

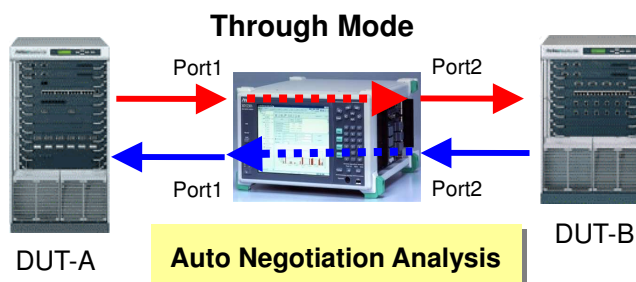
# Auto-Negotiation Analysis for GbE

MD1230A-15 / MD1231A-15 / MU740701A-15

## Auto Negotiation Analysis

### Auto Negotiation Analysis

GbE has Auto-Negotiation function that can adjust duplex mode and pause function between instruments before link establishes. However this function standardized by IEEE802.3, it does not have a good inter operability between instruments of different vendors. Specialized measuring instruments are required for Auto-Negotiation measurement since IP tester cannot measure anything before link establishes. Anritsu meets the requirement with software option of MD1230A family, MD1230A-15 / MD1231A-15 / MU740701A-15 Auto-Negotiation Analysis for GbE.



### Software Option

MD1230A-15/MD1231A-15, MU740701A-15

MD1230A-15 / MD1231A-15 / MU740701A-15 is an option of MD1230A family IP measuring instruments. Auto Negotiation Analysis and another IP measuring functions of MD1230A family can be used simultaneously.

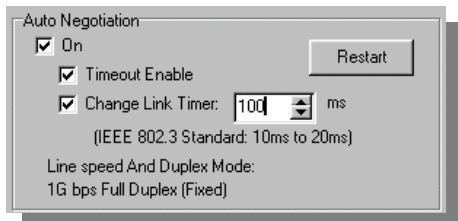
Switching is required for using the functions of traffic map, traffic monitor, and frame arrival time.

### Through Mode

MD1230A family supports Through Mode function that can confirm sequences directly between networks without external tapping module.

### Link Timer Adjustment

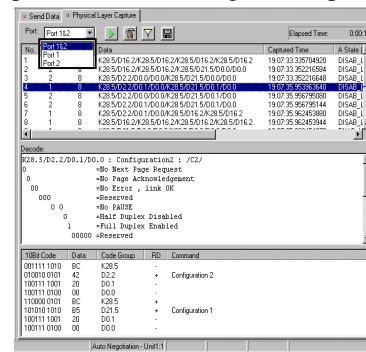
This option can change the Link Timer value of MD1230A for evaluation of Link Timer function of DUT. The value can be configured not only the standard ranges, which are from 10 ms to 20 ms, but also maximum of 100 ms.



### Capture & Decode

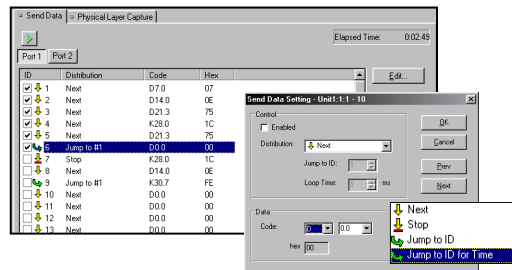
This option can check the configuration of sequences and inter operability, and do quick troubleshooting with capture and decode functions.

Decode function has not only code analysis but status supporting function of DUT so that status of each DUT is recognized at a glance.



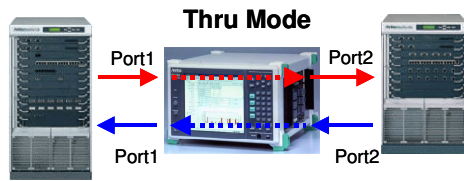
### Data Transmission

This option can transmit maximum of 256 code data by combining terms, like Continuous and Jump.



## Application Examples

### Auto Negotiation Analysis

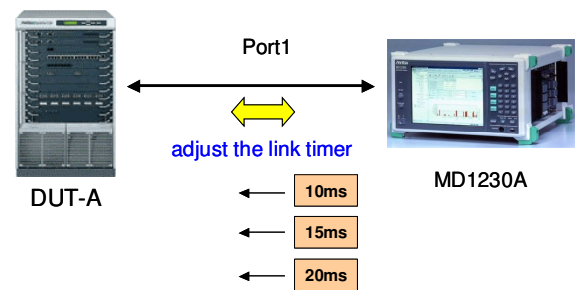


Capture & Decode functions of the option implement

- Check the Auto Negotiation sequences
- Verification of inter operability
- Quick Troubleshooting

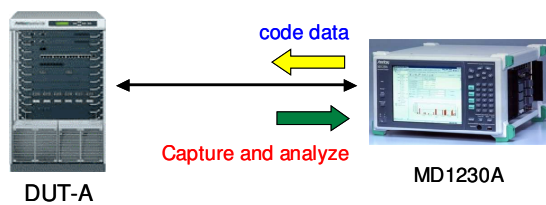
Measured data is saved with TXT (CSV) format in addition to original binary format, thereby simplifying the procedures for making reports.

### Link Timer Test



The option can confirm DUT performance by changing Link Timer value. Variable range is from 0ms to 100ms that make more extensive performance test than standard.

### Code Data Tx



The option can verify the network response when DUT receives correct data and also wrong data by using transmission function that can combine maximum 256 code data and Auto-Negotiation analysis function.

## Specifications

MD1230A-15 / MD1231A-15 / MU740701A-15		Auto Negotiation Analysis	
Model	MD1230A, MD1231A, MT7407A	Capture time resolution	16ns
Module	MU120112A	Capture Trigger	2 byte capture trigger
Support GbE	1000BASE-SX / LX / LH / ZX	Data Transmission	Maximum 256 data configured by sequences, like Continuous and Jump
Software Ver.	Ver3.1 or later		
Connection	Normal, Through, Monitor	Link Timer	0ms to 100ms (resolution: 1ms)
Data Capture	Max 1024 event / port Data captured on transited condition	Data Save	Original binary, TXT (CSV)

## Ordering Information

Model / Order No.	Item	Comment
MD1230A-15	Option	
MD1231A-15	Auto Negotiation Analysis	For MD1230A
MX123001A-15	Auto Negotiation Analysis	For MD1231A
	Auto Negotiation Analysis	For MT7407A

This option requires MU120112A, which is the gigabit Ethernet Advanced protocol module.



Specifications are subject to change without notice.

#### **ANRITSU CORPORATION**

1800 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan  
Phone: +81-46-223-1111  
Fax: +81-46-296-1264

#### ● U.S.A.

##### **ANRITSU COMPANY**

##### **TX OFFICE SALES AND SERVICE**

1155 East Collins Blvd., Richardson, TX 75081, U.S.A.  
Toll Free: 1-800-ANRITSU (267-4878)  
Phone: +1-972-644-1777  
Fax: +1-972-644-3416

#### ● Canada

##### **ANRITSU ELECTRONICS LTD.**

700 Silver Seven Road, Suite 120, Kanata,  
ON K2V 1C3, Canada  
Phone: +1-613-591-2003  
Fax: +1-613-591-1006

#### ● Brasil

##### **ANRITSU ELETRÔNICA LTDA.**

Praca Amadeu Amaral, 27 - 1 andar  
01327-010 - Paraiso, Sao Paulo, Brazil  
Phone: +55-11-3283-2511  
Fax: +55-11-3886940

#### ● U.K.

##### **ANRITSU LTD.**

200 Capability Green, Luton, Bedfordshire LU1 3LU, U.K.  
Phone: +44-1582-433280  
Fax: +44-1582-731303

#### ● Germany

##### **ANRITSU GmbH**

Grafenberger Allee 54-56, 40237 Düsseldorf, Germany  
Phone: +49-211-96855-0  
Fax: +49-211-96855-55

#### ● France

##### **ANRITSU S.A.**

9, Avenue du Québec Z.A. de Courtabœuf 91951 Les  
Ulis Cedex, France  
Phone: +33-1-60-92-15-50  
Fax: +33-1-64-46-10-65

#### ● Italy

##### **ANRITSU S.p.A.**

Via Elio Vittorini, 129, 00144 Roma EUR, Italy  
Phone: +39-06-509-9711  
Fax: +39-06-502-2425

#### ● Sweden

##### **ANRITSU AB**

Fagelviksvagen 9E S145 84 Stockholm, Sweden  
Phone: +46-853470700  
Fax: +46-853470730

#### ● Singapore

##### **ANRITSU PTE LTD.**

10, Hoe Chiang Road #07-01/02, Keppel Towers,  
Singapore 089315  
Phone: +65-6282-2400  
Fax: +65-6282-2533

#### ● Hong Kong

##### **ANRITSU COMPANY LTD.**

Suite 923, 9/F., Chinachem Golden Plaza, 77 Mody  
Road, Tsimshatsui East, Kowloon, Hong Kong, China  
Phone: +852-2301-4980  
Fax: +852-2301-3545

#### ● P. R. China

##### **ANRITSU COMPANY LTD.**

##### **Beijing Representative Office**

Room 1515, Beijing Fortune Building, No. 5 North  
Road, the East 3rd Ring Road, Chao-Yang District  
Beijing 100004, P.R. China  
Phone: +86-10-6590-9230

#### ● Korea

##### **ANRITSU CORPORATION**

8F Hyun Juk Bldg. 832-41, Yeoksam-dong,  
Kangnam-ku, Seoul, 135-080, Korea  
Phone: +82-2-553-6603  
Fax: +82-2-553-6604

#### ● Australia

##### **ANRITSU PTY LTD.**

Unit 3/170 Forster Road Mt. Waverley, Victoria, 3149,  
Australia  
Phone: +61-3-9558-8177  
Fax: +61-3-9558-8255

#### ● Taiwan

##### **ANRITSU COMPANY INC.**

7F, No. 316, Sec. 1, NeiHu Rd., Taipei, Taiwan  
Phone: +886-2-8751-1816  
Fax: +886-2-8751-1817

030930