

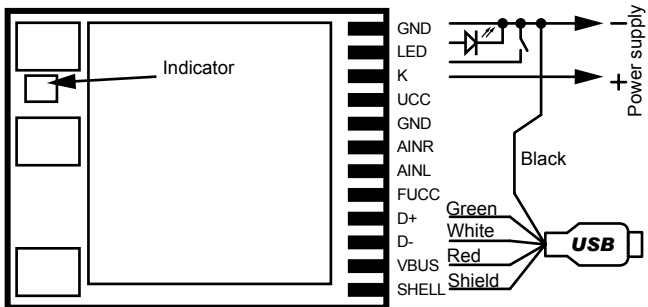
EMM Tiny Stereo-T 1120 Model

Specifications

- Printed Circuit Board
- Dimensions: 3.7x10x19.5 mm
- Weight (without miniSD flash card and power source): <1 g
- Recording mode: mono/stereo
- Current consumption in recording mode (sampling rate 8 K Hz, without compression): <2 mA
- Current consumption in VAS mode (audio signal below threshold): 350 microA
- Current consumption in stand-by mode: 25 microA
- Supply voltage: 3V

Package Content

- Module
- USB cable
- CD with drivers and programs
- User manual



Contact Assignments

Label	Assignment	Parameters	Notes
GND	Ground		
LED	Indicator's output	For external light diode connection	Red LED is recommended
K	External control 's connector	When it is connected with ground – recording if disconnected - stop	The module's switch has to be in the STOP position
UCC	+Module's power supply	Voltage is 3+/- 0.2 V	
GND	Ground		
AINR	Right channel input	2.9 Vpp voltage audio source with 1.5 V constant component	
AINL	Left channel input		
FUCC	Power supply of external audio source (microphone)	voltage is 3+/- 0.2 V, maximum load current is 10 mA	The connector is alive while recording
D+	USB signals		
D-			
VBUS	+5V computer USB port		
Shell	Dead earth		USB connector housing

Connection of the Module

UCC (+) and GND (-) connectors are used for power supply connection.

Attention! Check polarity while connecting the module to a power source! Otherwise, the module could be damaged.

The AINL and AINR connectors serve for connecting to the 2.9 Vpp voltage audio source with a 1.5 V constant component. If the audio source provides mono audio signal, the source should be connected to the AINR connector.

FUCC connector serves to provide power supply for external audio sources. As recording is turned on, the connector becomes alive: the voltage is 3+/- 0.2 V, maximum load current is 10 mA.

As audio signal sources, the Telesystems' microphones of USB recorder mini can be used.

A USB cable should be soldered to D+, D-, VBUS, Shell, and GND connectors corresponding to the table below.

USB A connector	Module's connector	Notes
1	VBUS	+5 V from PC
2	D-	
3	D+	
4	GND	
Connector housing	shell	

The LED and K connectors serve for connecting an external indicator and external control. It is recommended to use LED as an external indicator. An external control has to provide connection between The K and GND connectors to start recording and should be disconnected to stop recording.

When you turn on the module, set the switch in the RECORD position (connect K and GND connectors) for 2-3 seconds and then back to the STOP position (disconnect the K and GND connectors). The indicator will flash three times showing that the module started self-testing. After 5-10 seconds the module will flash for the fourth time and will be ready to start recording. If this does not occurred, check the module's power supply.

Attention!

The module is sensitive to static electricity. Use an antistatic bracelet while soldering. The soldering equipment has to be grounded.

To estimate the module's operation in different modes, use the table below.

Current Consumption (mA) in Different Recording Modes with 3 V Voltage Supply

	5,5 kHz		8 kHz		11 kHz		16 kHz		22 kHz	
	Mono	St.	Mono	St.	Mono	St.	Mono	St.	Mono	St.
Without compression	1,7	2,3	2	3	2,7	3,6	3,6	4,5	3,5	5,9
u-Law	1,9	3	2,3	3,5	2,9	5	3,8	6,1	5	-
4-bit ADPCM	2,1	3,2	2,8	4,1	3,2	5,4	4,4	6,7	5,4	-
2-bit ADPCM	2	3	2,5	3,7	3,1	5,3	4	6,4	5,4	-

Start/Stop Recording

To start recording, set the switch into the START position. The voice recorders' LED will flash five times and then start blinking in a sequence while the recording is in progress. To stop recording, set the switch into the STOP position.

Blinking sequences indicate the supply voltage level and available memory space. The first sequence indicates the supply voltage level: 1 flash – fully charged, 2 flashes – enough for work, 3 flashes – recharging is required. The second blinking sequence indicates the amount of memory available: 1 flash – 76-100%, 2 flashes – 51-75%, 3 flashes – 25-50%, 4 flashes – 1-25%.

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The Manufactory Warranty Coupon

The manufacturer undertakes warranty repair liabilities for 1 year from the date of purchase, but no longer than 2 years from the date of manufacture of the product (warranty does not cover batteries). Paid repair is provided within recorder's operation lifetime (5 years). The manufacturer reserves the right to refuse in repair after the expiration of recorder operation life.

This warranty is voided if the recorder is:

- improperly used
- mechanical damaged
- received without supplier warranty tag on this document

All questions regarding product exchange and return must be solved with the seller's company according to Protection of Consumers Law.

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