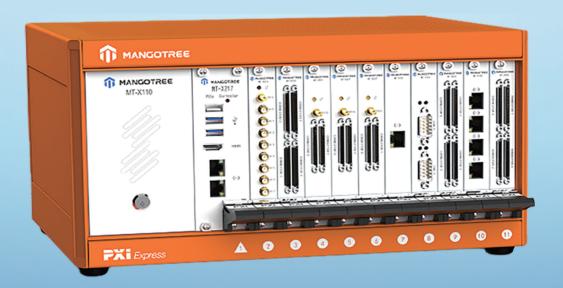




Software - Defined Modular Measurement And Control Platform

















400-081-8786

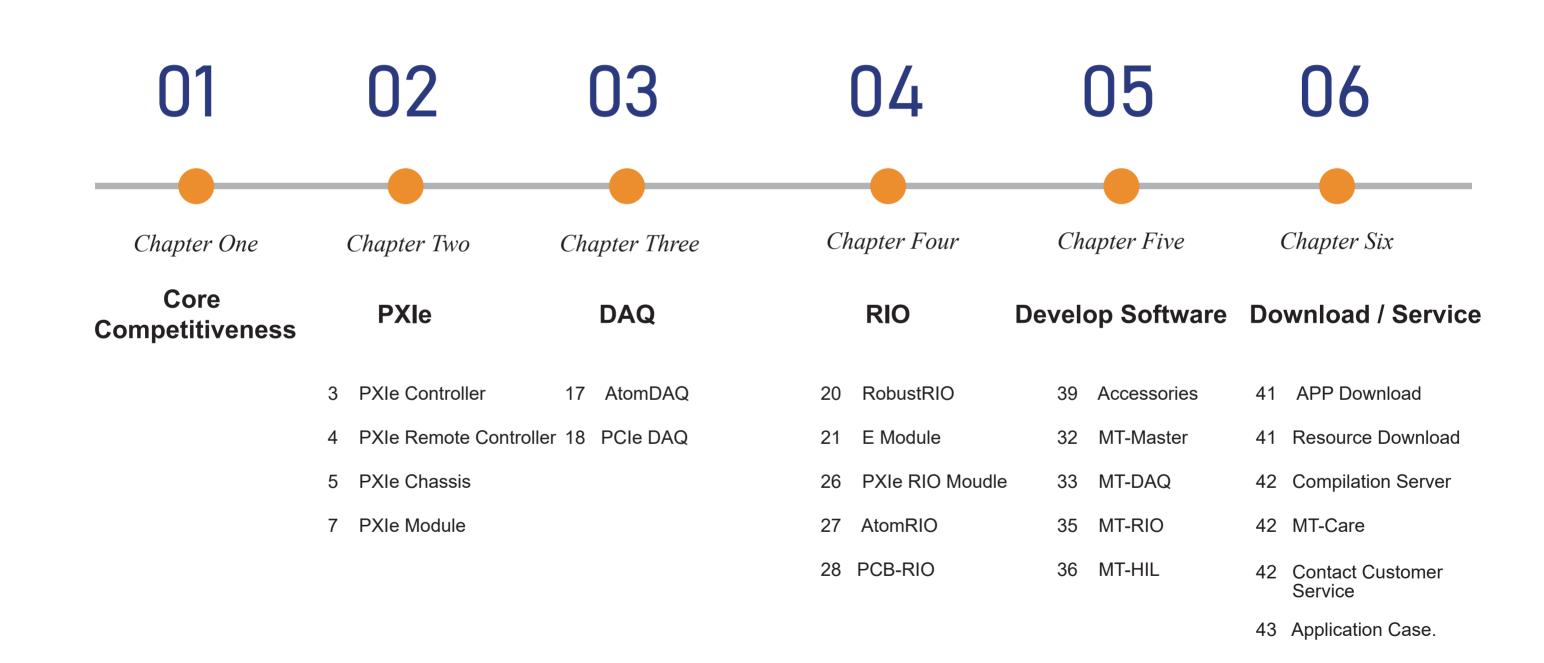


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Product Innovation

The company is committed to providing high-end measurement and control platforms that are localized, independent and intelligent in research and development and production. The company has obtained 5 invention patents, 6 utility models, more than 10 design patents and more than 20 software copyrights.

The company adheres to high R & D investment and continuous innovation. For emerging application fields such as unmanned driving simulation and testing, industrial Internet edge computing and nodes, and semiconductor packaging and testing, the company will also launch new product lines and software toolkits to help the continuous innovation and progress of the domestic measurement and control industry.



R & D Strengtht

As an innovative high-tech enterprise, the company has many senior experts from well-known companies in the industry and talents from many 985 and 211 universities, gathering a strong R & D team. At the same time, the company has always maintained close technical cooperation with many domestic research institutes and universities, providing strong technical support for the expansion of various branch fields of the company.

The proportion of personnel with bachelor's degree or above in the company is as high as more than 85%, and the proportion of R & D personnel is as high as more than 70%. The company will continue to increase investment in R & D talents to provide a basis for the company to continuously launch new technologies and products.

High-tech Enterprise Certificate

Patent Certificate





Quality Assurance

Relying on senior industry experts, rich technical accumulation, standardized development processes, rigorous work attitudes, and a complete quality system, the company provides high-quality industrial-level measurement and control products. The stability of its products has been fully verified among customers including national defense units, military research institutes, and leading electronic manufacturers. If you want to know about the third-party quality certifications obtained by the company, please log in to the company's official website: www.mangotree.cn.

After-Sales Service

When encountering unsolvable problems during product use, report to the after-sales service department in time to obtain corresponding technical support. The company will choose remote assistance or on-site service according to the actual situation and strive to solve your problems in the shortest time.

Technical support phone: 400-081-8786.
Technical support email: support@mangotree.cn.



Technology Leading Talent.



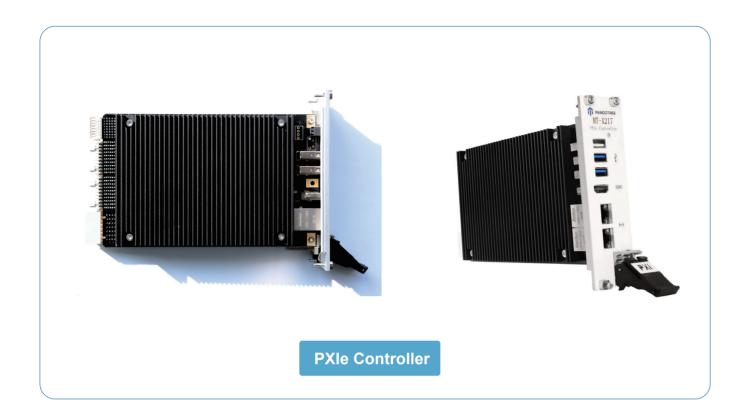






PXIe Controller

PXIe remote controller



Configuration and Selection

Intel Pentium 10th Gen

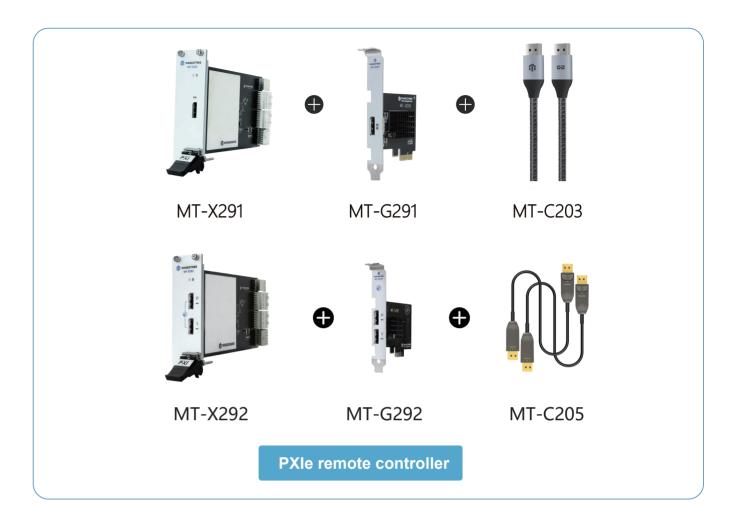
10th Generation Intel Core i3

10th Generation Intel Core i5

10th Generation Intel Core i7

PXIe Controller

Model	MT-X200	MT-X213	MT-X215	MT-X217
Function	PXIe Controller	PXIe Controller	PXIe Controller	PXIe Controller
CPU Series	Intel Pentium 10th Gen	10th Generation Intel Core i3	10th Generation Intel Core i5	10th Generation Intel Core i7
CPU Specifications	3.2G(Max) Quad- core, four threads.	4.1G(Max) Two cores, four threads	4.2G(Max) Quad- core, eight threads	4.9G(Max) Quad- core, eight threads
Memory	4G	4G	8G	16G
MSata	256G	_		
M.2 PCle hard disk	_	512G	512G	1TB
USB2.0	2		1	
USB3.0	_		2	
100 megabit network	1		_	
Gigabit network	<u> </u>		2	
HDMI	1		1	
Operating System	Windows/Linux RT		Windows/Linux RT	



| Configuration and Selection

Thunderbolt-based controller >

Controller based on industrial computer /desktop computer >

Thunderbolt

PCle

PXIe remote controller

Model	MT-X290	MT-X291	MT-X292	MT-G291	MT-G292(x1)	MT-G292(x2)
function	PXIe Thunderbolt 3	PXIe Remote	PXIe Remote	PCle Remote	PCle Remote	PCle Remote
Interface protocols	Thunderbolt 3	PCle x1	PCle x2	PCle x1	PCle x1	PCle x2
Mate with the host	Thunderbolt 3/4 or	Desktop/IPC	Desktop/IPC	Desktop/IPC	Desktop/IPC	Desktop/IPC
Access location	PXIe Chassis	PXIe Chassis	PXIe Chassis	PCle slot	PCle slot	PCle slot
Mix and match	_	Requires MT-G291	Requires MT-G292	Compatible with MT-	Compatible with MT-	Compatible with MT-
Support system	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT
Optional cable	Thunderbolt cables	MT-C203	MT-C205 (2pcs)	MT-C203	MT-C205 (2pcs)	MT-C205 (2pcs)
Cable immunity	☆☆	☆☆	***	☆☆	ተ ተተ	2
CABLE LENGTH	2 meters	2 meters	30 meters (fiber optic	2 meters	30 meters (fiber optic	30 meters (fiber optic
Cable connectors	Without lock	Without lock	With lock	Without lock	With lock	With lock
For new projects	recommend	Not recommended	recommend	Not recommended	recommend	recommend

Learn about PXIe Cotroller in detail -



PXIe chassis







Learn about PXIe Chassis in detail



T PXIe chassis

Configuration and Selection







Blazing Orange



Blazing Orange



Deep sea blue



Deep sea blue



Deep sea blue

PXIe Chassis

Model	MT-X104	MT-X110	MT-X116
function	PXIe Chassis	PXIe Chassis	PXIe Chassis
Number of slots	5 slots	11 slots	17 slots
Number of inserted cards	4 cards	10 cards	16 cards
PD power supply	•	•	_
All direct current power supply	•	•	•
Independent power supply	•	•	•

PXIe Remote Chassis

Model	MT-X151	MT-X154	MT-X184	MT-G291	MT-G292(x1)	MT-G292(x2)
function	PXIe Remote Chassis	PXIe Remote Chassis	PXIe Remote Chassis	PCle Remote Expansion Card	PCle Remote Expansion Card	PCle Remote Expansion Card
Number of slots	1 slot	4 slots	4 slots	1	1	1
Number of cards	1 slot	4 slots	4 slots	1	1	1
Interface protocols	PCle x1	PCle x1	PCle x2	PCle x1	PCle x1	PCle x2
Mate with the host	Desktop/IPC	Desktop/IPC	Desktop/IPC	Desktop/IPC	Desktop/IPC	Desktop/IPC
Access location	_	_	_	PCle slot	PCle slot	PCle slot
Mix and match	Requires MT-G291	Requires MT-G291	Requires MT-G292	Compatible with MT-	Compatible with MT-	Compatible with MT-
Support system	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT	Windows/Linux RT
Optional cable (required)	MT-C203	MT-C203	MT-C205 (2pcs)	MT-C203	MT-C205 (2pcs)	MT-C205 (2pcs)
Cable immunity	☆ ☆	☆ ☆	☆☆☆☆	**	☆☆☆☆	☆☆☆☆
CABLE LENGTH (MAX)	2 meters	2 meters	30 meters (fiber optic	2 meters	30 meters (fiber optic	30 meters (fiber optic
Cable connectors	Without lock	Without lock	With lock	Without lock	With lock	With lock
For new projects	Not recommended	Not recommended	recommend	Not recommended	recommend	recommend



Learn about PXIe Chassis in detail __





Configuration and Selection

Synchronous voltage/current >

Synchronous AI+AO+DIO (16-bit)

Synchronous voltage input

Synchronous current input

High-precision synchronous AI+AO (32-bit)

Synchronous voltage output

Synchronous current output

Asynchronous voltage/current >

Asynchronous voltage input

Asynchronous current input

Other function modules >

Sound and vibration

Communication interface

Static digital DIO

Temperature acquisition

Industrial Bus

Switch Module >

Relay

Multiplexer

Matrix switch

Programmable resistor

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Modular instrument >

High-speed (>10M) voltage input/output

Multimeter

Arbitrary waveform

Programmable power

High-performance FPGA >

High-performance FPGA

High-performance FPGA+optical

High-performance FPGA+LVDS

Synchronous AI+AO+DIO (16-bit)

Model	MT-X550	MT-X551	MT-X552	MT-X553	MT-X560	MT-X561	MT-X562	MT-X563	MT-X564
Al type	Voltage								
Number of Al channels	16	8	16	32	8	16	24	8	8
Al sampling rate	200K/CH/s	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
Al input method	single-ended	single-ended	single-ended	single-ended	Differential	Differential	Differential	Differential	Differential
Al sampling range	±10V								
Al resolution	16bit								
Al synchronization	•	•	•	•	•	•	•	•	•
AO type	Voltage								
Number of AO channels	4	8	8	8	8	8	8	16	24
AO sampling rate	200K/CH/s	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
AO output method	single-ended								
AO output range	±10V								
AO resolution	16bit								
AO synchronization	•	•	•	•	•	•	•	•	•
Encoder	2-channel	1-channel	2-channel	2-channel	1-channel	2-channel	2-channel	2-channel	2-channel
PWM	4-channel	2-channel	4-channel	4-channel	2-channel	4-channel	4-channel	4-channel	4-channel
Counter	4-channel	2-channel	4-channel	4-channel	2-channel	4-channel	4-channel	4-channel	4-channel
DI	6-channel	3-channel	6-channel	6-channel	3-channel	6-channel	6-channel	6-channel	6-channel
DO	6-channel	3-channel	6-channel	6-channel	3-channel	6-channel	6-channel	6-channel	6-channel
Digital waveform input	2-channel	1-channel	2-channel	2-channel	1-channel	2-channel	2-channel	2-channel	2-channel
Digital waveform output	2-channel	1-channel	2-channel	2-channel	1-channel	2-channel	2-channel	2-channel	2-channel
Trigger	3-channel	2-channel	3-channel	3-channel	2-channel	3-channel	3-channel	3-channel	3-channel
External interface	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*2	VHDCI*2	VHDCI*2
Product size				178.13m	m×20.02mm×1	30.5mm			

Synchronous voltage output

•	_	•										
Model	MT-X520	MT-X521	MT-X522	MT-X523	MT-X524	MT-X525	MT-X530	MT-X531	MT-X532	MT-X533	MT-X534	MT-X535
Туре	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage
Number of channels	8	16	32	8	16	32	8	16	32	8	16	32
Sampling rate	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
Input method	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended	single-ended
Sampling range	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V
Resolution	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit
Synchronization	•	•	•	•	•	•	•	•	•	•	•	•
Encoder	_	_	_	_	_	_	1-channel	1-channel	2-channel	1-channel	1-channel	2-channel
PWM	_	_	_	_	_	_	2-channel	2-channel	4-channel	2-channel	2-channel	4-channel
Counter	_	_	_	_	_	_	2-channel	2-channel	4-channel	2-channel	2-channel	4-channel
DI	_	_	_	_	_	-	3-channel	3-channel	6-channel	3-channel	3-channel	6-channel
DO	-	_	_	_	_	_	3-channel	3-channel	6-channel	3-channel	3-channel	6-channel
Digital waveform input	_	_	_	_	_	_	1-channel	1-channel	2-channel	1-channel	1-channel	2-channel
Digital waveform output	_	_	_	_	_	_	1-channel	1-channel	2-channel	1-channel	1-channel	2-channel
Trigger	1-channel	1-channel	1-channel	1-channel	1-channel	1-channel	2-channel	2-channel	3-channel	2-channel	2-channel	3-channel
External interface	VHDCI*1	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*1	VHDCI*2
Product size						178.13mm×20.0)2mm×130.5mm	1				

Configuration and Selection

Synchronous voltage input

Model	MT-X500	MT-X501	MT-X502	MT-X503	MT-X510	MT-X511	MT-X512	MT-X513
Туре	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage
Number of channels	16	32	16	32	16	32	16	32
Sampling rate	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s
Input method	single-ended	single-ended	Differential	Differential	single-ended	single-ended	Differential	Differential
Sampling range	±10V	±10V	±10V	±10V	±10V	±10V	±10V	±10V
Resolution	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit
Synchronization	•	•	•	•	•	•	•	•
Encoder	_	_	_	_	1-channel	2-channel	1-channel	2-channel
PWM	_	_	_	_	2-channel	4-channel	2-channel	4-channel
Counter	_	_	_	_	2-channel	4-channel	2-channel	4-channel
DI	_	_	_	_	3-channel	6-channel	3-channel	6-channel
DO	_	_	_	_	3-channel	6-channel	3-channel	6-channel
Digital waveform input	_	_	_	_	1-channel	2-channel	1-channel	2-channel
Digital waveform output	_	_	_	_	1-channel	2-channel	1-channel	2-channel
Trigger	1-channel	1-channel	1-channel	1-channel	2-channel	3-channel	2-channel	3-channel
External interface	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2
Product size				178.13mm×20.0	02mm×130.5mm	1		

High-precision synchronous AI+AO (32-bit)

Model	MT-X590	MT-X591	MT-X595	MT-X596
Al type	Voltage	Voltage	Voltage	Voltage
Number of Al channels	8	6	32	36
Al sampling rate	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s
Al input method	Differential	Differential	Differential	Differential
Al sampling range	±10V	±10V	±10V	±10V
Al resolution	32bit	32bit	32bit	32bit
Al synchronization	•	•	•	•
AO type	Voltage	Voltage	Voltage	Voltage
Number of AO channels	_	2	_	4
AO sampling rate	_	204.8K/CH/s	_	204.8K/CH/s
AO output method	_	Differential	Differential	Differential
AO output range	_	±10V	_	±10V
AO resolution	_	32bit	_	32bit
AO synchronization	_	•	_	•
External interface	SMA*8	SMA*8	VHDCI*2	SMA*8+VHDI*2
Product size	178.13mm×20.	02mm×130.5m	178.13mm×40.	34mm×130.5m

Learn about PXIe Module in detail





Synchronous current input

Model	MT-X506	MT-X507	MT-X516	MT-X517
Туре	Current	Current	Current	Current
Number of channels	16	32	16	32
Sampling rate	200K/CH/s	200K/CH/s	200K/CH/s	200K/CH/s
Input method	Differential	Differential	Differential	Differential
Sampling range	±25mA	±25mA	±25mA	±25mA
Resolution	16bit	16bit	16bit	16bit
Synchronization	•	•	•	•
Encoder	_	_	1-channel	2-channel
PWM	_	_	2-channel	4-channel
Counter	_	_	2-channel	4-channel
DI	_	_	3-channel	6-channel
DO	_	_	3-channel	6-channel
Digital waveform input	_	_	1-channel	2-channel
Digital waveform output	_	_	1-channel	2-channel
Trigger	1-channel	1-channel	2-channel	3-channel
External interface	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2
Product size		178.13mm×20.0	2mm×130.5mm	1

Synchronous current output

Model	MT-X526	MT-X527	MT-X536	MT-X537
Туре	Current	Current	Current	Current
Number of channels	8	16	8	16
Sampling rate	200K/CH/s	200K/CH/s	200K/CH/s	200K/CH/s
Input method	single-ended	single-ended	single-ended	single-ended
Sampling range	0~20mA	0~20mA	0~20mA	0~20mA
Resolution	16bit	16bit	16bit	16bit
Synchronization	•	•	•	•
Encoder		<u> </u>	1-channel	1-channel
PWM	_	_	2-channel	2-channel
Counter	_	_	2-channel	2-channel
DI	_	_	3-channel	3-channel
DO	_	_	3-channel	3-channel
Digital waveform input	_	_	1-channel	1-channel
Digital waveform output	_	_	1-channel	1-channel
Trigger	1-channel	1-channel	2-channel	2-channel
External interface	VHDCI*1	VHDCI*1	VHDCI*1	VHDCI*1
Product size		178.13mm×20.0	2mm×130.5mm	า

| Configuration and Selection

Asynchronous voltage input

Model	MT-X400	MT-X401	MT-X402	MT-X403	MT-X404	MT-X410	MT-X411	MT-X412	MT-X413	MT-X414
Туре	Voltage									
Number of channels	16	32	64	16	32	16	32	64	16	32
Sampling rate	200K/s	200K/s	200K/s	600K/s	600K/s	200K/s	200K/s	200K/s	600K/s	600K/s
Input method	Differential									
Sampling range	±10V									
Resolution	16bit									
Synchronization	No									
Encoder	_	_	_	_	_	1-channel	2-channel	2-channel	1-channel	2-channel
PWM	_	_	_	_	_	2-channel	4-channel	4-channel	2-channel	4-channel
Counter	_	_	_	_	_	2-channel	4-channel	4-channel	2-channel	4-channel
DI	_	_	_	_	_	3-channel	6-channel	6-channel	3-channel	6-channel
DO	_	_	_	_	_	3-channel	6-channel	6-channel	3-channel	6-channel
Digital waveform input	_	_	_	_	_	1-channel	2-channel	2-channel	1-channel	2-channel
Digital waveform output	_	_	_	_	_	1-channel	2-channel	2-channel	1-channel	2-channel
Trigger	1-channel	1-channel	1-channel	1-channel	1-channel	2-channel	3-channel	3-channel	2-channel	3-channel
External interface	VHDCI*1	VHDCI*2	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*2	VHDCI*1	VHDCI*2
Product size				178	3.13mm×20.0	2mm×130.5n	nm			

Asynchronous current input

Model	MT-X420	MT-X421	MT-X423	MT-X424	MT-X430	MT-X431	MT-X433	MT-X434
Туре	Current	Current	Current	Current	Current	Current	Current	Current
Number of channels	16	32	16	32	16	32	16	32
Sampling rate	200K/s	200K/s	600K/s	600K/s	200K/s	200K/s	600K/s	600K/s
Input method	Differential	Differential	Differential	Differential	Differential	Differential	Differential	Differential
Sampling range	±25mA	±25mA	±25mA	±25mA	±25mA	±25mA	±25mA	±25mA
Resolution	16bit	16bit	16bit	16bit	16bit	16bit	16bit	16bit
Synchronization	No	No	No	No	No	No	No	No
Encoder	_	_	_	_	1-channel	2-channel	1-channel	2-channel
PWM	_	_	_	_	2-channel	4-channel	2-channel	4-channel
Counter	_	_	_	_	2-channel	4-channel	2-channel	4-channel
DI	_	_	_	_	3-channel	6-channel	3-channel	6-channel
DO	_	_	_	_	3-channel	6-channel	3-channel	6-channel
Digital waveform input	_	_	_	_	1-channel	2-channel	1-channel	2-channel
Digital waveform output	_	_	_	_	1-channel	2-channel	1-channel	2-channel
Trigger	1-channel	1-channel	1-channel	1-channel	2-channel	3-channel	2-channel	3-channel
External interface	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2	VHDCI*1	VHDCI*2
Product size				178.13mm×20.0)2mm×130.5mn	1		

Learn about PXIe Module in detail





Sound and vibration

Model	MT-X610	MT-X611	MT-X612	MT-X613	MT-X614	MT-X615
Al type	Sound Vibration					
Number of Al channels	2	4	6	4	8	32
Al sampling rate	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s
Al input method	Differential	Differential	Differential	Differential	Differential	Differential
Al sampling range	±10V	±10V	±10V	±10V	±10V	±10V
IEPE Support	2mA	2mA	2mA	2mA	2mA	2mA
Al input mode support.	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC
Al resolution	32bit	32bit	32bit	32bit	32bit	32bit
Al synchronization	•	•	•	•	•	•
AO type	Sound Vibration	Sound Vibration	Sound Vibration	_	_	_
Number of AO channels	2	4	2	_	_	_
AO sampling rate	204.8K/CH/s	204.8K/CH/s	204.8K/CH/s	_	_	_
AO output method	Differential	Differential	Differential	_	_	_
AO output range	±10V	±10V	±10V	_	_	_
AO resolution	32bit	32bit	32bit	_	_	_
AO synchronization	•	•	•	_	_	_
Trigger	1-channel	1-channel	1-channel	1-channel	1-channel	1-channel
External interface	BNC*4	SMA*8	SMA*8	BNC*4	SMA*8	VHDCI*2
Number of slots occupied	1	1	1	1	1	2
Product size		178.13	3mm×20.02mm×13	0.5mm		178.13mm×40.34mm×130.5mm

Communication interface

Model	MT-X300	MT-X301	MT-X302	MT-X304	MT-X308			
Al type	PCIe NVMe SSD	Gigabit network	2.5G network card	Gigabit network	4G WiFi router			
Number of Al channels	1	1	1	4	1			
Attribute	Support	Support	Not support	Not support	4G full Netcom (Nano SIM card)			
Support Linux RT system	√	√	√	×	√			
External interface	M.2 NVMe	RJ45*1	RJ45*1	RJ45*4	SIM card *1, WAN *1, LAN *2, WiFi antenna, 4G antenna.			
Product size	178.13mm×20.02mm×130.5mm							

Temperature acquisition

Model	MT-X600	MT-X603	MT-X604	MT-X605	MT-X606	MT-X607	MT-X608	
Туре	Thermocouple	Thermocouple	Thermocouple	PT100	PT1000	PT100	PT1000	
Number of channels	32	8	16	16	16	32	32	
Sampling rate	10/CH/s	470/CH/s	470/CH/s	50/s	50/s	50/s	50/s	
Input method	Differential	Differential	Differential	Differential	Differential	Differential	Differential	
Thermocouple supported types	K/J/N/R/S/T/E/B	K/J/N/R/S/T/E/B	K/J/N/R/S/T/E/B	-	-	-	-	
Cold and temperature compensation	•	tion + having 1 chan external compensat		-	-	-	-	
Wiring methods of thermal	-	-	-	3-wire/4-wire	3-wire/4-wire	3-wire/4-wire	3-wire/4-wire	
Resolution	19bit	24bit	24bit	15bit	15bit	15bit	15bit	
Synchronization	•	•	•	_	_	_	_	
Trigger	1-channel	1-channel	1-channel	1-channel	1-channel	1-channel	1-channel	
External interface	VHDCI*1	VHDCI*1	VHDCI*1	VHDCI*1	VHDCI*1	VHDCI*2	VHDCI*2	
Product size	178.13mm×20.02mm×130.5mm							

Learn about PXIe Module in detail ightarrow



| Configuration and Selection

Static digital DIO

Model	MT-X570	MT-X571	MT-X572	MT-X573	MT-X574	MT-X575	MT-X576	MT-X577	MT-X578	
Input IO level	3.3V	5V	12-30V	12-30V	12-30V	_	12-30V	_	5V	
			source electrode	drain electrode	source electrode		drain electrode			
Number of input channels DI	16-channel	16-channel	16-channel	16-channel	32-channel	_	32-channel	_	_	
Output IO level	3.3V	5V	12-40V	12-60V	-	12-40V	_	12-60V	_	
Output 10 level			source electrode	drain electrode		source electrode	_	drain electrode		
Number of output channels DO	16-channel	16-channel	16-channel	16-channel	_	32-channel	_	32-channel	128-channel	
Update rate	1ms	1ms	1ms	1ms	1ms	1ms	1ms	1ms	30ms	
External interface	DB37*1	DB37*1	DB37*1	DB37*1	DB37*1	DB37*1	DB37*1	DB37*1	VHDCI*4	
Product size		178.13mm×20.02mm×130.5mm								

Industrial Bus

Model	MT-X312	MT-X313	MT-X314	MT-X315	MT-X322	MT-X330	MT-X340	MT-X341	MT-X342
Туре	RS232	RS485/422	RS232	RS485/422	CAN-FD	GPS/beidou	SENT signal	SENT signal	SENT signal
Number of channels	2	2	4	4	2	1	3in+3out	6 in	6 out
Attribute	Isolation	Isolation	Isolation	Isolation	supporting 8M/ compatible with CAN	Synchronous timing module	SENT communication	SENT communication	SENT communication
External interface	DB9*2	DB9*2	DB37*1	DB37*1	DB9*2	SMA*1	DB25*1	DB25*1	DB25*1
Product size		178.13mm×20.02mm×130.5mm							

Matrix switch (1-wire - single-ended)

Model	MT-X740	MT-X741	MT-X742	MT-X743	MT-X744	MT-X745
configuration	8 rows by	4 rows by	4 rows by	8 rows by	4 rows by	4 rows by
Configuration	8 columns	16 columns	8 columns	12 columns	24 columns	12 columns
Number of channels	1	1	2	1	1	2
Current(Max)	2A	2A	2A	2A	2A	2A
\\altaga(May\)	250VAC	250VAC	250VAC	250VAC	250VAC	250VAC
Voltage(Max)	/220VDC	/220VDC	/220VDC	/220VDC	/220VDC	/220VDC
Signal	Line 1-	Line 1-	Line 1-	Line 1-	Line 1-	Line 1-
Signal	Single-ended	Single-ended	Single-ended	Single-ended	Single-ended	Single-ended
External interface	DR37	DR37	DR37	DR37	DR37	DR37
Number of occupied slots	1	1	1	1	1	1
Product size			178.13mm×20.0	2mm×130.5mm	1	

Matrix switch (2-wire - differential)

Model	MT-X750	MT-X751	MT-X752	MT-X753	MT-X754	MT-X755		
configuration	8 rows by	4 rows by	4 rows by	8 rows by	4 rows by	4 rows by		
Number of channels	1	1	2	1	1	2		
Current(Max)	2A	2A	2A	2A	2A	2A		
Voltage(Max)	250VAC	250VAC	250VAC	250VAC	250VAC	250VAC		
Signal	Line 2 -	Line 2 -	Line 2 -	Line 2 -	Line 2 -	Line 2 -		
Signal	Differential	Differential	Differential	Differential	Differential	Differential		
External interface	DR78	DR78	DR78	DR78	DR78	DR78		
Number of occupied slots	1	1	1	1	1	1		
Product size	178.13mm×20.02mm×130.5mm							



Relay

Model	MT-X700	MT-X701	MT-X702	MT-X703	
Number of channels	18-Channels	31-Channels	8-Channels	8-Channels	
Current(Max)	5A	5A	10A	12A	
Voltage(Max)	250VAC/150VDC	250VAC/150VDC	250VAC/125VDC	400VAC/300VDC	
External interface	DR37	DR62	DR8*2	DR8*2	
Number of occupied slots	1	1	2	2	
Product size	178.13mm×20.0	2mm×130.5mm	178.13mm×40.34mm×130.5mm		

Multiplexer (1-wire - single-ended)

Model	MT-X720	MT-X721	MT-X722	MT-X723	MT-X724	MT-X725	MT-X726		
configuration	Select 1 from 32	Select 1 from 16	Select 1 from 64	Select 1 from 32	Select 1 from 16	Select 1 from 96	Select 1 from 48		
Number of channels	1	2	1	2	4	1	2		
Current(Max)	2A								
Voltage(Max)	250VAC/220VDC								
Signal	Line 1 - Single-ended								
External interface	DR78	DR78	DR78	DR78	DR78	D128P	D128P		
Number of occupied slots	1	1	1	1	1	1	1		
Product size		178.13mm×20.02mm×130.5mm							

Multiplexer (2-wire - differential)

Model	MT-X730	MT-X731	MT-X732	MT-X733	MT-X734				
configuration	Select 1 from 32	Select 1 from 64	Select 1 from 16	Select 1 from 32	Select 1 from 16				
Number of channels	1	1	2	2	4				
Current(Max)	2A	2A	2A	2A	2A				
Voltage(Max)	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC				
Signal	Line 2 - Differential	Line 2 - Differential	Line 2 - Differential	Line 2 - Differential	Line 2 - Differential				
External interface	DR78	D160P	DR78	D160P	D160P				
Number of occupied slots	1	1	1	1	1				
Product size		178.13mm×20.02mm×130.5mm							

Programmable resistor

型号	MT-X770	MT-X771	MT-X772	MT-X773	MT-X774	MT-X775	MT-X776
Resistance Range	1Ω -255Ω	1Ω -255Ω	2Ω -510Ω	2Ω -510Ω	0.25Ω -16.3KΩ	0.25Ω -16.3KΩ	0.25Ω -4.194MΩ
Number of channels	2	4	2	4	2	4	2
configuration	8bits	8bits	8bits	8bits	16bits	16bits	24bits
Resistance Step	1Ω	1Ω	2Ω	2Ω	0.25Ω	0.25Ω	0.25Ω
External interface	DB9	DB9	DB9	DB9	DB9	DB9	DB9
Number of occupied slots	1	1	1	1	1	1	1
Product size	178.13mm×20.02mm×130.5mm						

Learn about PXIe Module in detail ightarrow



| Configuration and Selection

High-speed (>10M) voltage input/output

Model	MT-X580	MT-X581	MT-X586
Туре	Voltage input	Voltage input	Voltage output
Number of input channels	4	4	_
Number of output channels	_	_	2
Sampling rate	65M/CH/s	250M/CH/s	125M/CH/s
Wiring methods	Differential	Differential	single-ended
Sampling range	±10V	±5V	±3V
Resolution	12bit	8bit	14bit
Synchronization	•	•	•
Trigger	1-Channels	1-Channels	1-Channels
External interface	BNC*4	BNC*4	BNC*2
Product size	178.13	3mm×20.02mm×130	0.5mm

Arbitrary waveform

Model	MT-X660	MT-X661
Туре	Arbitrary wave	form generator
Number of channels	1-Channels	1-Channels
Update rate (MAX)	1GS/s	1GS/s
Resolution	14bit	14bit
Bandwidth	40MHz	100MHz
Voltage output range	±10V	±10V
Support arbitrary	•	•
On-board signal storage	1024 Samples	1024 Samples
External hard trigger	_	•
External soft trigger	•	•
External interface	1*SMA + 1*SMB	1*SMA + 2*SMB
Product size	178.13mm×20.02mm×130.5mm	178.13mm×20.02mm×130.5mm

Multimeter

Model	MT-X650	
Туре	Multimeter	
Accuracy	Four and a half digits	
Isolation	•	
Sampling rate	2S/s	
Direct current voltage	±1000Vdc Max	
Alternating current	750Vac Max	
Input impedance	10MΩ Max	
Direct current voltage	±10A Max (Continuous measurement ≤ 5A)	
Alternating current	10A Max (Continuous measurement ≤ 5A)	
Resistance range	40MΩ Max	
Product size	178.13mm×20.02mm×130.5mm	



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Programmable power supply

Model	MT-X670	MT-X671	MT-X672		
type	Programmable power supply	Programmable power supply	Programmable power supply		
Number of channels	1 channel	1 channel	1 channel		
Output voltage MAX	10V	20V	30V (externally powered)		
Output current MAX	5A	5A	5A		
Power MAX	50W	60W	100W (150W peak)		
Voltage accuracy	±330mV	±330mV	±330mV		
Current accuracy	±5mA	±5mA	±5mA		
Real-time readback voltage	•	•	•		
Real-time readback current	•	•	•		
Output disconnect function	•	•	•		
Output isolation	•	•	•		
Supports external power supply	_	_	•		
External power supply range	_	_	12V-36V		
External interfaces	1*4Pin terminal	1*4Pin terminal	1*4Pin terminal + 1*2Pin		
Product dimensions	178.13mm×20.02mm×130.5mm				

High-performance FPGA

Model	MT-X900	MT-X901	MT-X910	MT-X911	MT-X912	MT-X920	MT-X921	MT-X922
FPGA model	Kintex7 160T	Kintex7 325T	Kintex7 160T	Kintex7 160T	Kintex7 160T	Kintex7 325T	Kintex7 325T	Kintex7 325T
FPGA DRAM capacity	NA	512M	NA	NA	NA	512M	512M	512M
Number of high-speed DIO Channels	128	128	64	64	64	64	64	64
DIO level	1.2V/ 1.5V/ 1.8	8V /2.5V/ 3.3V	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V
DIO rate	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz
Al type	_	_	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage
Number of Al channels	_	_	8	24	8	8	24	8
Al sampling rate	_	_	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
Al input method	_	_	Single-ended	Single-ended	Single-ended	Differential	Differential	Differential
Al sampling range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
Al resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
Al synchronization	_	_	•	•	•	•	•	•
AO type	_	_	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage
Number of AO channels	_	_	8	8	24	8	8	24
AO sampling rate	_	_	125K/CH/s	125K/CH/s	125K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
AO output method	_	_	Single-ended	Single-ended	Single-ended	Single-ended	Single-ended	Single-ended
AO output range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
AO resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
AO synchronization	_	_	•	•	•	•	•	•
External interface	VHDCI*4	VHDCI*4	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3
Product size				178.13mm×20.0	2mm×130.5mm	1		

Configuration and Selection

High-performance FPGA + Optical fiber communication

Model	MT-X930	MT-X931	MT-X950	MT-X951	MT-X952	
FPGA model	Kintex7 325T					
FPGA DRAM capacity	512M	512M	512M	512M	512M	
Number of fiber	2	2	2	2	2	
Protocol support	10G Aurora + 10 Gigabit UDP					
Number of high-speed	32	128	64	64	64	
DIO level	1.2V/ 1.5V/ 1.8	3V /2.5V/ 3.3V	3.3V	3.3V	3.3V	
DIO rate	80MHz	80MHz	80MHz	80MHz	80MHz	
Al type	_	-	Voltage	Voltage	Voltage	
Number of Al channels	_	_	8	24	8	
Al sampling rate	_	_	1M/CH/s	1M/CH/s	1M/CH/s	
Al input method	_	-	Differential	Differential	Differential	
Al sampling range	_	-	±10V	±10V	±10V	
Al resolution	_	-	16bit	16bit	16bit	
Al synchronization	_	-	•	•	•	
AO type	_	-	Voltage	Voltage	Voltage	
Number of AO channels	_	_	8	8	24	
AO sampling rate	_	_	1M/CH/s	1M/CH/s	1M/CH/s	
AO output method	_	-	Single-ended	Single-ended	Single-ended	
AO output range	_	_	±10V	±10V	±10V	
AO resolution	_	-	16bit	16bit	16bit	
AO synchronization	_	-	•	•	•	
Fiber optic interface	SFP+*2	SFP+*2	SFP+*2	SFP+*2	SFP+*2	
Other interfaces	VHDCI*1	VHDCI*4	VHDCI*3	VHDCI*3	VHDCI*3	
Number of slots	1	2	2	2	2	
Product size	178.13mm×20.02mm ×130.5mm	178.13mm×40.34mm×130.5mm				

High-performance FPGA+LVDS

<u> </u>			
Model	MT-X970	MT-X971	
FPGA model	Kintex7 325T	Kintex7 325T	
Maximum rate of LVDS	800 Mbps	1 Gbps	
FPGA DRAM capacity	512M	512M	
Support external clock input	•	•	
Total LVDS channels	36 groups	36 groups	
LVDS data input	16 groups	16 groups	
LVDS data output	16 groups	16 groups	
LVDS Trigger	4 groups	4 groups	
Single-ended Trigger channel	3	3	
Other interfaces	VHDCI*2 + SMA*2	VHDCI*2 + SMA*2	
Number of slots occupied	1	1	
Product size	178.13mm×20.02mm×130.5mm		

Learn about PXIe Module in detail



PCle DAQ Module



Configuration and Selection

Synchronous voltage/current >

Synchronous AI + AO + DIO

Synchronous current input

Synchronous current output

Other function modules >

Sound and vibration

Communication and bus

Synchronous current input

	•	
Model	MT-G506	MT-G516
Туре	Current	Current
Number of channels	16	16
Sampling rate	200K/s	200K/s
Input method	Differential	Differential
Sampling range	±25mA	±25mA
Resolution	16bit	16bit
Synchronization	•	•
Encoder	_	1-channel
PWM	_	2-channel
Counter	_	2-channel
DI	_	3-channel
DO	_	3-channel
Digital waveform input	_	1-channel
Digital waveform output	_	1-channel
Trigger	1-channel	2-channel

PCle DAQ Module

Configuration and Selection

Synchronous current output

Model	MT-G526	MT-G527	MT-G536	MT-G537
Туре	Current	Current	Current	Current
Number of channels	8	16	8	16
Sampling rate	200K/s	200K/s	200K/s	200K/s
Input method	single-ended	single-ended	single-ended	single-ended
Sampling range	0~20mA	0~20mA	0~20mA	0~20mA
Resolution	16bit	16bit	16bit	16bit
Synchronization	•	•	•	•
Encoder	_	_	1-channel	1-channel
PWM	_	_	2-channel	2-channel
Counter	_	_	2-channel	2-channel
DI	_	_	3-channel	3-channel
DO	_	_	3-channel	3-channel
Digital waveform input	_	_	1-channel	1-channel
Digital waveform output	_	_	1-channel	1-channel
Trigger	1-channel	1-channel	2-channel	2-channel

Synchronous AI + AO + DIO

Cyriciii Orious Ai	1 70 1 010				
Model	MT-G550	MT-G551	MT-G552	MT-G560	MT-G561
Al type	Voltage	Voltage	Voltage	Voltage	Voltage
Number of Al channels	16	8	16	8	16
Al sampling rate	200K/s	200K/s	200K/s	1M/s	1M/s
Al input method	single-ended	single-ended	single-ended	Differential	Differential
Al sampling range	±10V	±10V	±10V	±10V	±10V
Al resolution	16bit	16bit	16bit	16bit	16bit
Al synchronization	•	•	•	•	•
AO type	Voltage	Voltage	Voltage	Voltage	Voltage
Number of AO channels	4	8	8	8	8
AO sampling rate	200K/s	200K/s	200K/s	1M/s	1M/s
AO output method	single-ended	single-ended	single-ended	single-ended	single-ended
AO output range	±10V	±10V	±10V	±10V	±10V
AO resolution	16bit	16bit	16bit	16bit	16bit
AO synchronization	•	•	•	•	•
Encoder	2-channel	1-channel	2-channel	1-channel	2-channel
PWM	4-channel	2-channel	4-channel	2-channel	4-channel
Counter	4-channel	2-channel	4-channel	2-channel	4-channel
DI	6-channel	3-channel	6-channel	3-channel	6-channel
DO	6-channel	3-channel	6-channel	3-channel	6-channel
Digital waveform input	2-channel	1-channel	2-channel	1-channel	2-channel
Digital waveform output	2-channel	1-channel	2-channel	1-channel	2-channel
Trigger	3-channel	2-channel	3-channel	2-channel	3-channel

Sound and vibration

Courid dila vibiation	-				
Model	MT-G610	MT-G611	MT-G612	MT-G613	MT-G614
Al type	Sound Vibration				
Number of Al channels	2	4	6	4	8
Al sampling rate	192K/s	192K/s	192K/s	192K/s	192K/s
Al input method	Differential	Differential	Differential	Differential	Differential
Al sampling range	±10V	±10V	±10V	±10V	±10V
IEPE Support	2mA	2mA	2mA	2mA	2mA
Al input mode support.	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC	DC/AC/IEPE+AC
Al resolution	32bit	32bit	32bit	32bit	32bit
Al synchronization	•	•	•	•	•
AO type	Sound Vibration	Sound Vibration	Sound Vibration	_	_
Number of AO channels	2	4	2	_	_
AO sampling rate	192K/s	192K/s	192K/s	_	_
AO output method	Differential	Differential	Differential	_	_
AO output range	±10V	±10V	±10V	_	_
AO resolution	32bit	32bit	32bit	_	_
AO synchronization	•	•	•	_	_
Trigger	1-channel	1-channel	1-channel	1-channel	1-channel

Communication and bus

Model	MT-G312	MT-G313	MT-G322	MT-G340	MT-G341	MT-G342
Туре	RS232	RS485/422	CAN-FD	SENT signal	SENT signal	SENT signal
Number of channels	2	2	2	3in+3out	6 in	6 out
Attribute	Isolation	Isolation	Supporting 8M/	SENT	SENT	SENT
Attribute	isolation	isolation	Compatible with CAN	communication	communication	communication

Learn about PCIe DAQ in detail—



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AtomDAQ high-performance all-in-one data acquisition device

Mardal	MT D044	MT DOAG
Model	MT-D814	MT-D815
Function	AtomDAQ	AtomDAQ
CPU Model	11th i5-1155G7	11th i5-1155G7
CPU specification	4.5G quad-core eight-thread.	4.5G quad-core eight-thread.
Memory	4G	4G
Hard disk	256G	256G
Number of AI channels	16-channel	16-channel
Al synchronization	•	•
Al resolution	16bit	16bit
Al sampling range	±10V	±10V
Al sampling rate	200KS/s/CH	200KS/s/CH
Number of AO channels	4-channel	8-channel
AO synchronization	•	•
AO resolution	16bit	16bit
AO output range	±10V	±10V
AO sampling rate	125KS/s/CH	125KS/s/CH
Encoder	2-channel	2-channel
PWM	2-channel	2-channel
Counter	2-channel	2-channel
DI	16-channel	16-channel
DO	16-channel	16-channel
Digital waveform input	4-channel	4-channel
Digital waveform output	4-channel	4-channel



Learn about AtomDAQ in detail →



Configuration and Selection

Lightning/ PCIe interface

Model	MT-U800	MT-U801	MT-U802	MT-U803	MT-U832	MT-U833	MT-G291	
function	RobustRIO	RobustRIO	RobustRIO	RobustRIO	RobustRIO	RobustRIO	PCle Remote Expansion Card	
Number of slots	4 Slot	8 Slot	4 Slot	8 Slot	4 Slot	8 Slot	-	
FPGA model	FPGA LX75		FPGA LX75		FPGA K7 325T		-	
Interface protocols	Thunderbolt 3		PCle				PCle	
Mate with the host	Thunderbolt	3/4 or USB4 PC	Desktop/IPC				Desktop/IPC	
Connection	Thunde	rbolt cables		PXIe	PCle slot			
Optional cable (required)	Thunderbolt cables			MT-C203			MT-C203	
Mix and match		-	Requires MT-G291			MT PCle interface device		

With controller

Model	MT-U804	MT-U808	MT-U834	MT-U838	MT-U83C	
function	RobustRIO	RobustRIO	RobustRIO	RobustRIO	RobustRIO	
Number of slots	4 Slot	8 Slot	4 Slot	8 Slot	12 Slot	
CPU model		C	PU Intel Celeron J41	25		
CPU specifications		2.7GHz	(Max) quad-core qua	d-thread		
FPGA model	FPG	SA LX75	FPGA K7 325T			
memory			4GB DDR memory			
hard disk			512GB HDD			
Ethernet port	Dual Gigabit Ethernet ports support EtherCAT					
Power supply mode	2Pin Screw Terminal Power & Type-C PD Power Supply					
operating system		Support Window	s 10/11 or Linux-RT	operating system		

Learn about RobustRIO in detail -







Analog input >

Voltage input

Current input

strain input

Temperature acquisition

RTD acquisition

Sound acquisition

√ibration harvesting

Analog output >

Voltage outpu

current output

Digital IO >

Digital input and output

Digital input

Digital output

Bus communication >

Synchronization

Communication and bus

CLovk

Configuration and Selection

Communication and bus

Model	MT-E790	MT-E791	MT-E790S	MT-E791S	MT-E792	MT-E793	MT-E794	MT-E795	MT-E796
Type	RS485/422	RS232	RS485/422	RS232	I2C communication	SPI communication	high-speed CAN	CAN-FD	GPS/Beidou
Number of channels	4	4	4	4	2	2	2	2	1
Attribute	Isolation	Isolation	Support ba	aud rate of 600	Isolation	Isolation	Isolation	Supporting 8M/ Compatible with CAN	Synchronous timing
External interface	DB25*1	DB25*1	DB25*1	DB25*1	DB25*1	DB25*1	DB9*2	DB9*2	SMB*1
Product size	65.95mm*23.6mm*95.7mm								

Sound Vibration

Model	MT-E735	MT-E737	MT-E740	MT-E741	MT-E742	MT-E743	MT-E744	MT-E745
Wodel				Sound	Sound	Sound	Sound	Sound
Al type	Sound	Sound	Sound					
The second second	Vibration							
Number of Al channels	_	-	2	4	2	8	2	4
Al sampling rate	_	_	102.4K/Ch/s	102.4K/Ch/s	192K/Ch/s	102.4K/Ch/s	192K/Ch/s	192K/Ch/s
Al input method	_	_	Differential	Differential	Differential	Differential	Differential	Differential
Al sampling range	_	_	±5V	±5V	±5V	±5V	±10V	±10V
IEPE支持	_	_	2mA	2mA	2mA	2mA	2mA	2mA
AI输入模式支持	_	_			DC/AC	C/IEPE+AC		
Al resolution	_	_	24bit	24bit	24bit	24bit	32bit	32bit
Al isolation	_	_	•	•	•	•	•	•
Al synchronization	_	_	•	•	•	•	•	•
AO type	Sound	Sound	_	_	_	_	_	_
Number of AO	2	2	_	_	_	_	_	_
AO sampling rate	96K/Ch/s	192K/Ch/s	_	_	_	_	_	_
AO output method	Differential	Differential	_	_	_	_	_	_
AO output range	±5V	±10V	_	_	_	_	_	-
AO resolution	24bit	32bit	_	_	_	_	_	_
AO isolation	•	•	_	_	_	_	_	_
AO synchronization	•	•	_	_	_	_	_	_
External interface	BNC*2	BNC*2	BNC*2+SMB	BNC*4+SMB	BNC*2	DB25*1+SMB*2	BNC*2	BNC*4
Product size			65.95mm*2	3.6mm*95.7mm				

Clock synchronization & distribution

Model	MT-E700 (192K)	MT-E700 (96K)	MT-E700 (48K)	MT-E700 (44.1K)	MT-E700 (128K)	MT-E700 (102.4K)	MT-E700 (64K)
Function		Sync	hronous clock g	enerator + sync	hronous clock d	istributor	
Realization			•		sound & vibration		
Output clock channel	6	6	6	6	6	6	6
Input clock channel	1	1	1	1	1	1	1
Internal clock channel	1	1	1	1	1	1	1
Remarks			Select eith	er internal clock	or input clock		
Internal clock	49.152M	24.576M	12.288M	11.2896M	32.768M	26.2144M	16.384M
Corresponding	192K	96K	48K	44.1K	128K	102.4K	64K
External interface	SMB*7	SMB*7	SMB*7	SMB*7	SMB*7	SMB*7	SMB*7
Product size			65.9	95mm*23.6mm*	95.7mm		

Learn about E Module in detail -





Voltage input

Model	MT-E710_RSE	MT-E710_DIF	MT-E711_RSE	MT-E711_DIF	MT-E713	MT-E714	MT-E715	
Туре	Voltage input	Voltage input	Voltage input	Voltage input	Voltage input	Voltage input	Voltage input	
Number of channels	8	8	16	16	4	4	8	
Sampling rate	200K/Ch/s	200K/Ch/s	200K/Ch/s	200K/Ch/s	1M/s	102.4K/Ch/s	102.4K/Ch/s	
Input method	single-ended	Differential	single-ended	Differential	Differential	Differential	Differential	
Sampling range	±10V	±10V	±10V	±10V	±10V	±10V	±10V	
Resolution	16bit	16bit	16bit	16bit	16bit	24bit	24bit	
Isolation	•	•	•	•	•	•	•	
Synchronization	•	•	•	•	•	•	•	
External interface	DB25*1	DB25*1	DB37*1	DB37*1	BNC*4	BNC*4+SMB	DB25*1+SMB*2	
Product size		65.95mm*23.6mm*95.7mm						

Digital input

Model	MT-E760	MT-E761	MT-E762	MT-E763	MT-E764		
IO level	5V	12V-30V	12V-30V	±5V	5V		
Number of input	8	32	32	8	32		
Number of output	0	0	0	0	0		
Update rate	25ns	8us	8us	25ns	8us		
Electrical	TTL	Drain output	Source output	Differential input	TTL		
Synchronization	•	•	•	•	•		
Isolation	•	•	•	•	•		
External interface	DB25*1	DB37*1	DB37*1	DB25*1	DB37*1		
Product size	65.95mm*23.6mm*95.7mm						

Temperature acquisition

Model	MT-E720	MT-E721	MT-E722
Туре	Thermocouple acquisition	Thermocouple acquisition	Thermocouple acquisition
Number of channels	8	8	16
Sampling rate	10/Ch/s	50/Ch/s	10/Ch/s
Input method	Differential	Differential	Differential
Sampling range	B/E/J/K/N/R/S/T	PT100/PT1000	B/E/J/K/N/R/S/T
Resolution	19bit	15bit	19bit
Isolation	•	•	•
Synchronization	•	•	•
External interface	DB25*1	DB37*1	DB37*1
Product size	65.	.95mm*23.6mm*95.7n	nm

Configuration and Selection

Current/strain input

Model	MT-E712	MT-E716	MT-E749		
Туре	Current input	Current input	Strain/bridge input		
Number of channels	4	8	4		
Sampling rate	180K/Ch/s	180K/Ch/s	50K/Ch/s		
Input method	Differential	Differential	1/4 bridge, half bridge, full bridge		
Sampling range	±25mA	±25mA	±25mV/V		
Resolution	16bit	16bit	24bit		
Isolation	•	•	•		
Synchronization	•	•	•		
External interface	DB25*1	DB25*1	DB37*1		
Product size	65.95mm*23.6mm*95.7mm				

Digital input and output

Model	MT-E750	MT-E752	MT-E753	MT-E754		
Input level	5V TTL	5V TTL	12V- 30V drain	12V- 30V drain		
Number of input channels DI	4	16	16	16		
Output level	5V TTL	5V TTL	12- 60V drain	12- 40V source		
Number of output channels DO	4	16	16	16		
Update rate	25ns	8us	8us	8us		
Electrical characteristics	TTL	TTL	Drain output, Drain input	Source output,Drain input		
Synchronization	•	•	•	•		
Isolation	•	•	•	•		
External interface	DB25*1	DB37*1	DB37*1	DB37*1		
Product size	65.95mm*23.6mm*95.7mm					

Voltage/current output

Model	MT-E730	MT-E731	MT-E732	MT-E733	MT-E736		
type	Voltage output	Voltage output	Current output	Current output	Voltage output		
Number of channels	4	16	4	8	4		
Sample rate	125K/Ch/s	25K/Ch/s	125K/Ch/s	25K/Ch/s	1M/Ch/s		
Output range	±10V	±10V	0-25mA	0-25mA	±10V		
resolution	16bit	16bit	16bit	16bit	16bit		
isolation	be	be	be	be	be		
synchronous	be	be	be	be	be		
External interfaces	DB25*1	DB25*1	DB25*1	DB25*1	BNC*4		
Product dimensions	65.95mm*23.6mm*95.7mm						

Learn about E Module in detail —





PXIe RIO Module

Configuration and Selection

Digital output

Model	MT-E780	MT-E781	MT-E782	MT-E783	MT-E785			
IO level	5V	12V-60V	12V-40V	5V	250VAC/220VDC			
Number of input	0	0	0	0	0			
Number of output	8	32	32	32	8			
Update rate	25ns	8us	8us	12us	10ms			
Electrical	TTL	Drain output	Source output	TTL	2A(MAX)			
Synchronization	•	•	•	•	•			
Isolation	•	•	•	•	_			
External interface	DB25*1	DB37*1	DB37*1	DB37*1	DB25*1			
Product size		65.95mm*23.6mm*95.7mm						



Configuration and Selection

High-performance FPGA

Model	MT-X900	MT-X901	MT-X910	MT-X911	MT-X912	MT-X920	MT-X921	MT-X922
FPGA model	Kintex7 160T	Kintex7 325T	Kintex7 160T	Kintex7 160T	Kintex7 160T	Kintex7 325T	Kintex7 325T	Kintex7 325T
FPGA DRAM capacity	NA	512M	NA	NA	NA	512M	512M	512M
Number of high-speed DIO Channels	128	128	64	64	64	64	64	64
DIO level	1.2V/ 1.5V/ 1.8V /2.5V/ 3.3V		3.3V	3.3V	3.3V	3.3V	3.3V	3.3V
DIO rate	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz
Al type	_	_	voltage	voltage	voltage	voltage	voltage	voltage
Number of AI channels	_	_	8	24	8	8	24	8
Al sampling rate	_	_	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
Al input method	_	_	单端	单端	单端	Differential	Differential	Differential
Al sampling range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
Al resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
Al synchronization	_	_	•	•	•	•	•	•
AO type	_	_	voltage	voltage	voltage	voltage	voltage	voltage
Number of AO channels	_	_	8	8	24	8	8	24
AO sampling rate	_	_	125K/CH/s	125K/CH/s	125K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
AO output method	_	_	Differential	Differential	Differential	Differential	Differential	Differential
AO output range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
AO resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
AO synchronization	_	_	•	•	•	•	•	•
External interface	VHDCI*4	VHDCI*4	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3
Product size	178.13mm×20.02mm×130.5mm							

Learn about PXIe RIO in detail -





Learn about E Module in detail -

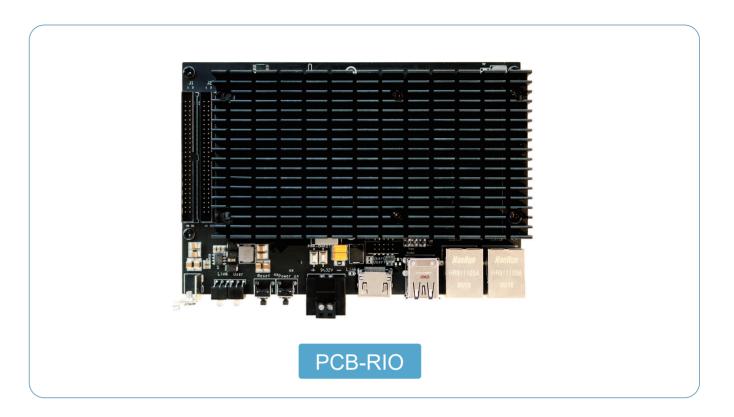


AtomRIO Integrated High-performance Measurement and Control Instrument.

AtomRio integrated High-performance Measurement and Control Institu								
Mod	lel	MT-S814	MT-S815	MT-S835	MT-S836			
funct	ion	AtomRIO	AtomRIO	AtomRIO	AtomRIO			
CPU n	nodel	Intel 11th Gen Core i5						
CP	U	4.5G quad-core and eight-thread						
FPGA r	nodel	FPGA	_LX75	FPGA_F	(7 325T			
mem	ory	4	G					
hard o	disk	25	6G	500G				
Number	of I/O	40 channels						
IO logic	level	3.3V TTL						
IO frequ	uency	80MHz						
Number	of I/O	16 cha	annels	16 channels	_			
IO logic	level	5V -	TTL	5V TTL	_			
IO frequ	uency	108	ЛHz	80MHz	_			
Numbe	r of Al	16 cha	annels	8 channels	16 channels			
Al		synchronous						
Al reso	lution	16bit						
Al sam	pling	±10V						
Al sam	pling	200KS	S/s/CH	1MS/s/CH				
Number	of AO	4 channels	8 channels	8 channels	16 channels			
AC)	synchronous						
AO reso	olution	16bit						
ΑΟ οι	ıtput	±10V						
AO san	npling	125KS/s/CH 1MS/s/CH						
opera	iting	Windows/Linux RT						
Progran	nmatic	LabVIEW FPGA programming						



Please Scan The Code



Configuration and Selection

PCB-RIO Batch Deployment Board

. ,						
Model	MT-P811	MT-P812	MT-P812 (64G)			
Function	PCB-RIO	PCB-RIO	PCB-RIO			
CPU Model	CPU_Z8350	CPU_Z8350	CPU_Z8350			
CPU specification	1.92GHz quad-core	1.92GHz quad-core	1.92GHz quad-core			
FPGA Model	FPGA_LX75	FPGA_LX75	FPGA_LX75			
Memory	2G	2G	2G			
Hard disk	16G EMMC	16G EMMC	64G EMMC			
Number of IO channels (3.3V)	80-channel digital IO	80-channel digital IO	80-channel digital IO			
IO logic level (3.3V)	3.3V TTL	3.3V TTL	3.3V TTL			
IO frequency (3.3V)	80MHz	80MHz	80MHz			
Number of IO channels (5V)	_	30-channel digital IO.	30-channel digital IO.			
IO logic level (5V)	_	5V TTL	5V TTL			
IO frequency (5V)	_	10MHz	10MHz			
Number of Al channels	_	16-channel	16-channel			
Al synchronization	_	•	•			
Al resolution	_	16bit	16bit			
Al sampling range	_	±10V	±10V			
Al sampling rate	_	200KS/s/CH	200KS/s/CH			
Number of AO channels	_	4-channel	4-channel			
AO synchronization	_	•	•			
AO resolution	_	16bit	16bit			
AO output range	_	±10V	±10V			
AO sampling rate	_	125KS/s/CH	125KS/s/CH			
Operating system	Linux RT	Linux RT	Linux RT			
Programming method	LabVIEW FPGA programming					



Please Scan The Code





Support 12V-60V drain output and 5V output (8 channels).

Magnetic suction cover plate, spring terminal (supports DIN rail installation).

MT-C126





Designed specifically for the standard rack on the MT-X116.

Pre-installed in the chassis at the factory and cannot be installed or replaced by yourself.

MT-C190



For More Details, Please Scan The Code.



VHDCl68 high-speed cable
Small male connector to large female connector.

MT-C210 (1 meter) MT-C211 (2 meters)



VHDCl68 high-speed cable
Small male connector to small male connector

MT-C212 (1 meter) MT-C213 (2 meters)



SFP+ 10G AOC optical cable (cooperates with high-performance FPGA optical fiber communication)

> MT-C232 (10meters) MT-C233 (15meters)



LAN to in-vehicle Ethernet (gigabit 1G)

Switchable master-slave mode supporting gigabit/100 megabit

MT-C150

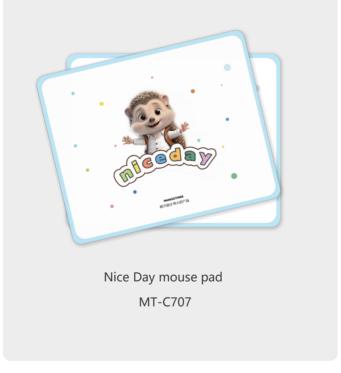


For More Details, Please Scan The Code.











For More Details, Please Scan The Code.

MT-Master Device Management Center.

• Through MT-Master, It is convenient to Manage, Activate, Obtain device information, Technical data, etc. for local or remote devices. MT-Master is software that must be installed for developing and using MT devices.

Supported by MT-Master system. ■

Support MAC OS

♣ Support Linux OS

Support Windows OS



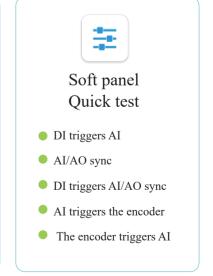




Warranty according to the

activation time





Learn about MT-Master in detail ·





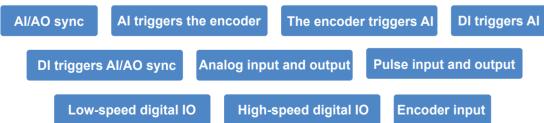
MT-DAQ Develop



Configure the Config text

Set up various acquisition modes





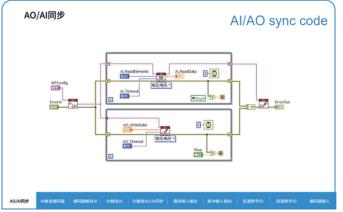
After importing the config text, carry out development and programming.

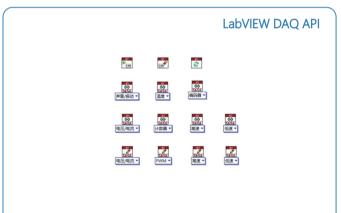
Python code example





LabVIEW code example





C# code example







For More Details, Please Scan The Code.

Simple FPGA Development software



MT-RIO develop: RobustRIO

Modular base, Solid state drive design.





Getting Started Guide

Video Course

MT-RIO develop: AtomRIO

Integrated and compact, with abundant acquisition and digital interfaces.







Getting Started Guide

Video Course

MT-RIO develop: PCB-RIO

Compact and small, deploy on terminals.





Getting Started Guide

Video Course

Learn about MT-RIO in detail —



MT-HIL



Configuration and Selection

High-performance FPGA

Model	MT-X900	MT-X901	MT-X910	MT-X911	MT-X912	MT-X920	MT-X921	MT-X922
FPGA model	Kintex7 160T	Kintex7 325T	Kintex7 160T	Kintex7 160T	Kintex7 160T	Kintex7 325T	Kintex7 325T	Kintex7 325T
FPGA DRAM capacity	NA	512M	NA	NA	NA	512M	512M	512M
Number of high-speed DIO Channels	128	128	64	64	64	64	64	64
DIO level	1.2V/ 1.5V/ 1.	8V /2.5V/ 3.3V	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V
DIO rate	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz
Al type	_	_	voltage	voltage	voltage	voltage	voltage	voltage
Number of AI channels	_	_	8	24	8	8	24	8
Al sampling rate	_	_	200K/CH/s	200K/CH/s	200K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
Al input method	_	_	单端	单端	单端	Differential	Differential	Differential
Al sampling range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
Al resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
Al synchronization	_	_	•	•	•	•	•	•
AO type	_	_	voltage	voltage	voltage	voltage	voltage	voltage
Number of AO channels	_	_	8	8	24	8	8	24
AO sampling rate	_	_	125K/CH/s	125K/CH/s	125K/CH/s	1M/CH/s	1M/CH/s	1M/CH/s
AO output method	_	_	Differential	Differential	Differential	Differential	Differential	Differential
AO output range	_	_	±10V	±10V	±10V	±10V	±10V	±10V
AO resolution	_	_	16bit	16bit	16bit	16bit	16bit	16bit
AO synchronization	_	_	•	•	•	•	•	•
External interface	VHDCI*4	VHDCI*4	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3	VHDCI*3
Product size	178.13mm×20.02mm×130.5mm							

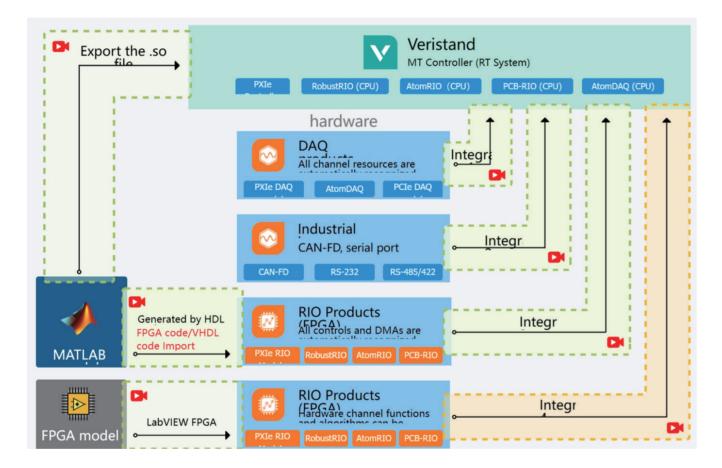
Learn about MT-HIL in detail -





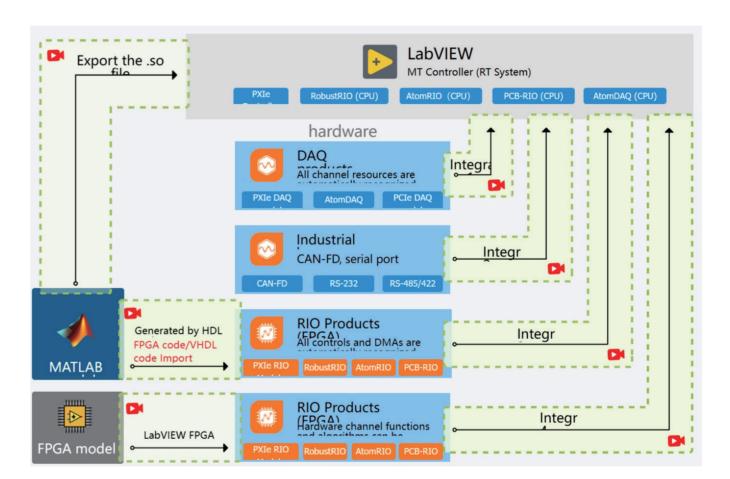
MT-HIL

MangoTree has launched a new software tool<MT-HIL>, which enables MT's
entire product line to be compatible with MATLAB, FPGA, and Veristand, providing
engineers with a more powerful and flexible HIL model real-time simulation solution.





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You can view all complete teaching videos of MT-HIL

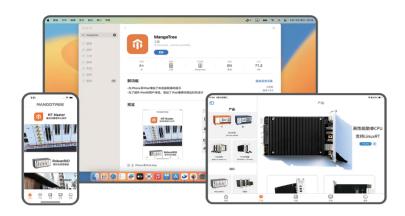




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You can view all complete teaching videos of MT-HIL

MangoTree Client Download

• Manuals can be obtained, products can be consulted, and video tutorials can be accessed without registration.







iOS & iPad Client

Android & HarmonyOS client.

Thoughtful design

• Fully supported on all platforms. Get started easily.



Learn about APP Download in detail —



Resource Download



MT-Master



Software









MT-RIO

Software



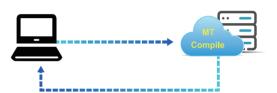


MT-VeriStand



Compilation Server

 Provided to customers for free use, Eliminating the cumbersome local installation The compilation speed is greatly improved



MT-Care

• The hardware warranty is extended to three years. In case of three man-made accidental damages within three years, free repair or replacement service is provided.

Each product needs to be purchased separately. This service is not provided for undifferentiated products.

Contact Customer Service



WeChat Official Account



WeChat Customer Service

Learn about Download / Service in detail



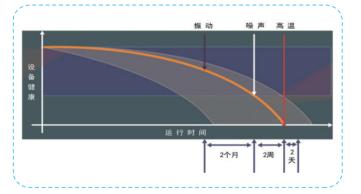
41 www.mangotree.cn www.mangotree.cn 42

Application Case



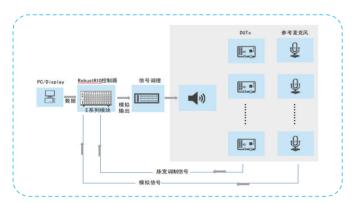
Industrial Internet of Things (IIoT)

- It can be used as a distributed data acquisition platform for the Industrial Internet of Things (IIoT), interconnecting rich sensor device interfaces.
- Based on the high-performance edge computing node of FPGA, complete data cleaning and algorithms at the edge.
- Connect to the user's MES and dock with mainstream public cloud platforms.



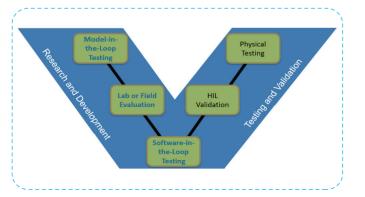
Predictive maintenance of equipment

- It is used to determine the state of mechanical equipment during operation, understand and analyze the health status of the monitored equipment in real time, so as to realize the prediction of some common faults.
- For different equipment, conduct fault analysis to determine its fault mode. Then, according to the specific components of the monitored equipment, determine the required sensor type. Finally, process and analyze the data obtained by the sensor to determine whether there is an abnormality in the component and whether a corresponding fault will occur.
- Easily realize the acquisition, analysis and storage of signal quantities such as vibration, voltage, current and temperature on the same platform.



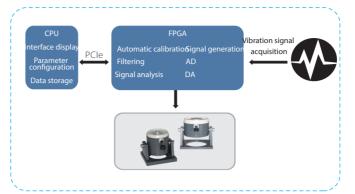
Acoustic function test

- Support the latest and mature audio and acoustic test requirements to ensure complete and accurate test coverage.
- FPGA and synchronization technology improve the test throughput of high-volume/high-mix production.
- Test objects cover analog microphones/speakers, headphones, mobile phones, wearable hearing aids, and digital



Hardware-in-the-Loop (HIL) testing

- The measurement and control platform based on reconfigurable I/O technology is very suitable for application in hardware-in-the-loop testing.
- Adopting a real-time operating system (such as Phalap RT or Linux RT), it supports the import of various model files, such as Simulink model files.
- The platform can complete the acquisition and excitation of rich embedded controller interfaces. The platform supports chassis cascading based on the 1588 protocol, providing a technical foundation for the testing of distributed controllers.



Adaptive active vibration reduction

- After the accelerometer at the front end obtains the vibration signal generated by the vibration source, the vibration signal is converted into a digital signal by the AD module for FPGA acquisition.
 - After the FPGA obtains the signal, it performs a series of processing: filtering, signal analysis, automatic calibration. Finally, the signal generation module generates a signal to excite
- the vibration absorber. After DA, the vibration absorber is controlled to complete the vibration absorption function.

The upper computer CPU is responsible for functions such as control interface, FPGA parameter configuration, signal



Intelligent scanning terminal

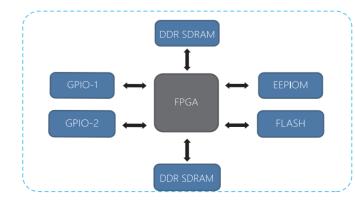
- FPGA technology integrates light source control, laser positioning, automatic zooming, and real-time ranging on one platform and is programmed or edited in a unified software environment.
- Identify various one-dimensional codes and two-dimensional codes, and identify multiple types and quantities of
- codes in the picture.

Built-in MES system: After setting up code recognition anal-



Power Monitoringl

- It can conduct tests on three-phase current, three-phase voltage, zero-sequence current, and zero-sequence voltage.
- Detect whether the product meets the special inspection requirements for the integrated pole-mounted switch and ring main unit of primary and secondary fusion of the State Grid Corporation of China.
- The SHJY-A1 comprehensive type, A2 single-phase source access type, and A3 three-phase source transformer calibrator use the MT RIO series as the controller. Improve the



Brain-inspired computing architecture

- It can conduct tests on three-phase current, three-phase voltage, zero-sequence current, and zero-sequence voltage.
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