Mobi

Technical Specifications

REVISION 1

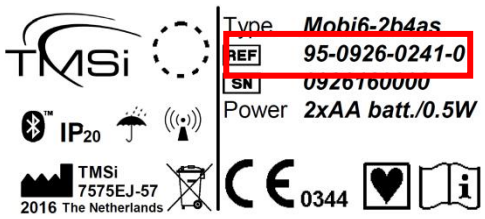
2017

Introduction

This document includes the technical specifications of the available configurations of the Mobi device. This document is supplementary to the User Manual provided with the product. Refer to the User Manual for instructions for use of the device.

Use of this document

1. Locate the device label on your Mobi device. The label can be found on the bottom of the device and looks like the picture depicted on the right.



2. Use the table of contents on the next pages to locate your device. The table is sorted on the REF code that can be found on the label.

3. Click on the correct device in the table of contents or go to the designated page number to find the device's technical specifications.

Contents

95-0926-0240-0, Mobi6-2b4a

Type	**Mobi6-2b4a**
REF code	95-0926-0240-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

AUX inputs

Noise	< 15 µVrms (@ lowest sample rate)
Gain	1 x
Input signal range (diff.)	-2V to +2V
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 70 dB
Output voltage	+5V, -5V, max 5mA per channel
Connector	5 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit, AUX 0.238 µV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	**1024 Hz**	**512 Hz**	**256 Hz**	**128 Hz**
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Aux3	2048	1024	512	256	128
4	Aux4	2048	1024	512	256	128
5	Aux5	2048	1024	512	256	128
6	Aux6	2048	1024	512	256	128
7	Digi	2048	1024	512	256	128
8	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Aux3	Auxiliary signal 3		0.2384 µV	-2.0V to +2.0V
4	Aux4	Auxiliary signal 4		0.2384 µV	-2.0V to +2.0V
5	Aux5	Auxiliary signal 5		0.2384 µV	-2.0V to +2.0V
6	Aux6	Auxiliary signal 6		0.2384 µV	-2.0V to +2.0V
7	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
8	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0926-0241-0, Mobi6-2b4as

Type	**Mobi6-2b4as**
REF code	95-0926-0241-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

AUX inputs

Noise	< 15 µVrms (@ lowest sample rate)
Gain	1 x
Input signal range (diff.)	-2V to +2V
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 70 dB
Output voltage	+5V, -5V, max 5mA per channel
Connector	5 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit, AUX 0.238 µV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	**1024 Hz**	**512 Hz**	**256 Hz**	**128 Hz**
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Aux3	2048	1024	512	256	128
4	Aux4	2048	1024	512	256	128
5	Aux5	2048	1024	512	256	128
6	Aux6	2048	1024	512	256	128
7	SaO2	128	64	512	256	128
8	Pleth	128	64	512	256	128
9	HRate	128	64	512	256	128
10	Status	128	64	512	256	128
11	Digi	2048	1024	512	256	128
12	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Aux3	Auxiliary signal 3		0.2384 µV	-2.0V to +2.0V
4	Aux4	Auxiliary signal 4		0.2384 µV	-2.0V to +2.0V
5	Aux5	Auxiliary signal 5		0.2384 µV	-2.0V to +2.0V
6	Aux6	Auxiliary signal 6		0.2384 µV	-2.0V to +2.0V
7	SaO2	Oxygen saturation		1 %	0 to 100, 127 = invalid
8	Pleth	Plethysmographic waveform		1 (bit)	0 to 255
9	HRate	Pulseoximeter heart rate		1 BPM	0 to 255
10	Status	Pulseoximeter status		1 (bit)	0 to 255
11	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
12	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0926-0420-0, Mobi6-4b2a

Type	**Mobi6-4b2a**
REF code	95-0926-0420-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

AUX inputs

Noise	< 15 µVrms (@ lowest sample rate)
Gain	1 x
Input signal range (diff.)	-2V to +2V
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 70 dB
Output voltage	+5V, -5V, max 5mA per channel
Connector	5 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit, AUX 0.238 µV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	**1024 Hz**	**512 Hz**	**256 Hz**	**128 Hz**
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Bip3	2048	1024	512	256	128
4	Bip4	2048	1024	512	256	128
5	Aux5	2048	1024	512	256	128
6	Aux6	2048	1024	512	256	128
7	Digi	2048	1024	512	256	128
8	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Bip3	Bipolar signal 3		0.0122 µV	-100mV to +100mV
4	Bip4	Bipolar signal 4		0.0122 µV	-100mV to +100mV
5	Aux5	Auxiliary signal 5		0.2384 µV	-2.0V to +2.0V
6	Aux6	Auxiliary signal 6		0.2384 µV	-2.0V to +2.0V
7	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
8	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0926-0421-0, Mobi6-4b2as

Type	**Mobi6-4b2as**
REF code	95-0926-0421-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

AUX inputs

Noise	< 15 µVrms (@ lowest sample rate)
Gain	1 x
Input signal range (diff.)	-2V to +2V
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 70 dB
Output voltage	+5V, -5V, max 5mA per channel
Connector	5 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit, AUX 0.238 µV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	**1024 Hz**	**512 Hz**	**256 Hz**	**128 Hz**
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Bip3	2048	1024	512	256	128
4	Bip4	2048	1024	512	256	128
5	Aux5	2048	1024	512	256	128
6	Aux6	2048	1024	512	256	128
7	SaO2	128	64	512	256	128
8	Pleth	128	64	512	256	128
9	HRate	128	64	512	256	128
10	Status	128	64	512	256	128
11	Digi	2048	1024	512	256	128
12	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Bip3	Bipolar signal 3		0.0122 µV	-100mV to +100mV
4	Bip4	Bipolar signal 4		0.0122 µV	-100mV to +100mV
5	Aux5	Auxiliary signal 5		0.2384 µV	-2.0V to +2.0V
6	Aux6	Auxiliary signal 6		0.2384 µV	-2.0V to +2.0V
7	SaO2	Oxygen saturation		1 %	0 to 100, 127 = invalid
8	Pleth	Plethysmographic waveform		1 (bit)	0 to 255
9	HRate	Pulseoximeter heart rate		1 BPM	0 to 255
10	Status	Pulseoximeter status		1 (bit)	0 to 255
11	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
12	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0926-0600-0, Mobi6-6b

Type	**Mobi6-6b**
REF code	95-0926-0600-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	1024 Hz	512 Hz	256 Hz	128 Hz
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Bip3	2048	1024	512	256	128
4	Bip4	2048	1024	512	256	128
5	Bip5	2048	1024	512	256	128
6	Bip6	2048	1024	512	256	128
7	Digi	2048	1024	512	256	128
8	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Bip3	Bipolar signal 3		0.0122 µV	-100mV to +100mV
4	Bip4	Bipolar signal 4		0.0122 µV	-100mV to +100mV
5	Bip5	Bipolar signal 5		0.0122 µV	-100mV to +100mV
6	Bip6	Bipolar signal 6		0.0122 µV	-100mV to +100mV
7	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
8	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0926-0601-0, Mobi6-6bs

Type	**Mobi6-6bs**
REF code	95-0926-0601-0

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	4 pin BINDER 719 series

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	1024 Hz	512 Hz	256 Hz	128 Hz
1	Bip1	2048	1024	512	256	128
2	Bip2	2048	1024	512	256	128
3	Bip3	2048	1024	512	256	128
4	Bip4	2048	1024	512	256	128
5	Bip5	2048	1024	512	256	128
6	Bip6	2048	1024	512	256	128
7	SaO2	128	64	512	256	128
8	Pleth	128	64	512	256	128
9	HRate	128	64	512	256	128
10	Status	128	64	512	256	128
11	Digi	2048	1024	512	256	128
12	Saw	2048	1024	512	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	Name	Function		resolution to bit	range
1	Bip1	Bipolar signal 1		0.0122 µV	-100mV to +100mV
2	Bip2	Bipolar signal 2		0.0122 µV	-100mV to +100mV
3	Bip3	Bipolar signal 3		0.0122 µV	-100mV to +100mV
4	Bip4	Bipolar signal 4		0.0122 µV	-100mV to +100mV
5	Bip5	Bipolar signal 5		0.0122 µV	-100mV to +100mV
6	Bip6	Bipolar signal 6		0.0122 µV	-100mV to +100mV
7	SaO2	Oxygen saturation		1 %	0 to 100, 127 = invalid
8	Pleth	Plethysmographic waveform		1 (bit)	0 to 255
9	HRate	Pulseoximeter heart rate		1 BPM	0 to 255
10	Status	Pulseoximeter status		1 (bit)	0 to 255
11	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		other	always 0		
12	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62

95-0928-008-2, Mobi8-4b4as

Type	**Mobi8-4b4as**
REF code	95-0928-008-2

Bipolar ExG inputs (EEG, ECG, EOG, EMG etc.)

Noise	< 1 µVrms (@ lowest sample rate)
Gain	19.5 x
Input signal difference	-100mV to +100mV
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 90 dB
Connector	LEMO 0B series 6 pin (2 channels)

AUX inputs

Noise	< 15 µVrms (@ lowest sample rate)
Gain	1 x
Input signal range (diff.)	-2V to +2V
Input common mode range	-2V to +2V
Input impedance	> 100 M Ω
CMRR	> 70 dB
Output voltage	+5V, -5V, max 5mA per channel
Connector	LEMO 0B series 5 pin

Sampling

Resolution	24 bits, Bipolar 12.2 nV per bit, AUX 0.238 µV per bit
Sample frequency (Fs)	2048 Hz, 1024 Hz, 512 Hz, 256 Hz, 128 Hz

Bluetooth supported sample rates/channel rates:

nr	channel name	Bluetooth channel rate @ Fs (Hz):				
		2048 Hz**	**1024 Hz**	**512 Hz**	**256 Hz**	**128 Hz**
1	A	2048	1024	512	256	128
2	B	2048	1024	512	256	128
3	C	2048	1024	512	256	128
4	D	2048	1024	512	256	128
5	E	256	128	64	256	128
6	F	256	128	64	256	128
7	G	256	128	64	256	128
8	H	256	128	64	256	128
9	SaO2	128	64	32	256	128
10	Pleth	128	64	32	256	128
11	HRate	128	64	32	256	128
12	Status	128	64	32	256	128
13	Digi	1024	512	256	256	128
14	Saw	256	128	64	256	128

** Sample rate is supported for a limited number of channels

Channel list:

nr	name	function		resolution/bit	signal range
1	A	Bipolar signal A		0.0122 µV	-100mV to +100mV
2	B	Bipolar signal B		0.0122 µV	-100mV to +100mV
3	C	Bipolar signal C		0.0122 µV	-100mV to +100mV
4	D	Bipolar signal D		0.0122 µV	-100mV to +100mV
5	E	Auxiliary signal E		0.2384 µV	-2.0V to +2.0V
6	F	Auxiliary signal F		0.2384 µV	-2.0V to +2.0V
7	G	Auxiliary signal G		0.2384 µV	-2.0V to +2.0V
8	H	Auxiliary signal H		0.2384 µV	-2.0V to +2.0V
9	SaO2	Oxygen saturation		1 %	0 to 100, 127 = invalid
10	Pleth	Plethysmographic waveform		1 (bit)	0 to 255
11	HRate	Pulseoximeter heart rate		1 BPM	0 to 255
12	Status	Pulseoximeter status		1 (bit)	0 to 255
13	Digi	Digital channel (bits)		1 (bit)	0 to 255
		0x01	1 = ON/OFF button or external marker pressed		
		0x02	1 = battery low		
		0x04	1 = battery empty		
		0x08	always 0		
		0x10	always 0		
		0x20	always 0		
		0x40	always 0		
		0x80	always 0		
14	Saw	Sawtooth test signal, 32-sample interval, steps of 2		1 (bit)	0 to 62