

# Modular Voice Communication Devices



[ TIPRO ]

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## 15.6" Touchcomputer with Integrated Intercom

- » Ergonomic integration of a fanless touchcomputer and an intercom
- » Wide-screen variant of BeFREE20
- » 16 additional tactile programmable keys with integrated LED indicators
- » Modular - combinable with other FREE modules into multifunctional terminals
- » Low-profile horizontal design
- » Silent and reliable - no moving parts, industrial grade components, Ethernet redundancy, redundant internal audio and controller interfaces
- » Built-in Tipro Controller
- » Extensive connectivity (LAN, USB, COM, external display, digital inputs, stereo sockets)
- » Cable management - hidden and secured, but accessible
- » Optional Inclination Mechanism (VESA 75)

### Computer

- » Intel Quad-Core 64-bit J1900 processor (SoC) with 4 GB RAM (optional 8 GB RAM)
- » Solid-State Disk 256 GB

### Display & Touchscreen

- » Industrial grade 15.6" high-brightness TFT LCD with HD (1920 x 1080) resolution
- » ELO 5-wire resistive touchscreen



### Intercom

- » Stereo loudspeakers (Left and Right, 2 x 2W) with two separate volume control encoders
- » Central low-frequency loudspeaker (1 x 3W) with programmable equalizer
- » Goose-neck microphone with illuminated PTT key
- » Dual USB audio device
- » HID telephony interface supported
- » Connected to the internal sound card (analogue interface)
- » Up to eight listening (output) and up to four recording (input) channels
- » Optional echo-canceller with a digital signal processor

### Programmable Keys - User Configurable

- » 16 single keys with integrated LED indicators or
- » 8 double keys with integrated LED indicators or
- » 16 blind keys or
- » various combinations of single, double and blind keys







## 15.0" Touchcomputer with Integrated Intercom

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- » Modular - combinable with other FREE modules into multifunctional terminals
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- » Built-in Tipro Controller
- » Extensive connectivity (LAN, USB, COM, external display, digital inputs)
- » Cable management - hidden and secured, but accessible
- » Optional Inclination Mechanism (VESA 75)

### Computer

- » Intel Quad-Core 64-bit J1900 processor (SoC) with 4 GB RAM (optional 8 GB RAM)
- » Solid-State Disk 256 GB

### Display & Touchscreen

- » Industrial grade 15.0" high-brightness TFT LCD with XGA (1024 x 768) resolution
- » ELO 5-wire resistive touchscreen



Optional Inclination Mechanism

### Intercom

- » Stereo loudspeakers (2 x 2W) with two separate volume control encoders
- » Additional low-frequency loudspeaker (1 x 3W) with programmable equalizer
- » Goose-neck microphone with illuminated PTT key
- » Dual USB audio device
- » HID telephony interface supported
- » Connected to the internal sound card (analogue interface)
- » Up to six listening (output) and up to three recording (input) channels
- » Optional echo-canceller with a digital signal processor

### Keys & Indicators

- » Two volume control incremental encoders (endless potentiometers)
- » Illuminated PTT key
- » Five mechanical keys for brightness control, volume adjustment and touchscreen (de)activation
- » Dual three-colour bar-graph display as VU meter, volume and brightness indicator
- » Several LED indicators (power, SSD, microphone, touchscreen ...)





## 10.4" Touchcomputer with Integrated Intercom

- » Space-saving integration of a fanless touchcomputer and an intercom
- » Modular - combinable with other FREE modules into multifunctional terminals
- » Low-profile horizontal design
- » Silent and reliable - no moving parts, industrial grade components, Ethernet redundancy, redundant internal audio and controller interfaces
- » Built-in Tipro Controller
- » Extensive connectivity (LAN, USB, COM, external display, digital inputs)
- » Cable management - hidden and secured, but accessible
- » Optional Inclination Mechanism (VESA 75)

### Computer

- » Intel Quad-Core 64-bit J1900 processor (SoC) with 4 GB RAM (optional 8 GB RAM)
- » Solid-State Disk 256 GB

### Display & Touchscreen

- » Industrial grade 10.4" high-brightness TFT LCD with XGA (1024 x 768) resolution
- » ELO 5-wire resistive touchscreen or Projected Capacitive (PCAP) touchscreen



### Intercom

- » Stereo loudspeakers (2 x 2W) with volume control encoder
- » Additional low-frequency loudspeaker (1x 3W) with programmable equalizer
- » Goose-neck microphone with illuminated PTT key
- » USB audio device
- » HID telephony interface supported
- » Connected to the internal sound card (analogue interface)
- » Up to four listening (output) and two recording (input) channels
- » Optional echo-canceller with a digital signal processor

### Keys & Indicators

- » Volume control incremental encoder (endless potentiometer) with switch
- » Illuminated PTT key
- » Three mechanical keys for brightness control and touchscreen (de)activation
- » Three-colour bar-graph display as VU meter, volume and brightness indicator
- » Several LED indicators (power, SSD, microphone, speakers, touchscreen ...)







## 7.0" Compact Touchcomputer with Integrated Intercom and Handset

- » Space-saving integration of a fanless touchcomputer, an intercom and a handset
- » Wide screen display
- » 6 tactile programmable keys
- » Silent and reliable - no moving parts, industrial grade components, Ethernet redundancy, redundant internal audio and controller interfaces
- » Built-in Tipro Controller (programmable keys, programmable switching handsfree-handset, etc)
- » Connectivity (LAN, 2 x USB)
- » Cable management - hidden and secured, but accessible
- » Optional Inclination mechanism (VESA 75)

### Computer

- » Intel® Dual Core N3350 processor (SoC) with 4 GB RAM (optional 8 GB RAM)
- » Solid-State Disk 32 GB (optional 64 GB)

### Display & Touchscreen

- » Industrial grade 7.0" high-brightness TFT LCD with XGA (800 x 480) resolution
- » ELO 5-wire resistive touchscreen



### Audio

- » USB Audio device
- » HID Telephony Supported
- » Programmable signal processing includes ambient noise suppression (noise gating), signal compression and limiting
- » Analogue front-end designed to meet wide-band IP telephony standards
- » Automatically switching from Handsfree (Intercom) to Handset

### Intercom

- » Stereo loudspeakers (2 x 2W) with volume control encoder
- » Separate alert/alarm audio output
- » Goose-neck microphone with illuminated PTT key
- » Optional echo-canceller with digital signal processor

### Handset

- » Programmable PushToTalk key and Hook switch
- » Programmable side-tone
- » Integrated acoustic shock protection
- » Optional dial-pad

### Programmable Keys & Indicators

- » 6 programmable keys
- » Three colour bar-graph display



# Differences Between BeFREEs



BeFREE 22

Display Size	15.6"
Display Resolution	HD (1920 x 1080)
Embedded Computer	Intel J1900, 4GB RAM, 256GB SSD
Analogue Sound Card	Internally Connected to InterCom
Ext. Sound Card Connections	Yes
InterCom	Integrated (USB and/or Analogue)
USB Audio Codecs	2
Ext. Analogue Audio in & out	Yes
Stereo Loudspeakers	Yes (2 x 2W)
Low-Frequency Loudspeaker	Yes (3W)
Volume Control Encoders	2
Volume Control Keys	Yes
Goose-Neck Microphone	Yes
Illuminated PTT Key	Yes
Bar-Graph Displays	2
Control Keys	5
Line Keys	16 -with LED Indicators
External Digital Inputs	2
Handset	Optional module
Dimensions W x D x H [mm]	440 x 342 x 112
Inclination Mechanism	TM-SUA

BeFREE 20

15.0"	10.4"	7.0"
XGA (1024 x 768)	XGA (1024 x 768)	800 x 480
Intel J1900, 4GB RAM, 256GB SSD	Intel J1900, 4GB RAM, 256GB SSD	Intel N3350, 4 GB RAM, 32 GB SSD
Internally Connected to InterCom	Internally Connected to InterCom	-
Yes	No	-
Integrated (USB and/or Analogue)	Integrated (USB and/or Analogue)	Integrated (USB Audio)
2	1	1
Yes	No	No
Yes (2 x 2W)	Yes (2 x 2W)	Yes (2 x 2W)
Yes (3W)	Yes (3W)	-
2	1	1
Yes	No	No
Yes	Yes	Yes
Yes	Yes	Yes
2	1	1
5	3	0
0	0	6
2	2	-
Optional module	Optional module	Integrated
440 x 342 x 111	332 x 278 x 100	332 x 278 x 113
TM-SUA	TM-SUA	TM-SUA

BeFREE 10

BeFREE 07



# Speakerbox

## USB Intercom module for hands-free communication



- » Add-on module or standalone device
- » Combination of a USB audio device and an HID keyboard
- » Plug&play operation with generic drivers
- » Stereo loudspeakers and goose-neck microphone
- » Separate alert/alarm audio output
- » Connection for an external analogue headset and handset
- » Incremental encoder (endless potentiometer) for volume control
- » Three-colour bar-graph display as VU meter and/or volume indicator
  - » Six programmable keys with LED indicators for mode control and volume adjustment
  - » Analogue front-end designed to meet wide-band IP telephony standards
  - » Programmable signal processing includes ambient noise suppression (noise gating), signal compression and limiting
- » Integrated acoustic shock protection
- » Optional HID telephony interface
- » Optional echo-canceller with a digital signal processor



# Handset

## USB handset module with PushToTalk/PushToMute function



- » Add-on module or standalone device (if a Tipro controller is integrated in)
- » Combination of a USB audio device and an HID keyboard (plug&play operation with generic drivers)
- » Programmable PushToTalk key and Hook switch
- » Two RGB LED status indicators
- » Hardware generated side-tone
- » Software adjustable volume (loudspeaker and microphone) and side-tone level
- » Programmable signal processing includes ambient noise suppression (noise gating), signal compression and limiting
- » Analogue front-end designed to meet wide-band IP telephony standards
- » Integrated acoustic shock protection
- » Optional dial-pad in the cradle/base
- » Optional HID telephony interface
- » Optional analogue audio interface (instead of USB) for legacy systems
- » Optional analogue switching handset in combination with all BeFREEs (except the BeFREE07) and new Intercom module



# Coming Soon

## BeFREE 03 3.5" Touchcomputer

The BeFREE 03 will be the smallest BeFREE module in Tipro's FREE modular range.



BF03, Intercom and Handset

- » It enables to add a touchscreen and network connection to Tipro's Intercom and/or Handset with a small footprint.
- » In contrast to its larger siblings that have microphone and speakers integrated, the BF03 is designed to be combined with our Voice Communication Modules.

### Technical details (Preliminary)

#### Computer

- » Processor: ARM based; Cortex A7 up to A9
- » System Memory: from 256 MB RAM up to 1 GB

#### Mass Storage

- » Type: internal NAND flash
- » Capacity: 512 MB up to 4GB
- » External mass storage: µSDCard

#### Display

- » Type: TFT LCD
- » Size: 3.5" diagonal
- » Native resolution: 240 x 320
- » Projected Capacitive Touch

#### Connectivity

- » USB: 2 x USB 2.0 ports
- » Ethernet : 1 x 10/100 Mbit
- » 12V DC input

Linux supported, Android planned.



BF03 with Handset

BF03 with Intercom

## Intercom USB Audio Device for the Hands-Free Communication

The Intercom will be the new version of Tipro's Speakerbox.



- » Compact design.
- » A single, large speaker which can produce a higher volume and lower frequency tones than the current Speakerbox.
- » It can be used on its own, as USB audio device or in combination with a Handset.
- » It can be expanded with a second speaker unit which allows for independent volume control for the left and right channel.
- » Besides this, it can be used in combination with the new BF03 as a very compact console solution.



Intercom with Handset



Intercom with a second speaker unit

### Basic Technical Data

- » USB audio device
- » 10 W speaker
- » Unidirectional gooseneck microphone
- » PTT key + 2 freely programmable keys
- » 8 W amplifier (per channel)
- » 12V input
- » Incremental encoder (endless potentiometer) for volume control
- » HID keyboard / HID Telephony interface
- » Optional hardware echo-canceller
- » Dimensions [WxDxH]: 98 x 222 x 73 mm (without gooseneck microphone, including side covers)





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