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## PRESS RELEASE

Anritsu Corporation

### Reduced Manufacturing Costs for 3.5G HSDPA Base Stations

#### RNC Simulator MD8391A

Anritsu Corporation (Hiromichi Toda, President) has developed the RNC Simulator MD8391A for enabling testing of 3G W-CDMA base stations and 3.5G HSDPA[\*1] base stations. Orders will be accepted starting June 5.

The MD8391A is a simulator that works as an RNC (Radio Network Controller) [\*see note], connecting the Node B[\*2] to the core network. By utilizing this new product, a base station testing environment can be created without making use of the costly real RNC or core network. Not only does this product enable general operation tests and application tests to be performed via voice call tests, videophone tests and IP packet transfer tests, but also enables testing of wireless performance when used together with the Digital Mobile Radio Transmitter Tester MS8609A and Vector Signal Generator MG3700A.

By providing all tests necessary during the process of manufacturing a W-CDMA or HSDPA base station, this product will contribute to reducing manufacturing costs and improving work efficiency.

#### **RNC** : Radio Network Controller

A mobile communications network is broadly composed of a core network and a radio access network. The radio access network (RAN) is composed of base stations for exchanging signals with mobile terminals and RNC (Radio Network Controllers) for connecting the base stations to the core network. RNC controls several base stations at once, allocating and switching radio resources to the mobile terminals.

#### [Development Background]

W-CDMA base stations are being deployed in increasing numbers as 3G mobile phone service continues to expand globally. HSDPA, the high speed data communication technology of the W-CDMA system, is also on the verge of deployment. In view of this situation, base station manufacturers have been putting their efforts into manufacturing base stations at high quality and low cost. However, prior to now, to test Node B's on the production line, there was a need to use the actual RNC or core network, or alternatively use a costly simulator developed for R&D. Both of these methods required considerable equipment investment.

Anritsu has provided a wide variety of RF measuring solutions for use in development, manufacturing and maintenance of base stations in the 3G base station market, from the Digital Mobile Radio Transmitter Tester MS8609A to the Vector Signal Generator MG3700A to the Site Master.

To expand our range of base station testing solutions, Anritsu has now developed the RNC Simulator MD8391A for simulating an Iub[\*3] signalling. By simply using this product in combination with the MS8609A and the MG3700A, the MD8391A eliminates the need for costly RNC or core network usage and makes it possible to perform W-CDMA/HSDPA Node B tests required on the manufacturing floor at low cost. We can now offer total support of W-CDMA/HSDPA base station testing, both wireless and wireline.

## [Product Outline]

The MD8391A is an Iub simulator that makes it possible to perform testing of W-CDMA/HSDPA Node B by simulating an RNC positioned between the Node B and the core network. Because the MD8391A uses plug-in modules, interface modules for connecting to base stations and optional modules can be selected based on the required test. The Iub interface provides the widely used ATM (Asynchronous Transfer Mode) interface (transmission speed: 156Mbps, 1.5Mbps/2Mbps, 6.3Mbps, 25Mbps) as well as 10Mbps/100Mbps Ethernet, which is expected to become the mainstream in the future. The ATM interface is optionally compatible with HSDPA, making it possible to test HSDPA Node B. By using the optional modules, it is possible to check Node B transmission of user data by performing not only packet transfer tests, voice call tests and ISDN videophone tests, but also RF characteristics tests by using the MD8391A in combination with the Digital Mobile Radio Transmitter Tester MS8609A and the Vector Signal Generator MG3700A. A maximum of two interface modules can be used, making it possible to test two Node B's simultaneously.

## [Primary Features / Functions]

- Permits testing of a base station in an environment close to actual operation

By controlling the Node B from the Iub interface, it is possible to create a testing environment equivalent to an operational base station.

- Covers all test items required during the manufacturing process

By combining the interface module with optional modules, it is possible to perform voice call tests, videophone tests, packet transfer test and BER (Bit Error Rate) tests.

Furthermore, by combining the MD8391A with the Digital Mobile Radio Transmitter Tester MS8609A and Vector Signal Generator MG3700A, it is possible to perform RF characteristic testing in accordance with the 3GPP TS25.141 standard[\*4].

- Remote control function

Since the MD8391A has built-in remote control commands for automating production line inspection, an automated inspection system can be created using an external PC controller in combination with other peripheral equipment.

- Ability to create any protocol sequence scenario

By writing a scenario[\*5] in the widely used C programming language, it is possible to perform any desired signalling test. By further combining this with the optional software RNC Simulation Designer MX839070A, it is possible to create scenarios using a GUI (Graphical User Interface)[\*6] without requiring knowledge of the C language programming.

- Compact and lightweight

350(W) x 132.5(H) x 373(D), less than 10kg, fits in a 19-inch rack.

## [Target Markets and Application]

- For manufacturing, installation and maintenance of W-CDMA/HSDPA Node B by 3G/3.5G network suppliers and operators.

## [Terminology]

- ※1 **HSDPA : High Speed Downlink Packet Access**

HSDPA is the high speed packet data transfer technology of the 3.5G mobile phone system. It is included in the 3GPP's Release 5 specifications.

- ※2 **Node B** : The Node B is the function within the W-CDMA network that provides the physical radio link between the UE (User Equipment) and the RNC (Radio Network Controller). Analogies can be drawn between the function of a Node B and those of a BTS (Base Transceiver Station).

- ※3 **Iub** : Interface between an RNC and a Node B

Interface between the RNC (Radio Network Controller) and the Node B.

※4 **3GPP TS25.141 standard**

A set of standards for radio performance testing by the 3GPP (3<sup>rd</sup> Generation Partnership Project), an international standardization project for 3G mobile phones.

※5 **Scenario**

The term for a protocol sequence written to test specific items. Various tests can be performed by writing a scenario (C language program) that defines signalling sequence and messages from the layer 3.

※6 **GUI : Graphical User Interface**

The term for a user interface that uses a large amount of graphics to provide information to the user, and uses a pointing device such as a mouse for basic input operations.