Dear Partners,

Following the launch of BeFREE 20, our newest Touchcomputer with integrated InterCom, we have decided to upgrade its predecessor BeFREE 10 with some of the new features introduced with BeFREE 20.

 Affected products:
- **BeFREE 10 Touchcomputer Modules**
(Ordering Codes BF10-xxx-xxx)

All variants of the module have been redesigned to provide for the following new properties:

1. Additional loudspeaker and improved speech quality
This Central speaker, along with associated hardware equalizer, emphasizes lower signal frequencies in order to improve naturalness and intelligibility of the reproduced speech. Quite similar to BeFREE 20.

2. Encoder with integrated push-switch and new volume control mode
By default the push-switch toggles currently active indication on the BarGraph: Speakers' Volume, Display/Indicators Brightness and VU Meter. Alternatively, it may toggle Voice and Alert Speaker to enable independent volume control of each in "push & rotate" fashion.

3. New Speaker Indicators
Two new LED indicators are added in the top part of the Stripe to indicate the Speaker(s) currently being adjusted by the incremental encoder.

4. New USB Codec Chip
Previously applied PCM2902 of Texas Instruments has been replaced by its successor PCM2902C which is used in BeFREE 20. Though it is an improved version of the chip, its USB Product ID is different as well as some properties of its microphone channel. These differences might require respective adjustments in the application software.

5. Software adjustable microphone preamplifier

A linear Programmable Gain Amplifier (PGA) has been added to the microphone input to provide for its fine sensitivity tuning. Differential inputs of the PGA further improve immunity to external electromagnetic noise. This feature is completely taken from BeFREE 20.

6. Optional linear regime of the microphone amplifier

Default logarithmic mode enables highest voice dynamics and best signal clarity. Optional linear regime is available for those who prefer naturalness over clarity. Furthermore, this linear regime might be a better choice in full-duplex operation where the acoustic echo is to be cancelled/suppressed by the application software rather than by the hardware echo-canceller which is optional for BeFREE 10. This feature is also completely taken from BeFREE 20.

7. Selectable reference for the internal echo-canceller

Instead of echo-canceller reference previously fixed to the Voice Speaker signal, it is now software selectable: Voice Speaker, Alert Speaker or both. This is another feature completely taken from BeFREE 20.

8. Selectable VU Meter input

Input of the VU Meter was previously fixed to the left output signal and the microphone signal. Now it is possible to disconnect the microphone signal as well as to add the right output signal.

9. External Programming

BeFREE10, as well as BeFREE 20, can be programmed/configured externally, from another computer. That computer needs to operate under Windows with ChangeMe utility installed and have one serial COM port available. The BeFREE10 may operate under any operating system or not have it installed at all. This feature is obviously useful in cases when the BeFREE10 runs a non-Windows operating system, but it is also applicable in all Windows cases where ChangeMe utility is not installed (e.g. to prevent uncontrolled modifications of the settings).

The existing functionality has been completely preserved and the backward compatibility provided for, except possibly for the USB Codec chip what depends on the particular application software.

The phasing-in process is about to be started while the transition is expected to be completed within the next couple of months. It is going to be entirely seamless to the customers, both logistically (same ordering codes) and commercially (same prices).

 In case of any related questions, please feel free to contact us at sales@tipro.si

Sincerely,
Tipro Marketing & Sales