

DAQ-MIC7500-1711LE

Ruggedized Multifunctional Box DAQ Starter Kit



Features

- 12-bit, 100KS/s, 16-ch analog input
- 16-ch digital input and 16-ch digital output
- Advantech DAQNav (Data Acquisition Software)
- 6th generation Intel® Core™ i7/i5/i3 BGA-type processor with Intel® QM170 chipset
- Wide operating temperature (-20 ~ 60 °C)
- 9 ~ 36 V DC input power range
- 2 x RS-232/422/485 and 4 x RS232 serial ports (with expansion cable)
- 1 x 2.5" HDD, 1 x CFast, and 1x mSATA
- Supports isolation COM and 32-bit GPIO modules
- 2 x GigaLAN and 8 x USB 3.0
- VGA and DVI output
- Supports Advantech's i-module, SUSIAccess, and embedded software APIs



System Specifications

System Chipset	CPU	Intel® Core™ i5-6442EQ		
	Maximum Speed	1.9GHz		
	L3 Cache	6 MB		
	Chipset	Intel® QM170		
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR4 2133 MHz		
	Socket	2 x 260-pin 4 GB DDR4 SODIMM (up to 16 GB per socket)		
	Maximum Capacity	4 GB (expandible up to 32 GB)		
Display	Chipset	Intel® HD Graphics 530, supports DirectX 12		
	VGA	1 x DB15, up to 2048 x 1536 maximum resolution		
	DVI	1 x DVI, up to 1920 x 1200 maximum resolution @ 30Mhz (with optional cable expansion for second DVI connector)		
	Multiple Display	Supports 3 x independent display		
Ethernet	Controller	LAN1: Intel® i219-LM LAN2: Intel® i210 (supports wake-on-LAN)		
	Interface	2 x RJ-45		
Storage	HDD	1 x 2.5" HDD		
	CFast	1		
	SSD	1 x internal mSATA (mini-PCIe interface)		
I/O	USB	8 x USB 3.0 and 1 x internal USB 2.0		
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control and 4 x RS-232 (with optional cable expansion)		
	Audio	2 (1 x line out and 1 x mic in)		
Expansion slot		1 x PCIe16		
		1 x PCI (populated with PCI-1711U)		
LED and Switch	LED	2 x TX, 2 x RX, and 1 x Storage		
	Button	1 x Power on/off switch		
Power	Type	ATX/AT		
	Input Voltage	9 ~ 36 V _{DC}		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment	Temperature	Operating (with industrial SSD) -20 ~ 60 °C with 0.7 m/s air flow	Operating (with HDD) 0 ~ 40 °C	Non-Operating -40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)		
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	2G	
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration	50G 11 ms	
Mechanical	Dimensions (W x H x D)	74 x 192 x 230 mm		
	Weight	2.9 kg (6.39 lbs)		
	Installation	Desktop/wall mount		
Certifications	EMC	CE/FCC Class A, CCC, BSMI		
	Safety	UL, CCC, BSMI		

DAQ Card Specifications

Analog Input

- **Channels** 16 single-ended
- **Resolution** 12 bits
- **Max. Sampling Rate** 100 kS/s
Note: The sampling rate for each channels will be affected by used channel number. For example, if 4 channels are used, the sampling rate is $100k/4 = 25$ kS/s per channel.)
- **FIFO Size** 1,024 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 2 M Ω /5 pF
- **Sampling Modes** Software, onboard programmable pacer, or external
- **Input Range (V, software programmable) & Absolute Accuracy**

Gain	0.5	1	2	4	8
Bipolar	± 10	± 5	± 2.5	± 1.25	± 0.625
Gain Error (%FSR)	0.1	0.1	0.2	0.2	0.4

Digital Input

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.

Digital Output

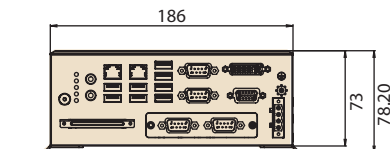
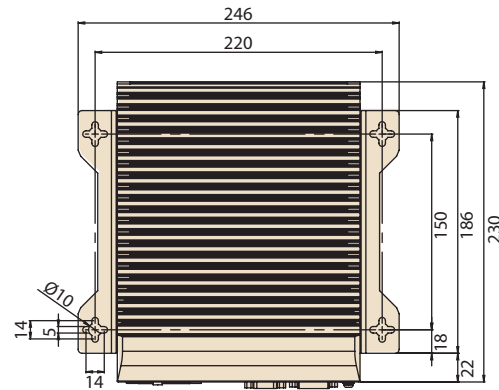
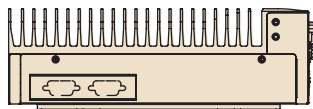
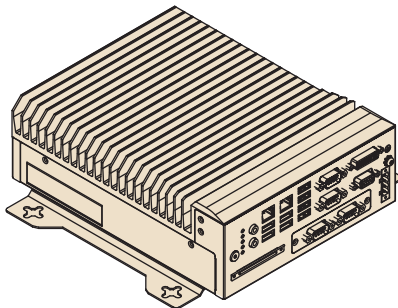
- **Channels** 16
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.8 V
Logic 1: 2.0 V
- **Output Capability** Sink: 8.0 mA @ 0.8 V
Source: 0.4 mA @ 2.0 V

Pacer/Counter

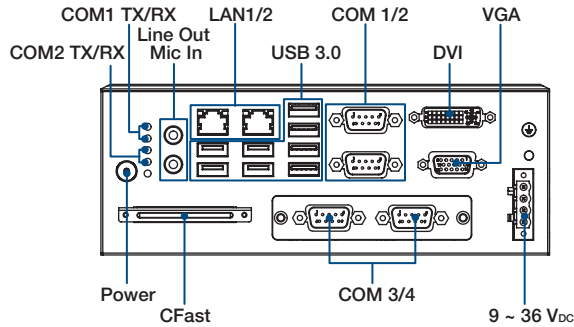
- **Channels** 1
- **Resolution** 16 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Reference Clock** Internal: 10 MHz

Dimensions

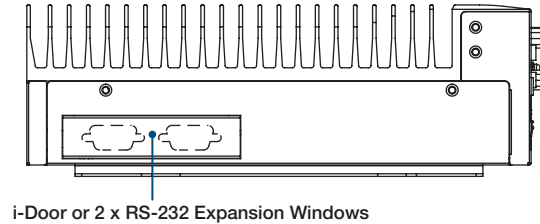
Unit: mm



Front View



Side View



Ordering Information

Part Number	CPU	VGA	DVI	2.5" HDD	IO	USB 3.0	GbE	COM	PCIe	Power
DAQ-MIC7500-1711LE	i5-6442EQ	1	1	1	16 AI/ 16 DI/ 16 DO	8	2	4	1x PCIe16	9 ~ 36V DC

Packing List

Part Number	Description
MIC-7500	6th Gen Intel Core i fanless system
2061750000	CD-ROM
2001750000	Startup manual
1652003234	4-pin Phoenix power connector
1960070543N001	2 x Mounting bracket
1700019445	SATA cable
1700024372-01	SATA power cable
1701200220	Dual DP9 port cable
DAQ Card	PCI-1711U-CE
Cable	PCL-10168-1E
Wiring board	ADAM-3968-AE

Optional Accessories

Part Number	Description
96PSA-A220W24P4-1	Adaptor A/D, 100-240V, 220W, 24V
96PSA-A150W19P4-1	Adaptor A/D, 100-240V, 150W, 19V
96PSA-A120W24T2	Adaptor A/D, 100-240V, 120W, 24V
96PSA-A120W19T2	Adaptor A/P, 100-240V, 120W, 19V
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
98R2C48510E	Isolation COM module
PCA-TPM-00A1E	TPM module
98R1750000E	Secondary DVI cable accessory kit

Note:

1. MIC-7500 supports the i-door module (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Embedded OS

Part Number	Description
2070014106	img WES7P MIC-7500 x64 V5.6.6 10MUI