Etude de l’existant

La tablette BrailleNote Touch

The 32-cell BrailleNote Touch Plus 32 combines the simplicity of a note-taking tool with the power of a smart digital device. Supported by the Android Oreo platform, it takes your braille experience to new levels and keeps you engaged and connected with your world.

Functional specifications

32 braille cells with cursor routing keys

- Worlds first Google certified braille tablet
- Save and create content using one of the many applications available (see list of KeySoft specific applications below)
- Install apps from the PlayStore
- Supports Google Classroom and other LMS
- Visual touch surface and screen with use of HumanWare Patent Touch Braille
- Ergonomic removable Perkins keyboard
- HumanWare signature thumb keys for navigation
- Onboard applications powered by KeySoft
- Text to speech engine
- Bluetooth and wireless connection
- Book Reader

- Supports various file formats, including docx, pdf and html
- Supports multiple languages and braille tables
- Create real time graphs
- Onboard braille translation (Duxbury and Liblouis included)
- Battery life: 12 hours

Applications

- KeyWord - Word processor
- KeyFiles - File manager
- KeyMail - Email
- KeyList - Contacts
- KeyPlan - Planner
- KeyMath - Math editor
- KeyCalc - Scientific calculator
- KeyBrf - Braille editor
- Chrome - Internet
- EasyReader + - Book reader
- YouTube
- Play Store and much more
- Install third party applications including Google Classroom, or Zoom

Supported Languages

- English
- French
- Italian
- German
- Dutch

Physical specifications

- Device weight: 900 g (2 lbs)
- Device dimensions (w x d x h): 24.4 x 16.2 x 2.06 cm / 9.5” x 6.3” x 0.8”
- Touch screen dimension: 22.86 cm x 7.62 cm (9” x 3.8”)
- LCD screen dimension: 1024 x 600 18 cm (7”) diagonal LCD screen
- Removable battery

Technical specifications

- Platform: Android 8.1
- 4 GB of RAM memory
- 64 GB of internal storage capacity
- Wi-Fi 802.11a/b/g/n/ac (2.4 and 5.0 GHz)
- Frequency band: 2.4 GHz (channels 1 to 13) and 5.0 GHz
- Bluetooth 4.2
- Audio CODEC with volume control, microphone input, 1W stereo speakers and stereo headphones output

- Internal omni directional MEMS type microphone
- External SD card socket with full SDIO interface
- High-Resolution video output (audio and video) for external display
- 21MP camera with dual LED flash
- USB 3.0 type C port for PC connectivity, debug and battery recharge.
- USB 2.0 type A host port capable of supplying 500 mA
- Access to USB 3.0 speeds
- Real Time Clock with battery backup
- Vibration device
- Sensors
- 3D accelerometer
- 3D gyroscope
- 3D electronic compass

2. L’application BrailleTouch

définition

BrailleTouch is a smartphone app that allows blind and visually impaired people to type on a touchscreen. It is based the familiar six-key braille keyboard found on the Perkins Brailler and many electronic braille notetakers. More information can be found at:

Both the free trial version and the full version of BrailleTouch are now available through the App Store:

To type with BrailleTouch, hold the phone in two hands with the screen facing away from you. The first three fingers of your left and right hands will naturally fall on the left and right sides of the screen, respectively. To type a braille chord, use the same fingers you would use on the standard six-key Perkins-style keyboard. For example, to type the letter “B”, tap the screen with the first two fingers of your left hand.

We recommend using a rubber case to aid in gripping your phone comfortably in both hands, and either wireless headphones or a right-angle headphone plug if your headphone jack is on the side of the phone where you would hold it.

BACKGROUND

BrailleTouch is based on research at the Georgia Tech School of Interactive Computing, which won first place in the Design Competition at the MobileHCI 2011 conference in Stockholm, Sweden. Researchers Caleb Southern, James Clawson, Brian Frey, Dr. Gregory D. Abowd, and Dr. Mario Romero evaluated BrailleTouch with eleven blind volunteers. They found that expert braille typists could transfer their skills to BrailleTouch on a touchscreen smartphone within an hour of practice, and could achieve typing speeds averaging 23 words per minute in Grade 1 braille.

There are currently no ideal solutions for mobile text entry in the blind community. Electronic braille notetakers, starting with the Braille ‘n Speak in the 1980s, offer portability and the Perkins-style six-key braille keyboard. However they are bulky and expensive, typically costing $1000s. Today’s smartphones offer computing power that can fit in your pocket for $200. However their small size makes typing on miniature QWERTY keyboards difficult for sighted users, and even more challenging for the blind. The growing popularity of touchscreens is especially problematic for blind users, as these phones have no tactile landmarks to aid in finding keys while typing. Current accessible soft keyboards for touchscreen smartphones, such as Apple’s VoiceOver split tap keyboard for the iPhone, are slow and tedious, with typing speeds below 10 words per minute. BrailleTouch fills this gap in accessible mobile text entry for the visually impaired. It offers fast typing on the familiar six-key braille keyboard, using a $200 commodity touchscreen smartphone that can fit in your pocket.