

Modular Voice Communication Devices



TIPRO

www.tipro.net

About TIPRO

Established back in 1991, Tipro is a small-size private limited company, based in Slovenia with headquarters and production in its own facility.

Since the very beginning TIPRO design, manufacture and market computer terminals and peripherals for various reliability-critical applications. The commitment to quality and environmental regulations has been acknowledged by ISO 9001 and ISO 14001 certificates.

TIPRO voice communication modules secure reliability and longevity with carefully selected suppliers and components. Qualified partners are chosen not only for the quality of their components but also for secured long term availability.

The complete product range is designed with easy-to-integrate, easy-to-use and ergonomics as important factors.



Configure
the Right
Console
for You



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
- » Cable management - hidden and secured, but accessible
- » Optional Inclination Mechanism (VESA 75)

Computer

- » Intel Quad-Core J6412 processor with 8 GB RAM (optional 16 GB RAM)
- » Solid-State Disk 256 GB



Connectivity

- » LAN: 2 x Gigabit ethernet
- » USB: 2 x USB 2.0 (Tipro Devices), 4 x USB 3.2
- » COM: 1 x RS232
- » External Display: HDMI, DP
- » Audio: Line-in, Line-out, microphone-in, speaker-in, microphone-out, TAC (for analog switching Handset)
- » Digital input: 2x
- » Internal: left and right Tipro Bus for add-on modules



Display

- » Industrial grade 15.6" high-brightness TFT LCD with HD (1920 x 1080) resolution

Touchscreen

- » ELO 5-wire resistive touchscreen or
- » Projected Capacitive (PCAP) touchscreen

Intercom

- » Stereo loudspeakers (10W each) with two separate volume controls (incremental encoders)
- » 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
- » Connection for analogue switching Handset
- » 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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Connectivity

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- » External Display: HDMI, DP
- » Audio: Line-in, Line-out, microphone-in, speaker-in, microphone-out, TAC (for analog switching Handset)
- » Digital input: 2x
- » Internal: left and right Tipro Bus for add-on modules



Optional Inclination Mechanism

Display

- » Industrial grade 15.0" high-brightness TFT LCD with XGA (1024 x 768) resolution

Touchscreen

- » ELO 5-wire resistive touchscreen

» Intercom

- » Stereo loudspeakers (10W each) with two separate volume controls (incremental encoders)
- » 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
- » Connection for analogue switching Handset
- » 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
- » Cable management - hidden and secured, but accessible
- » Optional Inclination Mechanism (VESA 75)

Computer

- » Intel Quad-Core J6412 processor with 8 GB RAM (optional 16 GB RAM)
- » Solid-State Disk 256 GB



Connectivity

- » LAN: 2 x Gigabit ethernet
- » USB: 2 x USB 2.0 (Tipro Devices), 4 x USB 3.2
- » COM: 1 x RS232
- » External Display: HDMI, DP
- » Audio: TAC (for analog switching Handset)
- » Digital input: 2x



Display

- » Industrial grade 10.4" high-brightness TFT LCD with XGA (1024 x 768) resolution

Touchscreen

- » ELO 5-wire resistive touchscreen or
- » Projected Capacitive (PCAP) touchscreen

Intercom

- » Stereo loudspeakers (10W each) with volume control (incremental encoders)
- » 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
- » Connection for analogue switching Handset
- » 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 (deactivation)
- » 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)
- » 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)



Connectivity

- » LAN: 1 x Gigabit Ethernet
- » USB: 2 x USB 3.0
- » External Display: HDMI
- » Internal: left and right Tipro Bus for add-on modules

Display

- » Industrial grade 7.0" high-brightness TFT LCD with XGA (800 x 480) resolution

Touchscreen

- » 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)
Touchscreen	ELO 5-wire Resistive or Projected Capacitive (PCAP)
Embedded Computer	Intel J6412, 8GB 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 10W)
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 (USB or Analogue)
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
ELO 5-wire Resistive	ELO 5-wire Resistive or Projected Capacitive (PCAP)	ELO 5-wire Resistive
Intel J6412, 8GB RAM, 256GB SSD	Intel J6412, 8GB 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 10W)	Yes (2 x 10W)	Yes (2 x 2W)
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 (USB or Analogue)	Optional module (USB or Analogue)	Integrated (Analogue)
440 x 342 x 111	332 x 278 x 100	332 x 278 x 113
TM-SUA	TM-SUA	TM-SUA





3.5" Touchcomputer

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



- » 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.

BF03

Handset
Intercom

Technical details

Computer

- » Processor: 800 MHz ARM Cortex A7
- » System Memory: 1 GB RAM

Mass Storage

- » Type: internal eMMC flash
- » Capacity: 4GB
- » External mass storage: µSDCard slot

Display

- » Type: TFT LCD
- » Size: 3.5" diagonal
- » Native resolution: 320 x 480 (portrait)

Touchscreen

- » Projected Capacitive Touch

Connectivity

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

Linux pre-installed.



BF03 with Handset

BF03 with Intercom

USB Audio Device for the Hands-Free Communication

The Intercom is 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)



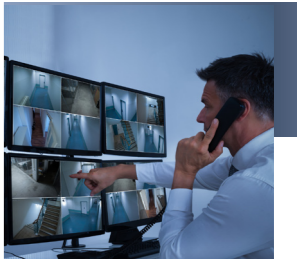
USB Intercom module for hands-free communication



- » 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



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

Panel/Rack Mount BeFREE 10



10.4" Panel/Rack Mount Touchcomputer with Integrated Intercom

- » Panel/Rack mount version of Tipro's BeFREE10
- » Sturdy metal frame
- » Modular – can be combined with Handset
- » Silent and reliable - no moving parts, industrial grade components
- » Ethernet redundancy, redundant internal audio and controller interfaces
- » Built-in Tipro Controller

Computer

- » Intel Quad-Core J6412 processor with 8 GB RAM (optional 16 GB RAM)
- » Solid-State Disk 256 GB



Connectivity

- » LAN: 2 x Gigabit ethernet
- » USB: 2 x USB 2.0 (Tipro Devices), 4 x USB 3.2
- » COM: 1 x RS232
- » External Display: HDMI, DP
- » Audio: TAC (for analog switching Handset)
- » Digital input: 2x

Display

- » Industrial grade 10.4" diagonal high-brightness TFT LCD with XGA (1024 x 768) resolution

Touchscreen

- » Elo 5-wire resistive touchscreen or
- » Projected Capacitive (PCAP) touchscreen

Intercom

- » Stereo loudspeakers (10W each) with volume control (incremental encoders)
- » 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

Dimensions

- » 332 x 316 mm [WxH]
- » Cut-out: 310 x 293 mm [WxH]
- » Depth (from surface): 94 mm



Panel Mount BF10 with Handset



Rack Mount BF10 with Handset

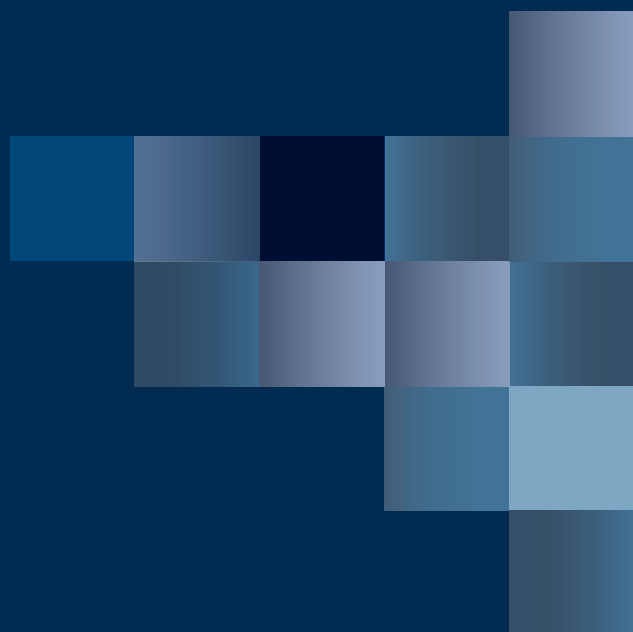


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