

MICRONIX Products

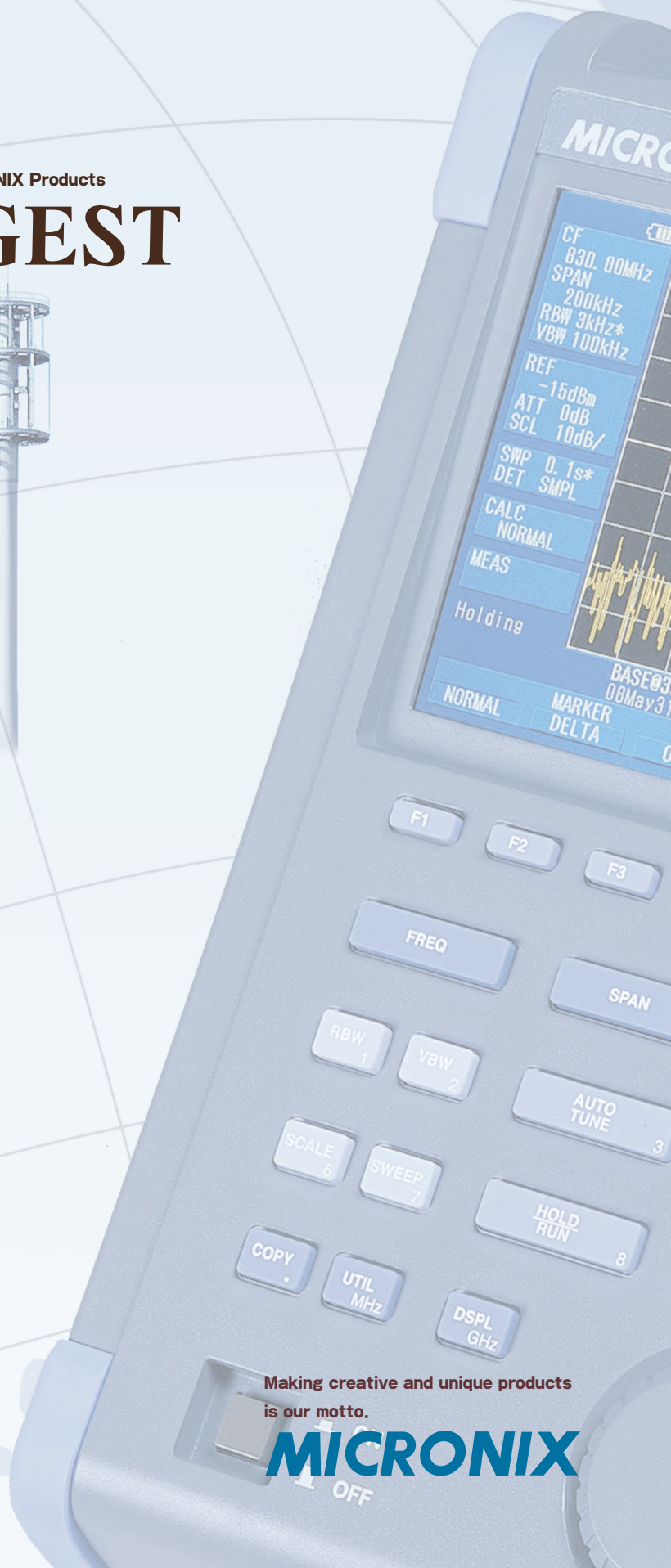
DIGEST



Spectrum analyzer / Signal analyzer
Electromagnetic anechoic box / Shield box
EMC test system
Variable attenuator
ETC/DSRC inspection system
Measuring system
Test accessories

Making creative and unique products
is our motto.

MICRONIX



**We provide one-stop services for the development,
manufacturing, sales, service,
and support of electronic measuring instruments,
information and communication devices,
and environmental-related equipment.**

Handheld Spectrum Analyzer Signal Analyzer

Performance and functionality comparable
to large bench-type spectrum analyzers



Our spectrum analyzer MSA400 series uses the frequency sweep method, and our signal analyzer (real-time spectrum analyzer) MSA500 series uses both the Fourier transform method and the frequency sweep method. The MSA500 series of signal analyzers (real-time spectrum analyzers) uses two methods, Fourier transform and frequency sweep, and despite their handy size, they offer performance and functionality comparable to large bench-type spectrum analyzers. Therefore, in addition to service applications, it can also be used in laboratories, experimental rooms, and production lines.

【Main Products】

MSA400 series/MSA500 series

Variable Attenuator

It can be used for various tests and simulations
in an ideal environment without chattering or spikes.

Handover tests, dynamic tests, reception sensitivity tests, and other communication simulations for various mobile wireless communication devices, as well as simulations for countermeasures against reception problems caused by rainfall attenuation in BS/CS digital broadcasting.

【Main Products】

High-Speed Programmable Attenuator MAT800 Series • MAT810/Step Attenuator MAT850



ETC/DSRC inspection system

Leading company of ETC/DSRC inspection system and tester.

Test systems for ETC and DSRC automatically test roadside units (RSU) installed at toll gates and on-board equipment (OBE) installed in vehicles. We also have a lineup of handheld ETC/DSRC testers.

【Main Products】

DSRC Roadside System ME9300/DSRC DSRC OBE Tester ME9100E/ DSRC Communication ME9115/ ETC/ITS Spot Electric Field Strength Measurement System ME9200/ETC Inspection System In Car Production Line ME8901



Electromagnetic anechoic box / Shield box

Necessities for wireless system testing, high performance and high reliability made by a measurement equipment manufacturer

A radio wave anechoic box is one that satisfies the following requirements: isolation from external noise, an anechoic environment with no reflection of radio waves inside, and no leakage of radio waves to the outside. A type without an internal radio wave absorber is called a shield box. We support a wide variety of interfaces, and can provide both customization and low cost. About 30 standard models are available with short delivery times. We also handle a large number of custom-made products to meet diversified applications.

【Main Products】

Taurus Series/Hand-in type/Medium-sized type/Large-sized type/Products Lineup/Heat dissipation type/Special type/mmWave 5G NR



EMC test system

Significantly reduce development costs, Ideal for pre-compliance testing of formal EMC tests!

The EMC test is conducted at a certification site (an anechoic chamber) for formal testing. If a product exceeds the specified value, it is necessary to repeat the formal test again and again to solve the problem, which takes a long time and costs a lot of money. We propose EMC test systems to reduce the number of formal tests as much as possible and to reduce development costs.

【Main Products】

Conducted EMI Test System MR2150/Pre-compliance EMI test system MR2300/Pre-compliance EMS test system MR2350/Pre-compliance EMI+EMS test system MR2400



Measuring System

Provide a variety of systems related to measurement

We offer a variety of RF measurement systems that combine our hardware and software with products from other companies.

Please feel free to contact us first.

【Main Products】

Electromagnetic wave emission pattern measurement system MRP770 / 2Radio wave absorption equipment / Multi-wave electric field strength automatic measurement system ME9500 / RF Matrix Switch Box MM6000 / GPS radio wave retransmission system MN1600 / Handover Tester MH3800 / Real time IQ data recorder system MQ5300 / Multiwindow waveform monitor MW4500



Service & Support

Establish a service support system that can respond quickly

Maintenance, inspection, repair, calibration, product update service/various product support

Spectrum analyzer/Signal analyzer

Handheld spectrum analyzer MSA400 series

Standard model of sweep method compact, lightweight and low Price

3.3GHz band MSA438



Frequency range : 50kHz to 3.3GHz

The successor model of MSA338

Center frequency accuracy	±52kHz@sweep 100ms, span 10MHz, RBW3kHz
RBW	3kHz to 3MHz(1-3 step)
SSB phase noise	-90dBc/Hz@100kHz offset
Reference level	+10 to -60dBm(1dB step)
Average noise level	-127dBm@1GHz
Sweep time	10ms to 30s

8.5GHz band MSA458



Frequency range : 50kHz to 8.5GHz

The successor model of MSA358

Center frequency accuracy	±52kHz@sweep 100ms, span 10MHz, RBW3kHz
RBW	3kHz to 3MHz(1-3 step)
SSB phase noise	-90dBc/Hz@100kHz offset
Reference level	+10 to -60dBm(1dB step)
Average noise level	-123dBm@1GHz
Sweep time	10ms to 30s

3.3GHz band for EMI MSA438E



Frequency range : 50kHz to 3.3GHz

[EMI measurement]

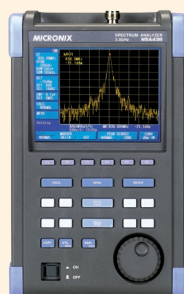
The successor model of MSA338E

Detection mode	PK, QP and AV detections
Resolution bandwidth(6dB)	9kHz, 120kHz, 1MHz

Provides a wider dynamic range and enables a lower noise measurement, because average noise level is improved 10dB.

- Radiated emission measurement by connecting antenna
- Conducted emission measurement by connecting LISN MPW201B
- Noise measurement on PCB by connecting magnetic field probe CP-2SA [applied to all models]

Comparison between MSA400 and MSA500



MSA400



MSA500

	MSA400 series	MSA500 series
Frequency range	50kHz to 3.3GHz : MSA438/E 50kHz to 8.5GHz : MSA458	20kHz to 3.3GHz : MSA538/TG/E 20kHz to 8.5GHz : MSA558/558E
Center frequency setting resolution	20kHz	100Hz
Resolution bandwidth [RBW]	3kHz to 3MHz(1-3step) : MSA438/458 6dB @9kHz, 120kHz, 1MHz : MSA438E	300Hz to 3MHz(1-3step) : MSA538/TG/558 6dB @9kHz, 120kHz, 1MHz : MSA538E/558E
Selectivity	1:12	1:4.5
SSB phase noise	-90dBc/Hz @100kHz offset	-95dBc/Hz @100kHz offset
Average noise level	-127dBm @cf 1GHz, RBW 3kHz : MSA438/E -123dBm @cf 1GHz, RBW 3kHz : MSA458	<ul style="list-style-type: none"> ■ Real time mode -140dBm @cf 1GHz, span 20kHz : MSA538/TG/E -135dBm @cf 1GHz, span 20kHz : MSA558/558E ■ Sweep mode -129dBm @cf 1GHz, RBW 300Hz : MSA538/TG/E -128dBm @cf 1GHz, RBW 300Hz : MSA558/558E
Real time mode	-	○
Frequency span of Real time mode	-	20MHz maximum
Time domain	-	○
Trigger	External	Power, Channel Power, IF Level, External

※ The dimensions and weight are almost same.

Handheld signal analyzer MSA500 series

handheld signal analyzer with REAL TIME plus SWEEP system

For offering both the real time system based on Fast Fourier Transform (FFT) and the conventional sweep system, each strong points of both systems are effectively usable.

By real time system, unsteady signal can be measured, and time domain analysis and modulation analysis can be performed. By sweep system, the wide frequency range can be observed at a glance.

3.3GHz band MSA538



Frequency range : 20kHz to 3.3GHz

The most popular model of MSA500 series.

Real time mode	<ul style="list-style-type: none"> · 8 types of analysis functions <ul style="list-style-type: none"> · Spectrum · Spectrogram · OverWrite · Time domain (5 types) · 20MHz maximum span · Fast OverWrite analysis · Large memory of 16K frames and high speed USB communication of 19ms/frame
Sweep mode	300Hz minimum RBW
Average noise level	-162dBm/Hz

- Four hour battery operation(option)

8.5GHz band MSA558

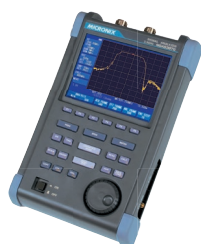


Frequency range : 20kHz to 8.5GHz

Covering almost all applications of wireless communication systems because of 8.5GHz band.

- The specifications are almost same as MSA538 excepting frequency range.
- Since the measurement frequency has expanded, spurious measurement that is \geq three times that of 5GHz band wireless LAN, 5.8GHz band DSRC, or 2.4GHz band equipment is possible.
- Real time processing up to 8.5 GHz
- Average noise level: -157dBm/Hz
- Four hour battery operation(option)

3.3GHz band with TG MSA538TG



Frequency range : 20kHz to 3.3GHz

<Tracking generator>

Output frequency range	5MHz to 3.3GHz
Output level	-10dBm

By being equipped with a tracking generator and keeping the functions of MSA538, it is possible to perform the measurement and evaluation of the amplitude frequency characteristics of filter, amplifier, electronic component and circuit.

- DTF adapter MA430
Enables to measure the distance to discontinuity point of cable and the length of normal cable.
- VSWR bridge
Enables to measure the return loss of electronic component and circuit.

8.5GHz band for EMI MSA558E



Frequency range : 20kHz to 8.5GHz

<EMI measurement>

Detection mode	PK, QP and AV detections
Resolution bandwidth (6dB)	9kHz, 120kHz, 1MHz

A model being equipped with EMI measurement function and keeping the functions of MSA558. Capable of EMI measurement up to 8.5 GHz.

- Radiated emission measurement by connecting antenna
- Conducted emission measurement by connecting LISN MPW201B
- A magnetic field probe (MMP500) can be connected to measure conducted emission from 20KHz to 100MHz in a non-contact manner.
- Noise measurement on PCB by connecting magnetic field probe CP-2SA [applied to all models]

3.3GHz band for EMI MSA538E



Frequency range : 20kHz to 3.3GHz

<EMI measurement>

Detection mode	PK, QP and AV detections
Resolution bandwidth (6dB)	9kHz, 120kHz, 1MHz

A model being equipped with EMI measurement function and keeping the functions of MSA538.

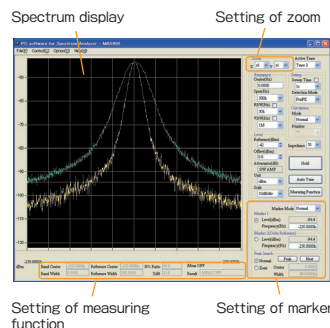
- Radiated emission measurement by connecting antenna
- Conducted emission measurement by connecting LISN MPW201B
- A magnetic field probe (MMP500) can be connected to measure conducted emission from 20KHz to 100MHz in a non-contact manner.
- Noise measurement on PCB by connecting magnetic field probe CP-2SA < applied to all models >

Spectrum analyzer/Signal analyzer

Peripherals/Options

Software

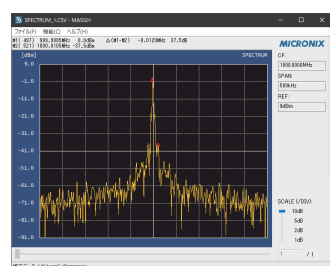
PC software MAS400/500



This is a software that controls the spectrum analyzer or signal analyzer by the PC and displays the spectrum waveform on PC screen.

- MAS400 : for MSA400 series
- MAS500 : for MSA500 series

IQ Data Analysis Software MAS501



This is a software for displaying and analyzing IQ data saved in USB memory on a PC.

- For MSA500 series

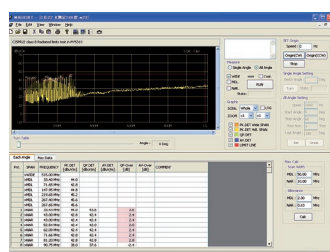
Logging software MAS410/510



This is a PC software that collects the measurement data by uninhabited. Optimum for watching an abnormal signal at night and recording the data by uninhabited for a long time.

- MAS410 : for MSA400 series
- MAS510 : for MSA500 series

EMI measurement PC software MAS430/530



This is a PC software that for measures radiated emission and conducted emission (noise terminal voltage). Spectrum analyzer settings and representative standard presets are provided in advance, allowing QP and AV measurements to be performed easily and automatically.

- MAS430:for MSA438E
- MAS530:for MSA538E/558E

Antenna

Portable antenna M301 to M310/M401 to M407

M301 to M310



Antenna for electric field strength measurement

Model	Frequency range
M301/401	0.8 to 1GHz
M302/402	1.25 to 1.65GHz
M303/403	1.7 to 2.2GHz
M304/404	2.25 to 2.65GHz
M305/405	300 to 500MHz
M306	4.8 to 6.2GHz
M307/407	470 to 770MHz
M308	3.6 to 4.2GHz
M309	4.4 to 4.9GHz
M310	5.9 to 7.2GHz

M401 to M407



- Connector : SMA(P)@M300, N(P)@M400
- Applied models: M401 to M405, M407 : MSA400/500 series

Biconical antenna MAN150/150B



Broadband, compact and lightweight antenna.

Item	MAN150	MAN150B
Frequency range	20MHz to 3GHz	30MHz to 1GHz
Gain(nominal)	-45 to +1dBi	-31 to +1dBi
Antenna factor	20 to 51dB/m	17 to 31dB/m
Dimensions	350×160×140mm	540×225×225mm
Weight	approx.350g	approx.1,150g

※ Dimensions : L × W × D,mm

Log-Periodic Antenna MAN160A/160B



Suitable for direction finding of radio emission sources in site survey and simple measurement of RF emission immunity.

Model	MAN160A	MAN160B
Frequency range	700MHz to 4GHz	700MHz to 6GHz
Maximum power	100W(At CW and 400MHz)	
Impedance	50Ω (nominal)	
VSWR	< 2.0(Typical)	
Gain	4dBi(Typical)	5dBi(Typical)
Antenna factor	23 to 38dB/m	26 to 41dB/m
Connector	SMA(J)	
Dimensions	340(L)×200(W)×25(D)mm	
Weight	270g	250g

Magnetic field probe MMP500



Conducted disturbance noise measurement up to 9kHz low frequency.

Frequency range	9kHz to 100MHz
Maximum measurement level	119dB μ V
Applied model	MSA538E/558E

Frequency counter (factory option)

Item	Specifications
Frequency range	<ul style="list-style-type: none"> 1MHz to 3.3GHz @excepting MSA458 1MHz to 8.5GHz @MSA458
Measured level	<ul style="list-style-type: none"> +10 to -70dBm @1MHz to 2GHz, RBW100kHz +10 to -60dBm @2 to 8.5GHz, RBW100kHz
Measurement resolution	100Hz
Display digits	8 digits max
Reference X'tal	<ul style="list-style-type: none"> Accuracy: ± 2ppm @23 °C Temp.characteristics: ± 5ppm @0 to 40 °C
Applied models	MSA400 series

Battery MB400



Lithium-ion battery
7.4V/500mAh

Applied models	MSA400/500 series
----------------	-------------------

Adapter

DTF Adapter MA430



Measure the fault position of the cable and the length of the normal cable.



Measuring distance range	<ul style="list-style-type: none"> 0.3 to 1,000 meters @50Ω cable 1 to 400 meters @75Ω cable
Cable characteristics list	<ul style="list-style-type: none"> 111 kinds @50Ω cable 11 kinds @75Ω cable
Applied model	MSA438TG/538TG

Communication cable MI400



USB cable

Connector	A plug/B plug
Length	1m
Applied models	MSA400/500 series

Printer BS2-80TU



Enables a hard copy of the screen.
(With AC adapter and one rollpaper)

Interface	USB
Printing method	Thermal line dot method
Paper	80mm width thermal paper
Power source	<ul style="list-style-type: none"> internal: AA-sized alkaline battery(4pcs) external: 7.5VDC/3A (dedicated AC adapter)
Applied models	MSA400/500 series

Option:Rollpaper (10 rolls)

Briefcase



Can be stored together with spectrum analyzer, AC adapter, antenna etc.

Outside dimensions	approx.460x150x350
--------------------	--------------------

※ Dimensions : W × H × D,mm

Electromagnetic anechoic box/Shield box

Taurus series

We achieve affordability and quick delivery through a range of interface modules. Our best-selling series.

MY1510



Outside dimensions	380(W) × 165(H) × 380(D)mm
Inside dimensions	315(W) × 100(H) × 315(D)mm
Weight	3.5kg
Shielding effectiveness	70dB typ @2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Connector	SMA × 2(back)
I/F module	1 module(back)
Option	I/F module

MY1515



Outside dimensions	465(W) × 214(H) × 465(D)mm
Inside dimensions	400(W) × 150(H) × 400(D)mm
Weight	10kg
Shielding effectiveness	70dB typ @2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
AC Fan	0.56m³/min (the maximum force of the wind)
Connector	SMA × 8(back)
I/F module	1 module(back)
Option	I/F module

MY1520



Outside dimensions	520(W) × 520(H) × 520(D)mm
Inside dimensions	455(W) × 455(H) × 455(D)mm
Weight	15kg
Shielding effectiveness	70dB typ @2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Connector	SMA × 2(back)
I/F module	2 modules(back)
Option	· I/F module · Wooden Table MT104

MY1520SW



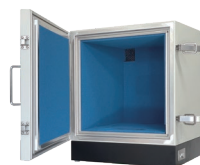
Outside dimensions	520(W) × 520(H) × 520(D)mm
Inside dimensions	455(W) × 455(H) × 455(D)mm
Weight	15kg
Shielding effectiveness	70dB typ @2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Shield window	300(W) × 200(H)mm
Connector	SMA × 2(back)
I/F module	2 modules(back)
Option	· I/F module · Wooden Table MT104

MY1525



Outside dimensions	460(W) × 570(H) × 582(D)mm
Inside dimensions	340(W) × 340(H) × 400(D)mm
Weight	17kg
Shielding effectiveness	90dB typ @2.4GHz
Reflection loss	≥20dB(MYA-77: ≥1.2GHz)
AC Fan	0.56m³/min (the maximum force of the wind)
Connector	SMA × 2(back)
I/F module	1 module(floor surface)
Option	I/F module

MY1527



Outside dimensions	620(W) × 740(H) × 626(D)mm
Inside dimensions	500(W) × 500(H) × 500(D)mm
Weight	26kg
Shielding effectiveness	90dB typ @2.4GHz
Reflection loss	≥20dB(MYA-77: ≥1.2GHz)
AC Fan	0.56m³/min (the maximum force of the wind)
Connector	SMA × 4(back)
I/F module	1 module(floor surface)
Option	· I/F Module(IFM10/11) · Through pipe(TP-8/10) · Additional SMA connectors (max.16, of which 4 are standard)

MY1530



Outside dimensions	1120(W) × 705(H) × 620(D)mm
Inside dimensions	1000(W) × 500(H) × 500(D)mm
Weight	56kg
Shielding effectiveness	70dB typ @2.4GHz
Reflection loss	≥20dB(MYA-77: ≥1.2GHz)
Connector	SMA × 4(back × 2, each side × 1)
I/F module	4 modules(back)
Option	· I/F module · Wooden Table MT105 · Turn Table Unit MT103

Taurus N series

Shield Box Type which inside is not covered with an radio wave absorber.

MY1510N



Outside dimensions	380(W)×165(H)×380(D)mm
Inside dimensions	375(W)×160(H)×375(D)mm
Weight	1.9kg
Shielding effectiveness	60dB typ@2.4GHz
Reflection loss	Not covered with an radio wave absorber
Connector	SMA×2(back)
I/F module	1 module(back)
Option	I/F module

MY1520N



Outside dimensions	520(W)×520(H)×520(D)mm
Inside dimensions	515(W)×515(H)×515(D)mm
Weight	12.3kg
Shielding effectiveness	60dB typ@2.4GHz
Reflection loss	Not covered with an radio wave absorber
Connector	SMA×2(back)
I/F module	2 modules(back)
Option	· I/F module · Wooden Table MT104

MY1530N



Outside dimensions	1120(W)×705(H)×620(D)mm
Inside dimensions	1115(W)×615(H)×615(D)mm
Weight	42kg
Shielding effectiveness	60dB typ@2.4GHz
Reflection loss	Not covered with an radio wave absorber
Connector	SMA×4(back×2, each side×1)
I/F module	4 modules(back)
Option	· I/F module · Wooden Table MT105 · Turn Table Unit MT103

Taurus Option

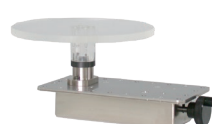
I/F module IFM1 to 11



The I/F module is a module on which AC supply, DC supply, LAN, USB, SMA, BNC, N, D-sub or through pipe connectors are mounted. The I/F modules can be selected according to the intended use.

Total of 12 modules available

Turn table Unit MT103



Manual Turn table unit for MY1530/1530N .

Dimensions	200mm φ
Load	10kg
Table material	Acrylic resin
Rotation angle	360°

Electromagnetic anechoic box/Shield box

Production line Series

MY2510



Outside dimensions	315(W) × 355(H) × 315(D)mm
Inside dimensions	250(W) × 250(H) × 250(D)mm
Weight	8.5kg
Shielding effectiveness	70dB typ@2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Connector	SMA(J) × 2(back)
I/F Module	1 module(back)

MY2520



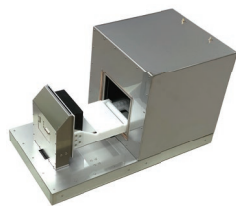
Outside dimensions	470(W) × 520(H) × 470(D)mm
Inside dimensions	400(W) × 400(H) × 400(D)mm
Weight	20kg
Shielding effectiveness	70dB typ@2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Connector	SMA(J) × 4(back)
I/F Module	2 modules(back)

MY5220



Outside dimensions	456(W) × 416(H) × 416(D)mm
Inside dimensions	390(W) × 340(H) × 340(D)mm
Weight	25Kg
Jig mount Dimensions	350(W) × 16(H) × 300(D)mm
Shielding effectiveness	75dB typ@2.4GHz
Reflection loss	≥20dB(MYA-75: ≥2.4GHz)
Connector	SMA × 3(side × 1, back × 2)
Option	Connector box(back)

With Automatic conveyor MY4620



Outside dimensions	480(W) × 480(H) × 486(D)mm
Inside dimensions	400(W) × 400(H) × 410(D)mm
Weight	47kg
Max. Outside dimensions (including base)	480(W) × 570(H) × 972(D)mm
Transport section opening dimensions	220(W) × 200(H)mm
EUT allowable dimensions	≤200(W) × 140(H) × 140(D)mm
EUT allowable weight	≤2kg
Shielding effectiveness	≥60dB@2.4GHz
Shielding Characteristics	≥20dB@2.4GHz
Connector	SMA (J-J) × 2 (top surface), GND terminal × 1 (rear)
IF(For EUT)	D-sub25pin × 1, USB2.0 × 1, LAN × 1

With Automatic conveyor ME8668



Outside dimensions	922(W) × 794(H) × 731(D)mm
Inside dimensions	790(W) × 605(H) × 605(D)mm
Weight	94kg(including conveyor)
Automatic conveyor	634(W) × 496(H) × 260(D)mm
EUT allowable dimensions	110(W) × 150(H) × 150(D)mm
EUT allowable weight	2kg
Shielding effectiveness	70dB typ@2.4GHz
Reflection loss	≥20dB(MYA77: ≥1.2GHz)
Connector	SMA × 2 (Transportation Department × 1, back × 1)

Hand-in series

MY3710



Outside dimensions	320(W) × 260(H) × 360(D)mm
Inside dimensions	250(W) × 160(H) × 290(D)mm
Weight	8kg
Shield window	140(W) × 140(D)mm
Shielding effectiveness	≥60dB@600MHz to 6GHz
Reflection loss	≥20dB(≥2.4GHz)
Connector	SMA × 4(back)
I/F module	1 module(back)

MY3710HS



Outside dimensions	320(W) × 260(H) × 360(D)mm
Inside dimensions	250(W) × 145(H) × 290(D)mm
Weight	9kg @
Shield window	140(W) × 140(D)mm
Shielding effectiveness	≥80dB@600MHz to 6GHz
Reflection loss	≥20dB(≥2.4GHz)
Connector	SMA × 4(back)
I/F module	1 module(back)

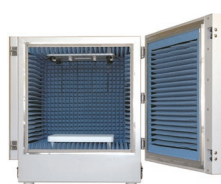
MY3720



Outside dimensions	615(W) × 515(H) × 518(D)mm
Inside dimensions	550(W) × 450(H) × 450(D)mm
Weight	21kg
Shield window	275(W) × 255(D)mm
Shielding effectiveness	≥60dB@600MHz to 6GHz
Reflection loss	≥20dB(≥2.4GHz)
Connector	SMA × 6(both sides each × 3)
I/F module	2 module(1 unit each on both sides)

mmWave 5G NR type

MY6520



Outside dimensions	743(W) × 830(H) × 721(D)mm
Inside dimensions	500(W) × 500(H) × 500(D)mm
Weight	33kg
Shielding effectiveness	≥60dB @700MHz to 6GHz @20GHz to 30GHz
Reflection loss	Pyramid urethane type 25dB @3GHz, 35dB @5GHz, ≥50dB@2.4GHz
RFConnector(back)	2.92mm(J-J) × 2, SMA(J-J) × 2
Interface(back)	AC × 1, DC × 2, USB3.0 TypeA × 2, LAN × 2

Medium size type

ME8661A



Outside dimensions	820(W)×608(H)×503(D)mm
Inside dimensions	690(W)×380(H)×380(D)mm
Weight	38kg
Acrylic resin table	200×200mm
Shielding effectiveness	65dB typ @2.4GHz
Reflection loss	≥20dB(MYA-77: ≥1.2GHz)
Connector	· SMA×3(left side×2, right side×1) · D-sub25pin×1(right side)
Option	· Various antennas · Manual Turn table MT101

Radio wave absorber ferrite series

MY5310-F1



Outside dimensions	1340(W)×1210(H)×1030(D)mm
Inside dimensions	1280(W)×960(H)×960(D)mm
Weight	400kg
Door opening dimensions	410(W)×710(H)mm
Manual turntable	220mm φ /10kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥20dB@30MHz to 400MHz · ≥12dB@400MHz to 1GHz
Connector	· N(J)×1(Front left bottom for antenna) · N(J)×1(Right side bottom)
I/F	· D-sub25pins×1(female) · LAN×1 · AC×1(250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106

Large size type

ME8661B



Outside dimensions	1520(W)×1100(H)×900(D)mm
Inside dimensions	1200(W)×600(H)×600(D)mm
Weight	230kg
Shielding effectiveness	65dB typ @2.4GHz
Reflection loss	≥20dB(MYA-79: ≥600MHz)
Connector	· SMA×3(left side×2, right side×1) · D-sub25pin×1(right side)
Option	· Various antennas · Manual Turn table MT102

MY5310S-F1



Outside dimensions	1350(W)×1220(H)×1080(D)mm
Inside dimensions	1280(W)×960(H)×960(D)mm
Weight	400kg
Door opening dimensions	510(W)×920(H)mm
Manual turntable	220mm φ /10kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥20dB@30MHz to 400MHz · ≥12dB@400MHz to 1GHz
Connector	· N(J)×1(Front left bottom for antenna) · N(J)×1(Right side bottom)
I/F	· D-sub25pins×1 · LAN×1 · AC×1(250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106

MY5630/MY5630ET



Model	MY5630	MY5630ET
Outside dimensions	2504(W)×1704(D)×1921.5(H)mm	
Inside dimensions	2010(W)×1210(D)×1140(H)mm	
Weight	750kg	765kg
Front door	Door opening dimensions 900(W)×1150(H)mm	
Maintenance door	Door opening dimensions 675(W)×675(H)mm Installing antenna fixing base made of resin	
Shielding effectiveness	≥80dB@800MHz to 12GHz (typ.) (when using shield sheet ≥60dB)	
Reflection loss	30dB@1GHz, 40dB@3GHz, 50dB@5GHz (typ.)	
Turn table	Manual	Electric
	500mm in diameter/30kg in load	
Exhaust fan and intake	· Intake(Below left side) · Exhaust fan (Upper right side, AC inlet below right side)	
Connector	USB×2, LAN×2, Power-supply(AC100V or DC), D-sub25×1, D-sub9pin×1, Shield sheet×1, SMA(J)×5	

MY5310SU-F1



Outside dimensions	1960(W)×1220(H)×1080(D)mm
Inside dimensions	1895(W)×960(H)×960(D)mm
Weight	595kg
Door opening dimensions	510(W)×920(H) mm
Manual turntable	500mm φ /50kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥20dB@35MHz to 2.2GHz · ≥12dB@400MHz to 1GHz
同軸Connector	N×2@(Right side×1, Front left×1)
I/F	· D-sub25pins×1 · LAN×1 · AC×1(250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	· Add door to B unit · Electric Turn table MT106B

Electromagnetic anechoic box/Shield box

MY5410-F1



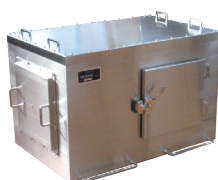
Outside dimensions	2364(W) × 1902(H) × 1424(D)mm
Inside dimensions	2215(W) × 1485(H) × 1275(D)mm
Weight	1020kg
Door opening dimensions	940(W) × 1440(H)mm
Manual turntable	756mm φ / 100kg in load
Shielding effectiveness	65dB typ@2.2GHz
Reflection loss	· ≥ 20dB@30MHz to 400MHz · ≥ 12dB@400MHz to 1GHz
Connector	· N(J) × 2 (Left side bottom) · N(J) × 1 (Right side bottom for antenna)
I/F	· D-sub25pins × 1 (female) · LAN × 1 · AC × 1 (250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106C

MY5305-F1



Outside dimensions	1150(W) × 765(H) × 635(D)mm
Inside dimensions	1060(W) × 550(H) × 550(D)mm
Weight	185kg
Door opening dimensions	500(W) × 500(H)mm
Shielding effectiveness	75dB typ@300MHz
Reflection loss	· ≥ 20dB@30MHz to 400MHz · ≥ 12dB@400MHz to 1GHz
Connector	· N × 2 (Front left bottom × 1, Right side bottom × 1) · 25pins D-sub × 1 · LAN × 1 · Power supply × 1

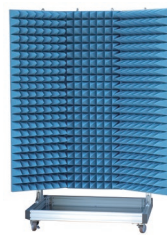
ME8669



Outside dimensions	910(W) × 650(H) × 610(D)mm
Inside dimensions	800(W) × 495(H) × 495(D)mm
Weight	205kg
Door opening dimensions	290(W) × 290(H)mm
Shielding effectiveness	70dB typ@300MHz
Reflection loss	≥ 20dB @50MHz to 800MHz
Connector	SMA × 2 (Right and left side 1 each)
I/F	D-sub25pins × 1

Radio wave absorption partition

600MHz to millimeter wave compatible MY5505



Outside dimensions	1370(W) × 1850(H) × 700(D)mm
Weight	55kg (excluding weight plate)
Material	Aluminium board
Caster	Flexible caster (with stopper) × 4
Other	· Eyebolt · Protective cap (edge measures)

Simple anechoic chamber

Shielded tent type MY5700 series



Electromagnetic shield tent	double-woven fabric
Exit and entrance	Door dimensions: 0.9m(W) × 1.6m(H) One front location, Double-layered curtain type structure
Cable feed port	φ50mm × 4 (optional)
Shielding effectiveness	1-6GHz @60dB, 28GHz @70dB
Radio wave absorber	· Urethane pyramid type: 10cm MYA-V010 used · Flame resistance: Aluminum plate treatment on the reverse side (except for floor surface)
Reflection loss	1.4GHz @20dB, 1.9GHz @30dB, >3.5GHz @40dB
Air intake and exhaust	Available (with blower)
Interior floor treatment	Punch carpet
Lighting	LED clip lamps × 4

Model	External Dimensions(W × H × D)	Internal dimensions(W × H × D)	Weight
MY5722	2m × 2m × 2m	1.67m × 1.73m × 1.67m	170kg
MY5723	2m × 2m × 3m	1.67m × 1.73m × 2.67m	280kg
MY5724	2m × 2m × 4m	1.67m × 1.73m × 3.67m	335kg
MY5725	2m × 2m × 5m	1.67m × 1.73m × 4.67m	420kg
MY5732	3m × 2m × 2m	2.67m × 1.73m × 1.67m	255kg
MY5733	3m × 2m × 3m	2.67m × 1.73m × 2.67m	355kg
MY5734	3m × 2m × 4m	2.67m × 1.73m × 3.67m	425kg
MY5735	3m × 2m × 5m	2.67m × 1.73m × 4.67m	525kg

I/F Module

The I/F module is a module on which AC supply, DC supply, LAN, USB, SMA, BNC, N, D-sub or through pipe connectors are mounted. The I/F modules can be selected according to the intended use.

■ For Taurus, MY2500 and MY3700 series (except MY1525/MY1527)

Model	Mounting connectors
IFM1	AC(1pc), LAN ^{※1} (1pc), USB ^{※3} (1pc), D-sub9 ^{※5} (1pc)
IFM2	AC(1pc), LAN ^{※1} (2pcs), USB ^{※3} (2pcs), D-sub9 ^{※5} (1pc)
IFM3	AC(1pc), LAN ^{※1} (2pcs), USB ^{※3} (2pcs), D-sub25 ^{※6} (1pc)
IFM4	DC(1pc), LAN ^{※1} (1pc), USB ^{※3} (1pc), D-sub9 ^{※5} (1pc), D-sub25 ^{※6} (1pc)
IFM5B	SMA(4pcs), BNC(2pcs), N(2pcs)
IFM6-1	Through pipe(1pc)
IFM6-2	Through pipe(2pcs)
IFM7	AC(1pc), LAN ^{※2} (1pc), USB ^{※4} (1pc)
IFM8	DC(2pcs), LAN ^{※2} (1pc), USB ^{※4} (1pc)
IFM9	LAN ^{※2} (2pcs), USB ^{※4} (2pcs)

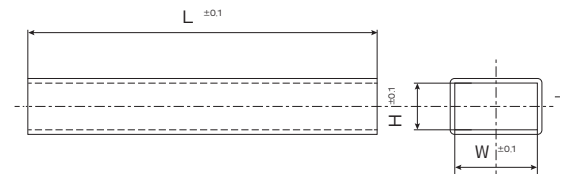


MY1520 equipped with two I/F module

Install one or two IFM6 through pipes from the following five types. Inserting a substance containing an electric conductor inside the through pipe may reduce the shielding performance.

Model	Pipe Inner dimensions	Pipe Length	Applicable frequency	Shielding effectiveness
TP-5	47.6(W)×22.2(H)mm	170mm	Up to 2GHz	60dB
TP-6	40.4(W)×20.2(H)mm	170mm	Up to 3GHz	60dB
TP-7	34.9(W)×15.8(H)mm	150mm	Up to 3.5GHz	60dB
TP-8	28.5(W)×12.6(H)mm	150mm	Up to 4GHz	60dB
TP-10	22.8(W)×10.1(H)mm	150mm	Up to 4.5GHz	60dB

IFM6 Through pipe

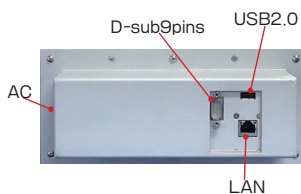


- ※1. Cat 5e equivalent ,PoE not supported
- ※2. Cat 6A equivalent ,PoE++ supported
- ※3. USB2.0,Type-A(Inside/Outside) ,Power Delivery(PD) not supported
- ※4. USB3.1 Gen1,Type-A(Inside/Outside) ,Power Delivery(PD) not supported
- ※5. male(Inside/Outside) ,fit M2.6(metric screw threads)
- ※6. female(Inside/Outside) ,fit M2.6(metric screw threads)

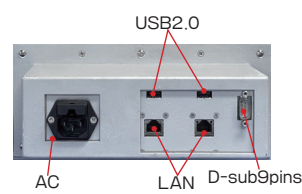
■ Available for MY1525/MY1527

Model	Mounting connectors
IFM10	AC(1pc), LAN ^{※1} (1pc), USB ^{※3} (2pcs), D-sub9 ^{※5} (1pc)
IFM11	DC(1pc), LAN ^{※1} (1pc), USB ^{※3} (2pcs), D-sub9 ^{※5} (1pc)

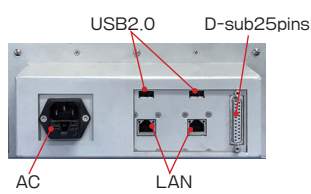
■ IFM1



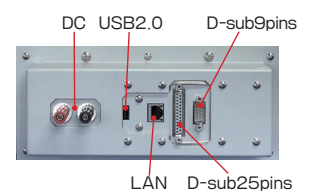
■ IFM2



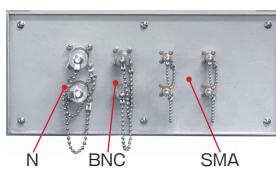
■ IFM3



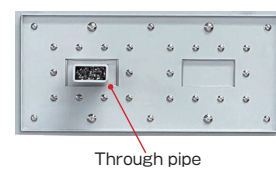
■ IFM4



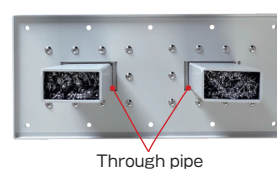
■ IFM5B



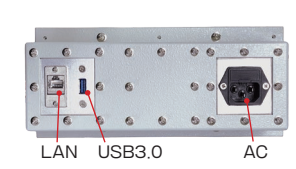
■ IFM6-1



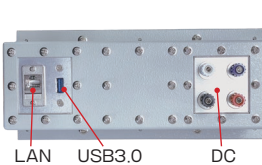
■ IFM6-2



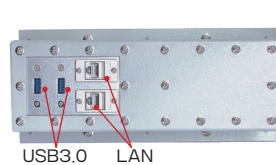
■ IFM7



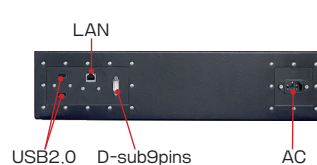
■ IFM8



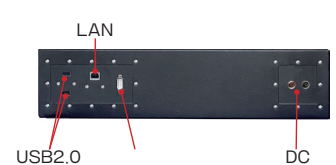
■ IFM9



■ IFM10



■ IFM11

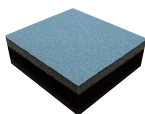


Electromagnetic anechoic box/Shield box

Peripherals/Option

Radio wave absorber

Urethane ① to ③



item	MYA-75	MYA-77	MYA-79
Thickness	approx. 30mm	approx. 60mm	approx. 120mm
Frequency range	≥ 2.4GHz	≥ 1.2GHz	≥ 0.6GHz
Reflection loss	10dB	1GHz	350MHz
	15dB	1.9GHz	700MHz
	20dB	2.4GHz	1.2GHz
	24dB	≥ 5.6GHz	≥ 2.5GHz

Ferrite ①



item	Specifications
Thickness	19mm
Frequency range	50MHz to 800MHz
Reflection loss	20dB@30MHz 30dB@150MHz 40dB@260MHz 30dB@430MHz 20dB@930MHz

Ferrite ②



item	Specifications
Thickness	28mm
Reflection loss	17dB@30MHz ≥ 20dB@35MHz to 2.2GHz ≥ 10dB@2.2 to 2.7GHz

Ferrite ③



item	Specifications
Thickness	5.2mm
Frequency range	30MHz to 1GHz
Reflection loss	≥ 20dB@30MHz to 400MHz ≥ 12dB@400MHz to 1GHz
Structure	single-layer ferrite tile

Antenna

Dipole antenna M301 to M310

Antenna for electric field strength measurement



■ Connector : SMA(P)

Model	Frequency range
M301	0.8 to 1GHz
M302	1.25 to 1.65GHz
M303	1.7 to 2.2GHz
M304	2.25 to 2.65GHz
M305	300 to 500MHz
M306	4.8 to 6.2GHz
M307	470 to 770MHz
M308	3.6 to 4.2GHz
M309	4.4 to 4.9GHz
M310	5.9 to 7.2GHz

Log periodic antenna M213/213R



A linear polarization antenna with frequency band from 700MHz to 5GHz. The reference antenna M213R is with an antenna gain & VSWR data.

- Transmitting/receiving antenna : M213
- Standard antenna : M213R

Biconical antenna MAN150/150B



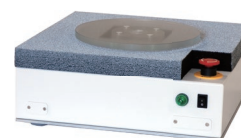
Broadband, compact and lightweight antenna.

Model	MAN150	MAN150B
Frequency range	20MHz to 3GHz	30MHz to 1GHz
Gain(nominal)	-45 to +1dBi	-31 to +1dBi
Antenna factor	20 to 51dB/m	17 to 31dB/m
Dimensions	350×160×140mm	540×225×225mm
Weight	approx. 350g	approx. 1,150g

※ Dimensions : L × W × D, mm

Turntable

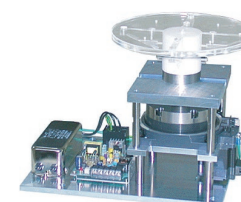
Electric turntable MT107



Suitable for evaluation of small antennas and wireless devices. A radio wave absorber is sandwiched between the acrylic stand and the case.

- MT107-MYA75 Urethane radio wave absorber ①
- MT107-MYA77 Urethane radio wave absorber ②

Electric turntable MT106

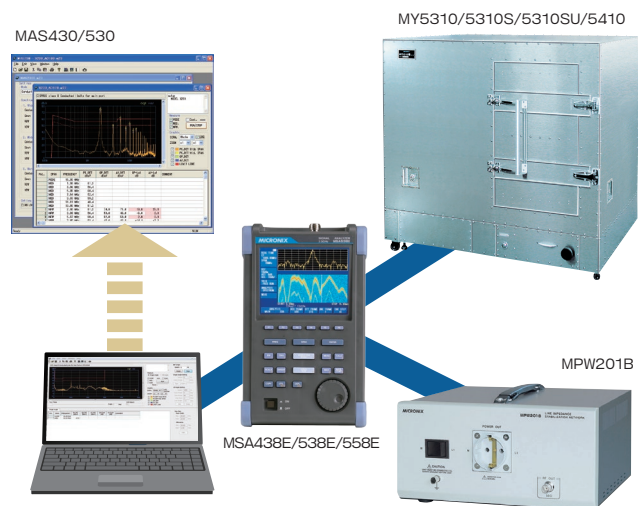


Electric turntable for zmy5310, 5310S, 5310SU and 5410. Control software is included as standard.

Application	MY5310/S	MY5310SU	MY5410
Model	MT106	MT106B	MT106C
Table diameter	220mm φ	500mm φ	756mm φ
Table Material	Plastic	Metal	Metal
load-bearing capacity	15kg	50kg	100kg

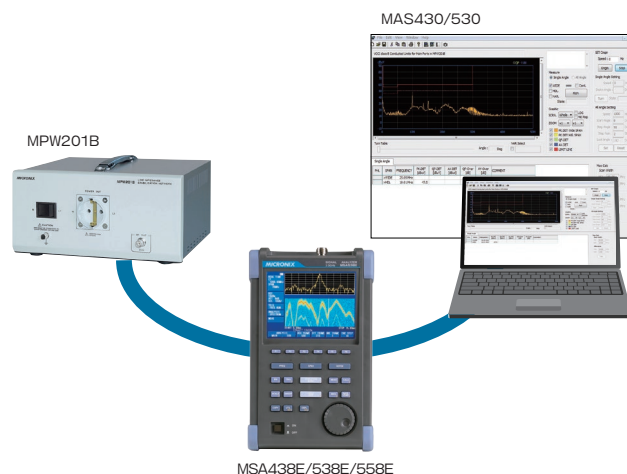
EMC test system

EMI test system MR2300



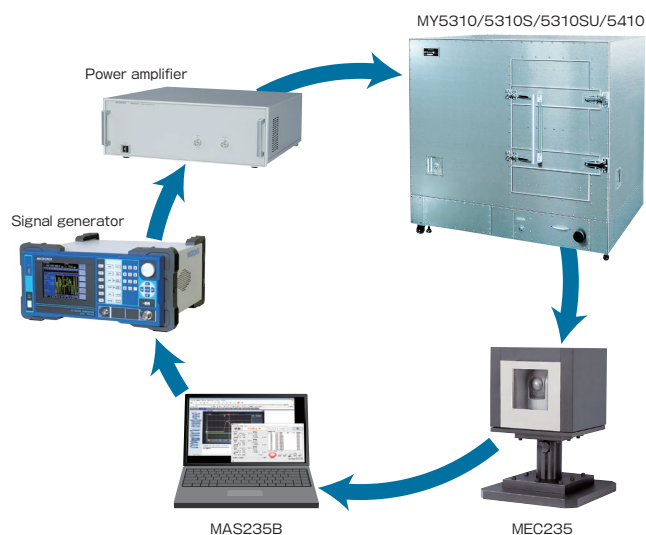
The MR2300 is a pre-compliance EMI total testing system for measuring radiated interference noise and conducted interference noise. Four types of anechoic chambers are available to suit the EUT (Equipment Under Test).

Conducted EMI Test System MR2150



Pre-compliance test system for conducted EMI. The development cost can be significantly reduced by debugging and evaluating EUT using this system before testing in the formal EMC site.

EMS test system MR2350



Pre-compliance EMS test system for the radiation immunity test (IEC/EN 61000-4-3). Electric field strength of 1, 3, 10V/m. The malfunction of the EU by the electromagnetic radiation can be observed by a camera put in the anechoic box.

EMI+EMS test system MR2400



This system combine EMI test system MR2300 and EMS test system MR2350.

EMC test system

Electromagnetic anechoic box

Electromagnetic anechoic box can be selected according to the size of EUT.

MY5310-F1



An anechoic box for a small EUT and of the lowest price. The maximum size of EUT will be approx. 220mm cube.

Outside dimensions	1340(W) × 1210(H) × 1030(D)mm
Inside dimensions	1280(W) × 960(H) × 960(D)mm
Weight	400kg
Door opening dimensions	410(W) × 710(H)mm
Manual turntable	220mm φ / 10kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥ 20dB @ 30MHz to 400MHz · ≥ 12dB @ 400MHz to 1GHz
Coaxial connectors	· N(J) × 1 (Bottom left of the front/For antenna) · N(J) × 1 (Right side bottom)
I/F	· D-sub25pins × 1 (female) · LAN × 1 · AC × 1 (250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106

MY5310S-F1



Split type of MY5310. Since it is divided into two parts at the center, it is easy to carry in using a small elevator or to install in a narrow space.

Outside dimensions	1350(W) × 1220(H) × 1080(D)mm
Inside dimensions	1280(W) × 960(H) × 960(D)mm
Weight	400kg
Door opening dimensions	510(W) × 920(H)mm
Manual turntable	220mm φ / 10kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥ 20dB @ 30MHz to 400MHz · ≥ 12dB @ 400MHz to 1GHz
Coaxial connectors	· N(J) × 1 (Bottom left of the front/For antenna) · N(J) × 1 (Right side bottom)
I/F	· D-sub25pins × 1 · LAN × 1 · AC × 1 (250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106

MY5310SU-F1



A type in which a spacer unit (width 610 mm) is inserted between the MY5310S divided into two. *For MR2300 (EMI) only.

Outside dimensions	1960(W) × 1220(H) × 1080(D)mm
Inside dimensions	1895(W) × 960(H) × 960(D)mm
Weight	595kg
Door opening dimensions	510(W) × 920(H) mm
Manual turntable	500mm φ / 50kg in load
Shielding effectiveness	70dB typ@2.2GHz
Reflection loss	· ≥ 20dB @ 35MHz to 2.2GHz · ≥ 12dB @ 400MHz to 1GHz
Coaxial connectors	N × 2 (Right side × 1, Front left × 1)
I/F	· D-sub25pins × 1 · LAN × 1 · AC × 1 (250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	· Add door to B unit · Electric Turn table MT106B

MY5410-F1



The largest anechoic box for large EUTs. EUT size guideline is 756mm cube or less.

Outside dimensions	2364(W) × 1902(H) × 1424(D)mm
Inside dimensions	2215(W) × 1485(H) × 1275(D)mm
Weight	1020kg
Door opening dimensions	940(W) × 1440(H)mm
Manual turntable	756mm φ / 100kg in load
Shielding effectiveness	65dB typ@2.2GHz
Reflection loss	· ≥ 20dB @ 30MHz to 400MHz · ≥ 12dB @ 400MHz to 1GHz
Coaxial connectors	· N(J) × 2 (Bottom left side) · N(J) × 1 (Bottom right side/for antenna)
I/F	· D-sub25pins × 1 (female) · LAN × 1 · AC × 1 (250Vmax/10A) ※ When electric-powered turntable is attached, AC100V
Option	Electric Turn table MT106C

Spectrum analyzer / Signal analyzer

Depending on your budget and performance/functionality, you can choose from the following.

Spectrum analyzer for EMI MSA438E/538E/558E



- Radiated and conducted emission test measurements in the MR2300 system.
- Conducted emission test measurements using LISN (MPW201B) together with PC software for EMI (MAS430/530).
- Non-contact measurement of conducted emission test from 20KHz to 100MHz by connecting the magnetic field probe(MMP500).

Model	MSA438E	MSA538E	MSA558E
Frequency range	50kHz to 3.3GHz	20kHz to 3.3GHz	20kHz to 8.5GHz
Detection mode	PosPK(positive peak), QP(quasi-peak), AV(average)		
Resolution bandwidth (6dB)	9kHz, 120kHz, 1MHz		
Real time mode	×	○	○

Peripheral equipment/Option

Power amplifier MAP202



Frequency range	80 to 1000MHz
Gain	46dB typ@80 to 600MHz 44.5dB typ@600 to 1000MHz
1dB compression level	42.5dBm typ@80 to 600MHz 41dBm typ@600 to 1000MHz

Low noise amplifier MAP301/302



MAP301 is ideal for CISPR25 radiated noise measurements in combination with the loop antenna MAN120.

MAP302 is ideal for horizontal and vertical polarization radiated noise measurements in combination with the biconical antenna MAN150.

Items	MAP301	MAP302
Frequency range	100kHz to 500MHz	20MHz to 3GHz
Gain	50dB	20dB
Noise figure	3.5dB	3.5dB

EUT camera monitor MEC235



The camera body is covered with a radio wave absorbing material and the pedestal is made of resin to minimize radio wave reflection. Zoom range is up to 42x, and the field of view can be controlled $\pm 29^\circ$ to the left and right, 23° upward, and 35° downward. These controls are performed by a PC, and the images are displayed on the PC screen.

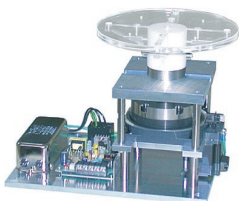
Loop antenna MAN120



Compact antenna suitable for low-frequency measurements. Suitable for low-frequency radiated disturbance measurements.

Frequency range	50kHz to 33MHz
Connector	N(P)
Impedance	50Ω
Dimensions	Outside:420mm, Inside:320mm, Thickness:13mm
Weight	1.2kg

Electric turn table MT106



MY5310・5310S・5310SU・5410 用 Electric Turn table.

Control software: Standard accessory

Application	MY5310/S	MY5310SU	MY5410
Model	MT106	MT106B	MT106C
Table diameter	220mm φ	500mm φ	756mm φ
Table Material	Plastic	Metal	Metal
load-bearing capacity	15kg	50kg	100kg

Biconical antenna MAN150/150B



Broadband, compact, lightweight antenna.

Model	MAN150	MAN150B
Frequency range	20MHz to 3GHz	30MHz to 1GHz
Gain(nominal)	-45 to +1dBi	-31 to +1dBi
Antenna factor	20 to 51dB/m	17 to 31dB/m
Dimensions (L×W×D)	350×160×140mm	540×225×225mm
Weight	350g	1,150g

Line impedance stabilization network(LISN) MPW201B



When measuring conducted emission noise emitted from the power supply line of an EUT, LISN is used to ensure that the impedance of the power supply side from the EUT is constant and reproducible.

Frequency range	150kHz to 30MHz
Circuit type	50Ω /50μH, V type(based on CISPR16-1)
Rated current	15A
Power supply frequency	single phase, 50/60Hz, 250VACmax

Magnetic field probe MMP500



Conducted disturbance noise measurement up to 9kHz low frequency.

Frequency range	9kHz to 100MHz
Maximum measurement level	119dB μV
Applied models	MSA538E/558E

Variable attenuator

High-speed programmable attenuator MAT800



By reading the attenuation data stored in the 128k word internal memory, arbitrary attenuation patterns can be generated. The amplitude curve of the microwave signal can be freely created. The maximum readout speed is $2\mu\text{s}/\text{word}$, and no spike occurs when switching. Attenuation patterns are created on a PC using the standard accessory "Attenuation Program Generation Software MAS800" and transferred to the instrument's memory. Ideal for air simulation of wireless communication such as handover test of mobile communication equipment and dynamic operation test of ETC/DSRC.

5 models are available for each frequency band.

Model	ModelA	ModelB	ModelC	ModelD	ModelE
Frequency range	1.5 to 4.5GHz	3 to 9GHz	4.5 to 12.5GHz	1.95 to 5.85GHz	0.75 to 2.25GHz
Attenuation maximum	80dB				
Attenuation resolution	0.05dB				

High-speed programmable attenuator MAT810



Multifunctional programmable attenuator capable of switching the attenuation of microwave band electric signals at ultra high speed ($2\mu\text{s}$). Attenuation patterns are created on a PC and transferred to the unit's memory using the standard software for creating attenuation patterns.

Ideal for evaluating the communication quality of cellular phones, WiMAX, ETC, wireless LAN, and wireless communication devices.

Frequency range	300MHz to 6.6GHz
Attenuation maximum	60dB
Attenuation resolution	0.05dB

Step attenuator MAT850



Compact and lightweight step attenuator that can be switched while checking the attenuation of microwave band electrical signals on the LED display. No chattering or spikes occur during knob switching.

Ideal for evaluating the communication quality of cellular phones, WiMAX, ETC, wireless LAN, and wireless communication devices.

Frequency range	300MHz to 6.1GHz
Attenuation maximum	60dB
Attenuation resolution	0.1dB

ETC/DSRC inspection system

DSRC OBE tester

ME9100E



ME9100 is a tester to check the wireless communication of DSRC OBE installed on a car. After transmitting FCMC from ME9100E, it is confirmed whether ACTC and WCNC are returned by OBE correctly. Since the power is automatically turned off after 7 seconds from test start, battery life becomes longer. The number of test times is about 500 times without exchanging the battery.

- Supporting ETC and ITS spot
- Supporting all 7 channels and all 4 profiles
- Complete one piece and handheld type without any connection cable
- Easy operation by one multi-direction switch

※ Technical standards conformity certification has been obtained. (Radio license is not required.)

DSRC communication unit

ME9115



Lineup by 4 models of A, C, A+C and CN. It is possible to read WCN of OBE and to measure electric field strength of OBE and RSU. WCN and electric field strength measurement data can be saved up to maximum 100 data respectively. Moreover, since this operates as a removable disk, the saved data can be transferred to the PC through USB interface.

※ Certified for technical standards conformity certification (no radio license required)

Model	Function
ModelA	Read WCN of On-board equipment (OBE) and display 12 digit ID number.
ModelC	Measure the electric field strength of roadside unit (RSU) and OBE.
ModelA+C	Compound instrument of ME9115A and ME9115C.
ModelCN	Measure the electric field strength of RSU with the traveling vehicle. That of OBE can also be measured.

DSRC roadside system

ME9300



A system that utilizes ETC used on highways for private use. The unique WCN of the ETC onboard device is read and can be used for various applications.

[System configuration]

- ME9300 (Transmission power fixed type)
 - DSRC Antenna ME9301
 - Interface box ME9302
 - Dedicated I/F cable ME9303
- ME9300V (with transmit power adjustment function)
 - DSRC Antenna ME9301V
 - Interface box ME9302
 - Dedicated I/F cable ME9303
- ME9300F (fixed transmit power, extended transmission distance model)
 - DSRC Antenna ME9301F
 - Interface Box ME9302
 - Dedicated I/F cable ME9303
- ME9300FV (with transmit power adjustment function, extended communication distance model)
 - DSRC Antenna ME9301FV
 - Interface Box ME9302
 - Dedicated I/F cable ME9303

ETC/ITS spot electric field strength measurement system

ME9200



ME9200 is a system that measures the electric field strength distribution of ETC or ITS spot and makes a graph and map of electric field strength.

- Actual wave or CW is measured in a short time.
- Capable of the measurement by cart type and on-board type.
- Capable of being equipped with maximum 17 antennas (9 pcs at standard).
- If the cart is equipped with 17 antennas at 20cm intervals, the lane width of 3.2m will be measured at one time.
- When measuring multiple roadside units on a main road with an in-vehicle type, the automatic measurement mode can be used to automatically perform measurements while driving according to the pre-registered measurement section positions and measurement conditions.

ME9200D

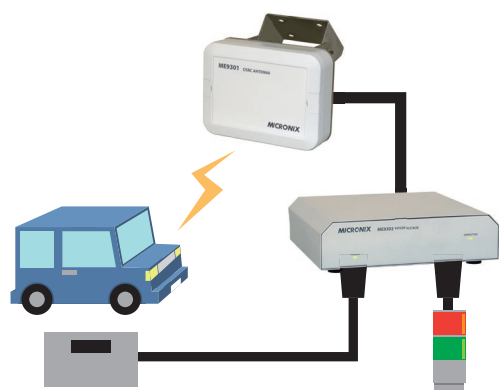


Measure the electric field strength distribution of ETC/ITS spots using operating waves or CW in a short time, and create electric field strength graphs and distribution maps. It is an upgraded version of the conventional ME9200/9200C.

- The integrated radio wave absorber on the back of the antenna reduces the measurement variation of the electric field strength due to reflection.
- Measurements can be taken using a cart and vehicle. The antenna is easy to install, just 'place it' on the fixed stand.
- The antenna and cable can be separated, making attachment and storage convenient.
- Two types of systems are available, with 9 and 5 antennas respectively.

Vehicle production line system

ETC/OBE inspection system in car production line ME8901



This system is used for conducting tests after ETC OBE is installed in car. It is optimum for a production line.

ETC/DSRC related products

Programmable attenuator for dynamic motion test MAT800/B



The dynamic motion test described in ARIB TR-T16 <2-2-1> to <2-2-3> can be easily done with MAT800/B. The power pattern is created in the way of making arbitrary waveform on the PC using a standard accessory "Software for making attenuation program". And then this power pattern is transferred to the memory of MAT800/B. The dynamic motion test is performed connecting such ETC/DSRC signal generator as RSU simulator to the input of MAT800/B and connecting antenna or OBE to the output.

Electromagnetic anechoic box ME8661A

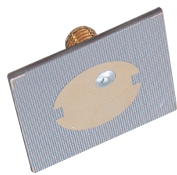


Suitable for basic operation test, dynamic motion test and wireless system test of ETC/DSRC OBE by the space coupling. Various antennas, antenna movable mechanism and turntable are available as options.

Outside dimensions	830(W)×608(H)×503(D)mm
Inside dimensions	690(W)×380(H)×380(D)mm
Weight	38kg
Acrylic resin table	200×200mm

Antenna

Patch antenna M211/211R



M211 is a transmission & receiving antenna with right circular polarization used in the ETC/DSRC test. The reference antenna M211R is with an antenna gain & VSWR data and is used when obtaining RF space coupling degree.

Frequency range	5820±35MHz
-----------------	------------

Measuring system

Electromagnetic wave emission pattern measurement system

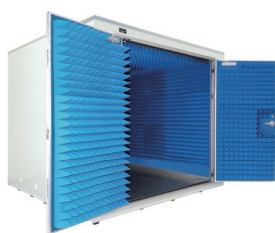
MRP770



A compact, low-cost electromagnetic wave radiation pattern measurement system that requires no installation work. It is ideal for the development of small wireless devices, information communication devices, and antennas. We provide the optimal system tailored to your specific needs.

Radio wave absorption equipment

200MHz to 28GHz compatible Radio wave absorption equipment



We hear the objective test standard, the budget, setting environment and offer the most suitable radio wave absorption equipment under the limited condition.

Handover tester

MH3800



The total system that can easily perform "Handover (hand-off)" evaluation of wireless communication equipment and "Fall back (decrease transmission speed)" operation test by distance attenuation in real environment.

RF matrix switch box

MM6000 series



A switching box that can combine multi-input x multi-output RF signals in a matrix. An electronic programmable attenuator is built in, and any attenuation can be obtained. Suitable for handover evaluation.

Multi-wave electric field strength automatic measurement system

ME9500



As the electric field strength such as AM radio, FM radio, business radio and VICS can be measured at high speed, it is the optimum system for investigation of radio wave service area and maintenance of retransmission system.

GPS radio wave retransmission system

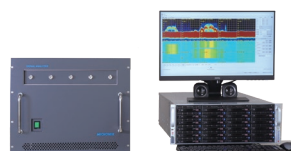
MN1600



The MN1600 is a retransmission system that receives GPS radio wave with a receiving antenna installed outdoors, amplifies it and then radiates again with an indoor transmitting antenna. Effective when setting up in-vehicle devices such as car navigation systems and drive recorders indoors.

Real time IQ data recorder system

MQ5300



A total system that records IQ data captured by the signal analyzer MSA538/558 in the IQ data recorder in real time and reproduces and analyzes it using the basic software MAS550.

Multiwindow waveform monitor

MW4500



A system that controls spectrum analyzers MSA400 and MSA500 series with remote commands and splits and displays measured spectrum waveforms on a large screen display. Suitable for signal monitoring at broadcasting stations and radio relay stations.

Test Accessories

Antenna

Portable antenna M301 to M310/M401 to M407

M301 to M310



Antenna for electric field strength measurement

Model	Frequency range
M301/401	0.8 to 1GHz
M302/402	1.25 to 1.65GHz
M303/403	1.7 to 2.2GHz
M304/404	2.25 to 2.65GHz
M305/405	300 to 500MHz
M306	4.8 to 6.2GHz
M307/407	470 to 770MHz
M308	3.6 to 4.2GHz
M309	4.4 to 4.9GHz
M310	5.9 to 7.2GHz

■ Connector :
SMA(P)@M300, N(P)@M400

M401 to M407



Loop antenna MAN120



Compact antenna suitable for low-frequency measurements. Suitable for low-frequency radiated disturbance measurements.

Frequency range	50kHz to 33MHz
Connector	N(P)
Impedance	50Ω
Dimensions	Outside:420mm, Inside:320mm, Thickness:13mm
Weight	1.2kg

Biconical antenna MAN150/150B



Broadband, compact and lightweight antenna.

Item	MAN150	MAN150B
Frequency range	20MHz to 3GHz	30MHz to 1GHz
Gain(nominal)	-45 to +1dBi	-31 to +1dBi
Antenna factor	20 to 51dB/m	17 to 31dB/m
Dimensions	350×160×140mm	540×225×225mm
Weight	350g	1,150g

※Dimensions : L×W×D

Patch antenna M211/211R



M211 is a transmission & receiving antenna with right circular polarization used in the ETC/DSRC test. The reference antenna M211R is with an antenna gain & VSWR data and is used when obtaining RF space coupling degree.

Frequency range	5820±35MHz
-----------------	------------

Probe

Magnetic Field Probe MMP500



Conducted disturbance noise measurement up to 9kHz low frequency.

Frequency range	9kHz to 100MHz
Maximum measurement level	119dB μ V
Applied models	MSA538E/558E

Log periodic antenna M213/213R



A linear polarization antenna with frequency band from 700MHz to 5GHz. The reference antenna M213R is with an antenna gain & VSWR data.

Log-Periodic antenna MAN160A/160B



Suitable for direction finding of radio emission sources in site survey and simple measurement of RF emission immunity.

Model	MAN160A	MAN160B
Frequency range	700MHz to 4GHz	700MHz to 6GHz
Maximum power	100W(At CW and 400MHz)	
Impedance	50Ω (nominal)	
VSWR	≤ 2.0(Typical)	
Gain	4dBi(Typical)	5dBi(Typical)
Antenna factor	23 to 38dB/m	26 to 41dB/m
Connector	SMA(J)	
Dimensions	340(L)×200(W)×25(D)mm	
Weight	270g	250g

Coaxial attenuator / Terminator

Coaxial Attenuator MG-XXdB



16 types of 1 to 10dB, 12 to 15dB, 20dB, 30dB.

Frequency range	DC to 18GHz (MG-30dB : DC to 8GHz)
Impedance	50Ω
Connector	SMA(P)/SMA(J)

Terminator MG-50S/-50N



50Ω terminator.
There are SMA(P) type (MG-50S) and N(P)
type(MG-50N).

Coaxial cabl

Model	Connector	Length	Frequency range
MC102	SMA(P)/BNC(P)	1.5m	DC to 2GHz
MC201	SMA(P)/SMA(P)	0.5m	DC to 18.5GHz
MC202	SMA(P)/SMA(P)	3m	DC to 18.5GHz
MC203	SMA(P)/SMA(P)	4m	DC to 18.5GHz
MC204	SMA(P)/SMA(P)	1.5m	DC to 18.5GHz
MC301	SMA(P)/SMA(P)	0.5m	DC to 10GHz
MC302	SMA(P)/SMA(P)	1m	DC to 10GHz
MC303	SMA(P)/SMA(P)	1.5m	DC to 10GHz
MC304	SMA(P)/N(J)	0.2m	DC to 4GHz
MC305	SMA(P)/N(P)	0.2m	DC to 4GHz
MC306	SMA(P)/BNC(J)	0.2m	DC to 2GHz
MC307	SMA(P)/BNC(P)	0.2m	DC to 2GHz
MC308	N(P)/N(P)	0.5m	DC to 10GHz
MC309	N(P)/N(P)	1m	DC to 10GHz
MC310	N(P)/N(P)	1.5m	DC to 10GHz
MC311	N(P)/SMA(J)	0.2m	DC to 10GHz
MC312	N(P)/BNC(J)	0.2m	DC to 2GHz
MC313	N(P)/BNC(P)	0.2m	DC to 2GHz
MC314	BNC(P)/BNC(P)	1.5m	DC to 2GHz

Adapter

Model	Connector	Impedance	Frequency range
MA301	BNC(P)/BNC(J)	50Ω /75Ω	DC to 2GHz
MA302	BNC(P)/N(J)	75Ω /75Ω	DC to 1.8GHz
MA303	BNC(P)/N(P)	75Ω /75Ω	DC to 1.8GHz
MA304	BNC(P)/F(J)	75Ω /75Ω	DC to 1.8GHz
MA305	BNC(P)/F(P)	75Ω /75Ω	DC to 1.8GHz
MA306	N(P)/SMA(J)	50Ω /50Ω	DC to 12.4GHz
MA307	N(P)/BNC(J)	50Ω /50Ω	DC to 2GHz
MA308	N(P)/BNC(J)	50Ω /75Ω	DC to 2GHz
MA309	N(J)/BNC(P)	50Ω /50Ω	DC to 2GHz

Communication cable

Communication cable MI400



USB cable

Connector	A terminal/ B terminal
Length	1m
Applied models	MSA400/500 series

※ Dimensions exclude protrusions, etc. Weights do not include IF modules and any other options. Dimensions and weight are approximate.
※ MICRONIX Corporation reserves the right to make changes in design, specifications and other information without prior notice.

MICRONIX

MICRONIX CORPORATION

2987-2, KOBIKI-CHO, HACHIOJI-SHI, TOKYO 193-0934 JAPAN

TEL:+81-42-637-3667 FAX:+81-42-637-0227

URL : <https://micronix-jp.com/english/> E-mail : micronix_e@micronix-jp.com

AGENCY

ZZ2501E