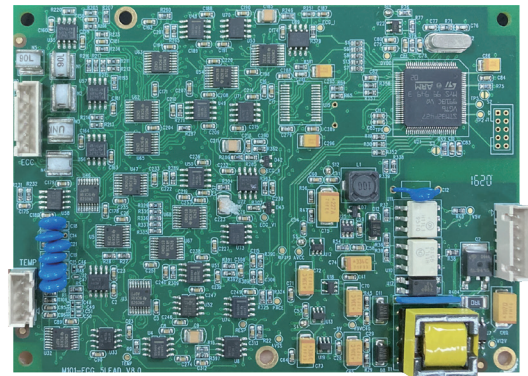


3/5 Leads ECG

Module MCEG3

The MCEG3 monitoring ECG measurement module can measure ECG, respiration, and body temperature, and is used in patient monitoring.



Dimension : 125 mm × 90 mm × 15 mm

3/5 lead
ECG

HR

RR

2×TEMP

Features

- > With 3/5-lead ECG, 1 breathing, 2 body temperature monitoring functions
- > Patient model: adults, children and newborns
- > Unique ECG analysis function, verified by MIT, AHA database, and passed EC57 standardized test
- > The measurement results include heart rate, body temperature, respiration and ST segment offset values of I, II, and V1 channels
- > Provide four measurement modes: diagnosis, monitoring, HARDEST and surgery mode
 - Diagnosis mode: filter range is 0.05hz~130hz
 - Monitoring mode: filter range is 0.5hz~40hz
 - HARDEST mode: the filtering range is 5hz~20hz
 - Surgery mode: filter range is 1hz~25hz
- > ECG calibration: input 1mv standard voltage to record the waveform amplitude
- > Gain setting: adjust the amplitude of ECG waveform and respiratory waveform
- > Heart rate calculation channel: Heart rate I, II and V1 can be selected as the heart rate calculation channel or set as an independent choice
- > Lead setting: Lead I, Lead II, Lead AVL, Lead AVR, Lead AVF can be selected as the signal of channel I and channel II
- > Notch mode: 50Hz, 60Hz, 50/60Hz and close notch mode commands can be selected

Specifications

ECG		TEMP	
Range	0.15mV-5.5mV	Range	0-50°C
Accuracy	Undefined	Accuracy	±0.1°C
Resolution	2.36uV/LSB	Resolution	0.1°C
lead type	3 Lead:I or II or III 5Lead:I ,II,III,AVR,AVL,AVF,V1		

HR		AwRR	
Range	15~300bpm	Range	0-120rpm
Accuracy	±1bpm	Basic resistance	500-2000Ω
Resolution	1bpm	Varistor value	0.2Ω~3.0Ω

Electical Specification

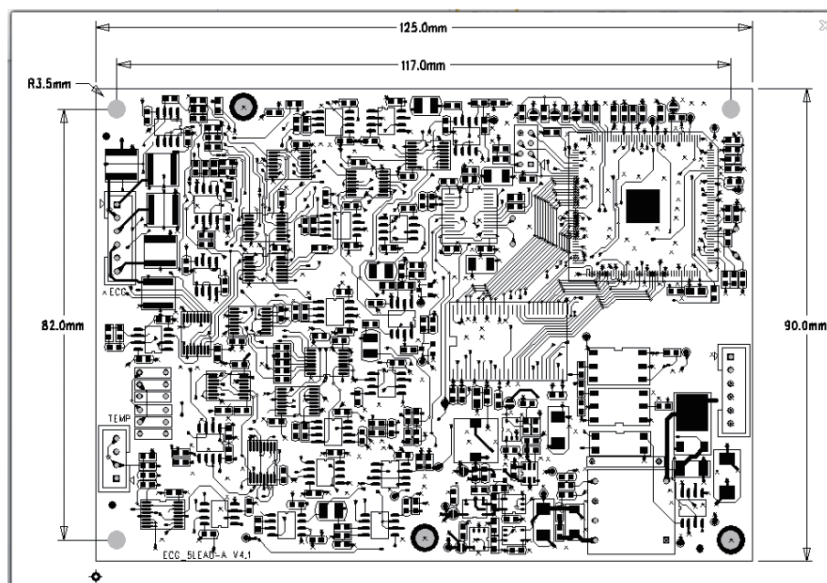
Power supply	DC.12V±5%
Power consumption	≤3W
Communication	TTL,USART
Temperature	Operating 0°C~ 70°C Storage -40°C~ 70°C

Compliance

Standard	IEC 60601-2-27: 2011 AAMI EC57:2012/(R)2020
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Dimensions

The board dimensions are given in millimeters.

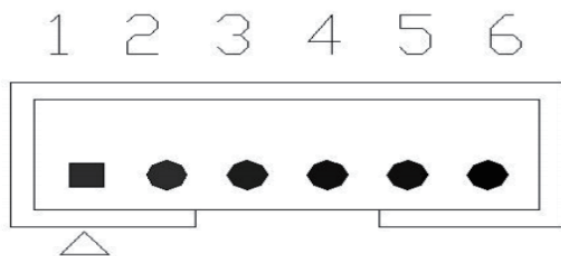


Interfaces

Power and Communication Interface

Power and communication interface socket pin definition diagram (note: 4 and 6 pins are the same input, 3 and 5 pins are the same input), between the sockets

Distance 2.54mm:

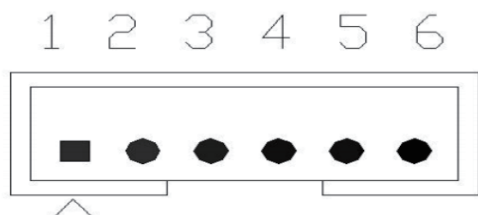


Power and communication interface socket J4 pins are defined as follows:

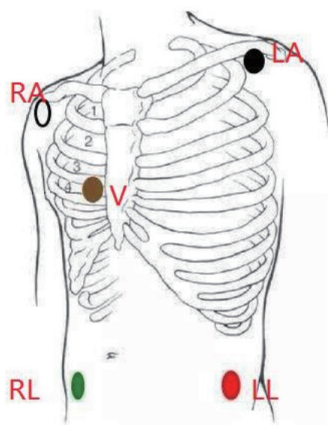
Pin No	Signal	Description
1	TXD	UART Sending data from module to host
2	RXD	UART Receiving data from host to the module
3	DGND	12V battery ground
4	+12V	Power Supply input 12V DC
5	DGND	12V battery ground
6	+12V	Power Supply input 12V DC

ECG lead input interface

The lead input interface J10 is defined as follows, and the socket spacing is 2.54mm:



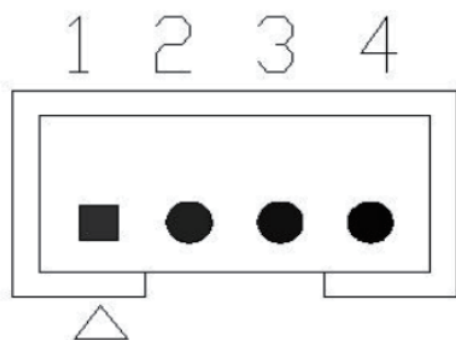
A schematic diagram of the location of the lead electrodes is shown below:



Pin No	Signal	Description
1	RA	Installed under the collarbone, near the right shoulder
2	LA	Installed under the collarbone, near the left shoulder
3	LL	placed in the left lower abdomen
4	V1	Chest leads in the fourth intercostal space, close to the right border of the sternum
5	ECG SHIELD	Signal shield wire
6	RL	placed in the lower right abdomen



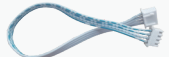







Body temperature probe interface






The temperature probe interface J8 is defined as follows, and the socket spacing is 2.54mm:



Pin No	Signal	Description
1	TEMP1	Temperature sensor 1 positive direction input
2	TGND	Temperature sensor 1 negative input
3	TEMP2	Temperature sensor 2 positive direction input
4	TGND	Temperature sensor 2 negative input

Purchase Guider

Code	Name	Quantity	Description	Image
022-060101-00	MECG3 Module	x1		
009-130101-00	Internal Cable ECG	x1	Connect with M101 Module	
009-130102-00	Internal cable Temp	50cm	Connect with M101 Module	
022-990101-00	Connector board	x1	Connect with M101 Module	
041-004002-04	ECG Cable 5-lead defibrillation proof, European standard, button type	Optional	Connect with connector board ECG interface	
041-004002-10	ECG Cable 5-lead defibrillation proof, American Standard, button type	Optional	Connect with connector board ECG interface	
041-004002-12	ECG Cable 5-lead anti-defibrillation, anti-electric knife, European standard, button type	Optional	Connect with connector board ECG interface	
041-004002-13	ECG Cable 5-lead anti-defibrillation, anti-electric knife, American standard, button type	Optional	Connect with connector board ECG interface	
041-004001-02	ECG Cable 3-lead defibrillation proof, European standard, button type	Optional	Connect with connector board ECG interface	
041-004001-06	ECG Cable 3-lead defibrillation proof, American Standard, button type	Optional	Connect with connector board ECG interface	

Code	Name	Quantity	Description	Image
041-003005-01	Temperature probe Adult Skin	Optional x 2	Connect with TEMP interface	
041-003003-00	Temperature probe Pediatric General	Optional x 2	Connect with TEMP interface	
041-003007-00	Temperature probe Pediatric Skin(Disposable)	Optional x 2	Connect with TEMP interface	
041-003006-00	Temperature probe Adult General(Disposable)	Optional x 2	Connect with TEMP interface	
041-003008-00	Temperature probe Adult Skin(Disposable)	Optional x 2	Connect with TEMP interface	

* The data is subject to change without notice. Please refer to the manual for the contraindications and precautions