

MPE-1000

Quick Specification

Version: 1.1

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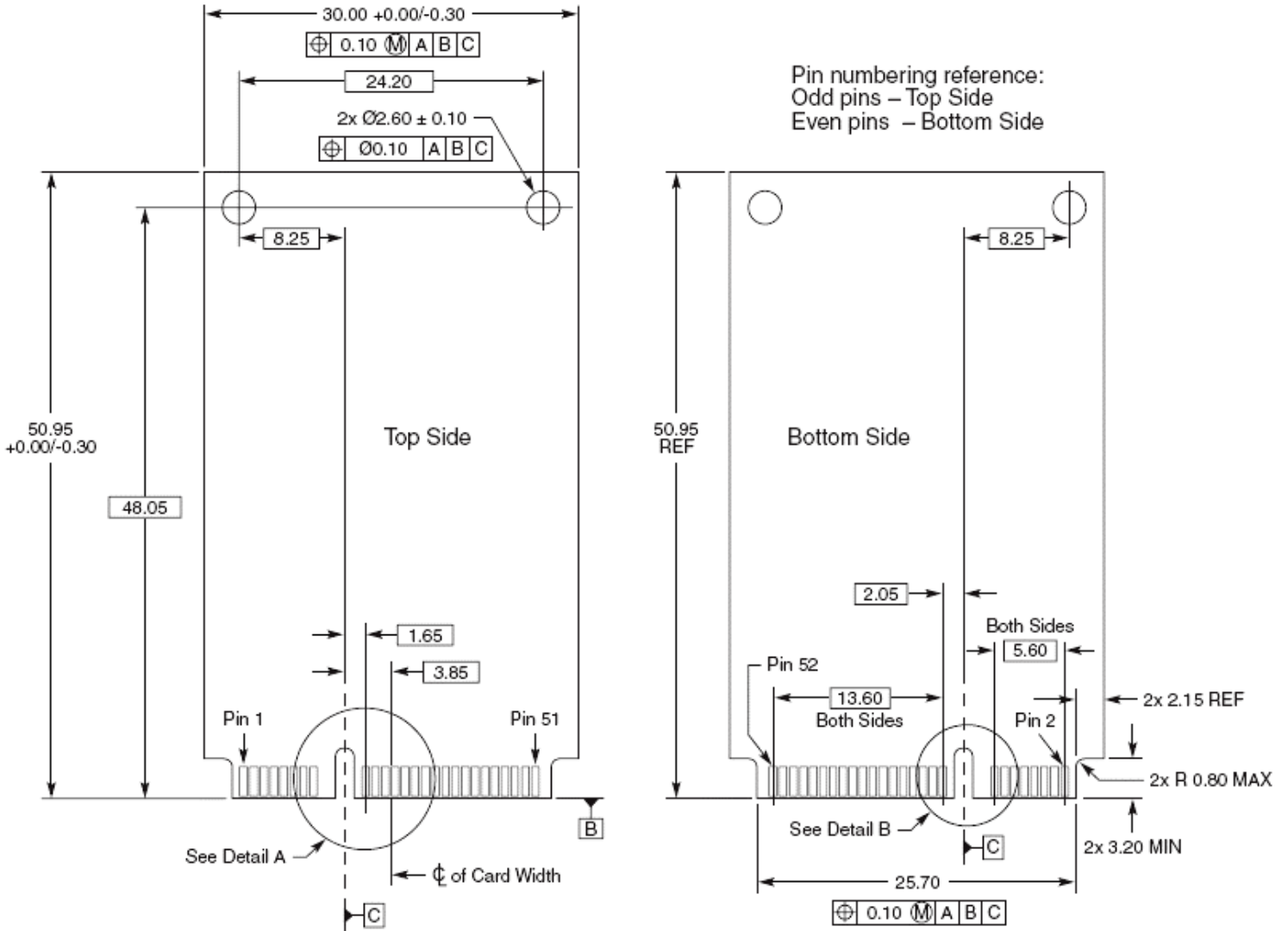


Electrical Specification

1.1 General usage		
Features	- Provide GPS function in NB, MID, UMPC.	
Environment	- Fits into laptop's mini-PCI-E slot.	
Temperature	- Operating: -40 ~ 85℃ (with battery: -20~60℃) - Storage: -40 ~ 85℃ (with battery: -20~60℃)	
Operation	- Stand alone	
Size	- Dimension: 50.95mm x 30.0mm x 3.5±0.2mm	
Weight	5.50 g	
Voltage Type	- 3.3V ±5%	
RoHS	- Supported	
I/O pin	- Reference PCI Express mini card form factor (refer page 3)	
1.2 Specification		
GPS		
Chipset	- MTK MT3329 The single chip solution is offered as a 81-pin TFBGA (6.2x6.2x1.3mm)	
Frequency	- L1,1,575.42 MHz	
Channel	- 22 tracking/ 66 acquisition-channel	
C/A Code	- 1,023 MHz	
TTFF	MTK MT3329	- Hot start: less than 1s (avg.) - Warm start: less than 33s (avg.) - Cold start: less than 36s (avg.)
	MPE-1000	- Reacquisition: less than 1s - Hot start: less than 2s (avg.), 5s (max.) - Warm start: less than 40s (avg.), 60s (max.) - Cold start: less than 40s (avg.), 60s (max.) Tolerance of Maximum in each item of long time DVT test should be ≤1% (=times of over-60sec./ TTL times)

Accuracy	- Position: within 10m for 90% - Velocity: 0.1m/s
Interface Protocol	- NMEA 0183 standard V3.01 and backward compliance - Adjustable by firmware
Internal Memory	- Flash type on 4Mb
Navigation applications	- SBAS (WAAS, EGNOS, GAGAN , MSAS), DGPS (RTCM), and AGPS.
Dynamics	
Altitude	- 18,000 meter maximum
Velocity	- 515 meter/second maximum
RF Connector	
- WIESON 7169 series Connector G7169-201101	
Power consumption	
Vcc	DC 3.3V
Current (Average)	GPS: <55mA@3.3V (ACQ w/o ext. Antenna) <50mA@3.3V (Tracking w/o ext. Antenna)
Environment	
Operating Temperature	-20~60°C
Humidity	≤ 95%
Testability	
It shall be able to be tested by MTK test mode and single channel simulator.	

1.3 Mechanical Diagram



System Connector Pin-Out

Pin#	Name	Pin#	Name
51		52	+3.3V
49		50	GND
47		48	
45		46	
43		44	
41		42	
39		40	GND
37		38	USB_D+
35	GND	36	USB_D-
33		34	GND
31		32	
29	GND	30	
27	GND	28	
25		26	GND
23		24	
21	GND	22	
19		20	
17		18	GND
Mechanical Key			
15	GND	16	
13		14	
11		12	
9	GND	10	
7		8	
5		6	
3		4	GND
1		2	+3.3V

- * Reserved for future second PCI Express Lane (if needed)
- ** Reserved for future Subscriber Identity Module (SIM) interface (if needed)
- *** Reserved for future wireless disable signal (if needed)
- **** Reserved for future wireless coexistence control interface (if needed)