illuminator control	
real-time dual BP and DP support	
customized ambient light suppression	
low power wake-on-gaze for presence control	







### OS extension level middleware | full dev SDK

stream engine | interaction engine | UX toolkit | interaction plug-ins

80% of all impressions received by the human brain are through the eyes

patented tobii Engine™

transforms intent into performance and interaction magic





# tobii Engine™ SDK

### world's most advanced and most deployed eye tracking SDK

millions of devices (2017) | hundreds of games and applications | complete ecosystem developed over 16 years and 6 generations

Windows | Android | OSX (2017)

supports industry standards





# tobii eyeCore®

## Why we chose Cadence Tensilica

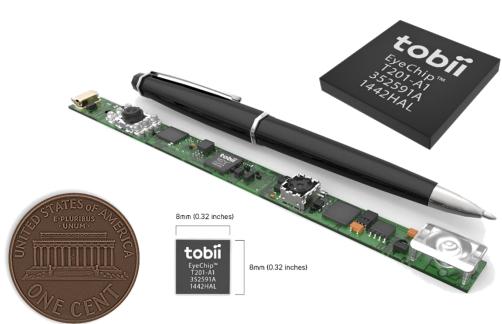
World's most advanced eye tracking platform uses Tensilica

• Tobii can license tailored TIE instructions into your chip design for optimized Tobii

eye tracking performance.

EyeChip ASIC incl. EyeCore eye tracking algorithm

- Used in VR headsets, Mobile Phones, Monitors and Laptops by Dell, Alienware, Acer, MSI, Huawei...
- Tobii added tailored instructions to make their Eye-tracking Software 100% more efficient
- EyeChip achieves 30% lower power using Tensilica compared to a standard processor





# we power PCs









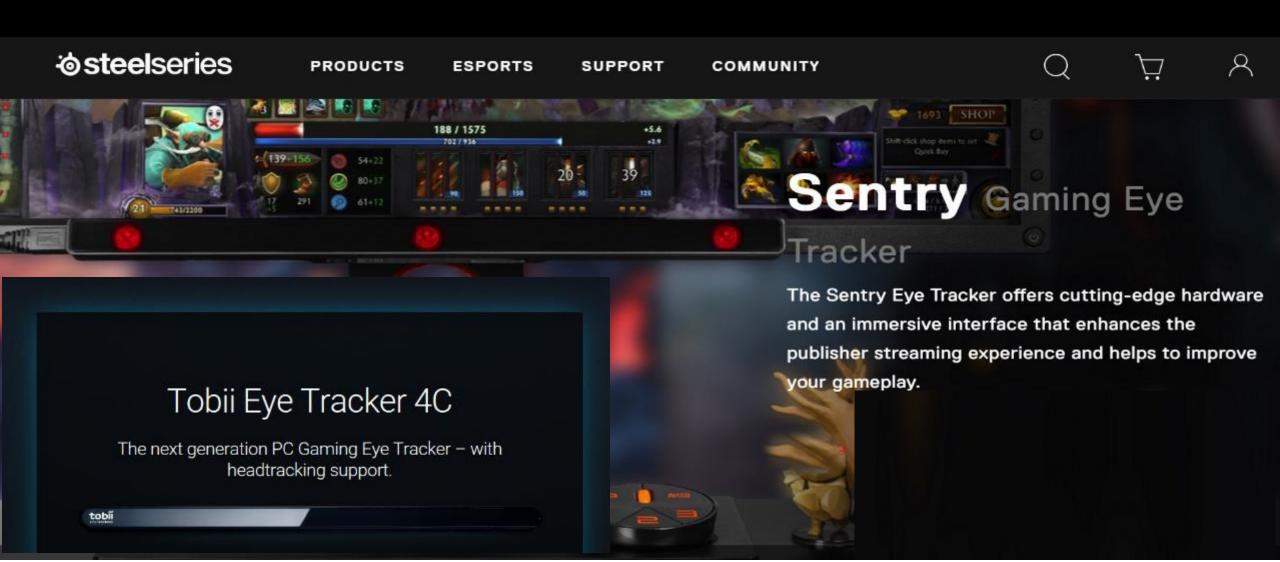
# we power monitors





## we power peripherals





## we power wearables





# we power smartphones







## we power game engines













## we power game studios













## we power games





# we power interaction







## we power experience





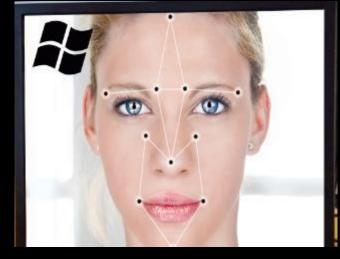
presence | graphics | lighting

## we power security





**Microsoft** Windows Hello





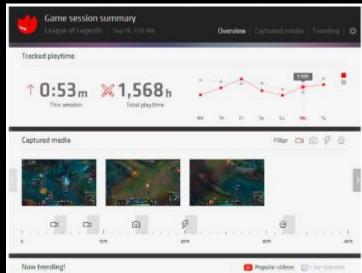


biometric authentication

# we power insight









embedded analytics

