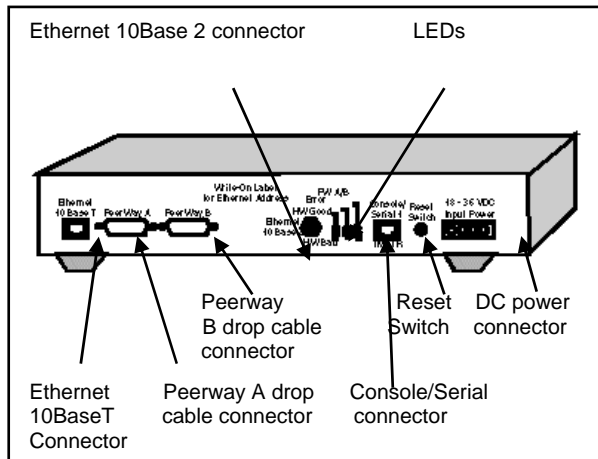


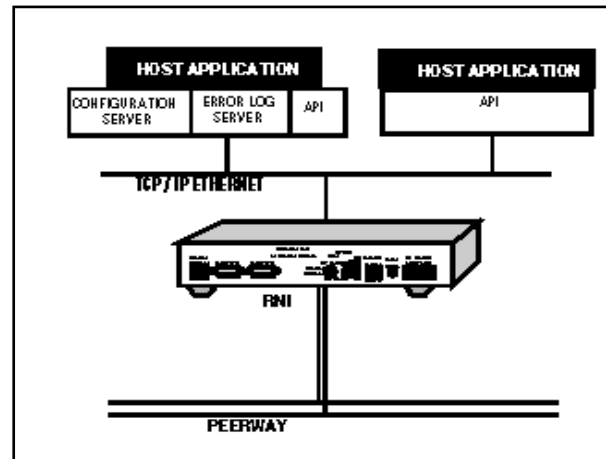


# RS3™ Network Interface (RNI™) V5.0

## RNI™ Version 5.0 for Windows® XP and Windows Server® 2003 Operating Systems



RNI™ back view with connections.



Multiple hosts accessing an RNI™. One host supplies RNI configuration, security, error logging, and boot services. Additional hosts need only the API library.

- Increase your application options with TCP/IP Ethernet connectivity.
- Improve process availability and consistency by integrating RS3™ information with other applications in the plant.
- Protect the integrity of the process with RNI™ interface security features.

### Benefits

**Increase your application and platform choices with RNI™ Ethernet connectivity.** As more applications become available to help you better manage your plant, you need to be able to implement them easily and cost effectively. The RNI™ provides the open connectivity required to integrate information today and in the future. RNI Version 5.0 supports Microsoft Windows® XP and Windows Server® 2003 operating systems. The RNI also provides the ability to communicate with the

growing family of Emerson Process Management software applications.

**Provide a secure, yet flexible, window to your RS3™ process data.** The RNI provides process information to third-party applications and to Emerson Process Management applications. With flexible password security options, the RNI allows you to control the level of access to ensure data integrity.

**Save time with the Application Programming Interface (API) that provides a library of run-time services.** If the application you are using is already integrated with the RNI interface, you are ready to begin accessing RS3™ information immediately. But, if you need to develop your own interface, you'll appreciate the time-saving API Toolkit that provides you with a library of run-time services and example programs to make interface development easier.



## RNI Product Description

**Dynamic Data Service (DDS) gives your applications RS3 dynamic data information in a variety of ways.** DDS reads dynamic process data on a periodic basis for use by applications such as plant historian or process optimization. The three subscription options for host applications to acquire dynamic data are:

1. Exception: Data is sent only when data has changed relative to a deadband. This is the most efficient data collection method because data is constantly monitored, but sent only when a change has occurred.
2. Periodic: Data is sent at specified intervals. This method is less efficient because all requested data is sent at predetermined intervals regardless of data status.
3. Polled: Data is sent only when a request is made. This is the least efficient method of data collection because each data request must be made individually.

**Message Monitor Service allows your applications to read RS3 system information.** Host applications can receive RS3 process management system alarm messages, data compression events, and process event messages.

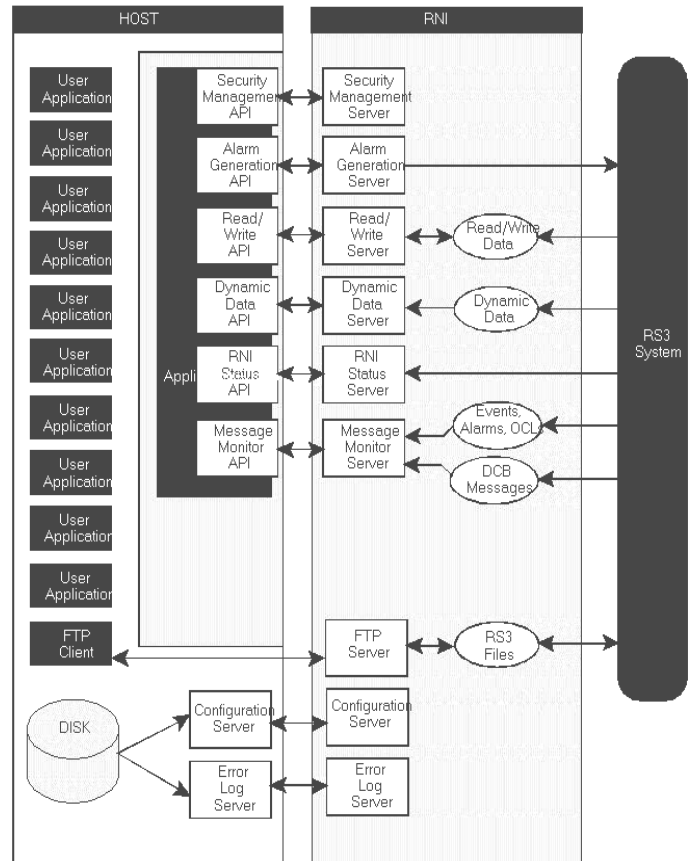
**Read/Write Service allows your applications to read and write RS3 system information.** Using this service, host applications are able to read or write RS3 Dynamic process data or static data such as engineering units, alarm limits, tag names, and mode.

**Security System ensures the integrity of the process.** Security features allow remote access while protecting the process control environment.

**Alarm Service enables alarms and messages to be manipulated from your application.** Host applications can generate, acknowledge, and clear RS3 alarms or send messages to RS3 event lists.

**Status Server enables applications to access status of RS3 system files.** The Status Server provides application access to plant status,

ControlFile status, RNI status, RS3 system time, and RS3 block directories.



RNI™ Software Overview

**File Transfer Protocol (FTP) Server enables easy file exchange between applications.** With the appropriate user privileges, FTP clients on the TCP/IP network have open access to:

- Report Files—giving managers quick access to critical operations data.
- Configuration Files—enabling engineers to utilize powerful off-line implementation tools.
- Array Files—facilitating collection of batch data analysis.



MTCC Folders available using RNI V5.0 and FTP

ABC Data	Reports
ABC Log	Report Config.
SRU Data	Plant Config.
ASCII Files	Plant Program
Process Graphics	Console Config.
Process Symbols	RBL Files
PW I/F Config.	Trend Data
PW I/F Program	

**Application Programming Interface (API) Toolkit enables you to tailor RNI software to your needs.**

The API Toolkit software includes:

- API Library
- Configuration Server
- Error Log Server
- C source code examples

The Configuration Server and Error Log Server can provide service for multiple RNIs—but the software needs to be installed only on one host system.

**Functional Specifications for RNI Version 5.0**

Network Requirements	
Network Protocol	TCP/IP 802.3 Ethernet.
Number of RNI's per Peerway	3 Maximum One RNI per Peerway is recommended for installations with multiple Peerways.
Ethernet connector	10BaseT or 10Base2
Maintenance port	9600 baud, RS-232

Dynamic Data Server Specifications	
Client Sessions	0-20
Controllers	1-75
ControlBlocks	1-4,000
Points	1-7,500
Subscriptions	1-15,000
Number of update rates	4
Table update rate	0.5s to 100,000s
Throughput for DDS monitoring from Peerway	~1,500 values/s
Transfer to client application	~400 values/s

Read/Write Server	
Clients	Unlimited
Points/request	Unlimited
Points/s (read)	50 values/s maximum
Points/s (write)	5 values/s maximum

Message Monitor	
Client Sessions	0-20
Message Types	Alarms, Events, Data Compression Events, Batch Alarms, and Operator Changes

Alarm Services	
Client Sessions	0-10
Supported Operation Types	Generate, Acknowledge, and Clear

Status Server	
Client Sessions	Unlimited
Request Types	RS3 time, ControlFile Status, RNI Status, Plant Status, Block Directory

File Transfer Protocol (FTP) Server	
Sessions	0-10

Security Services	
Simultaneous user clients	2-20
Number of users in registrator file	Unlimited
Security Types	Username, Password, Host name, and Attributes
Security Levels	View, Operator, Supervisor, Configurer, Manager, and Recipe Manager

Configuration Server	
RNI's Served	Unlimited
Configuration files	Unlimited

Error Logger	
Log destination	Host file, RNI serial port, or both

**Note:** Configuration options are provided for flexibility. It is not feasible for all configuration



parameters be set to maximums. All configuration parameters are preset to defaults.

Environmental Specifications	
Temperature Range	0-50°C (32-122°F)
Average Heat Dissipation	85 Btu/hr (configuration dependent)
Relative Humidity	0-95% non-condensing
Environmental Rating	G1
Installation Category	I
Pollution Degree	2
Altitude	2,000m (6,562 ft)

Physical Specifications	
Mounting	19 inch rack
Weight	~5 kg (11 lbs)
Input Voltage	18-36 Vdc
Average power consumption	20W
Dimensions	430 x 89 x 412mm (17.2 x 3.5 x 16.2in)

Ordinary Locations Approvals	
Canadian Standards Association	
CE marking affixed	
Nationally Recognized Testing Laboratory (NRTL)	

## Ordering Information

### RS3 Network Interface (RNI) Hardware

Item	Code
Model Number	6600RNS
Version	1 Rackmount
Zero Fill	0
Ethernet Cable Option <b>(Note 2)</b>	1 10BaseT (Default Setting) 2 10Base2
DC Power Cable Option <b>(Note 1)</b>	2 14 AWG, A/B bus 4 10 AWG, A/B bus
Other Options, None	0
Typical Model Number	6600RNS10120

**Note 1** Included within the 6600RNS model number are the 2 Peerway drop cables and one power cable.

**Note 2** The Ethernet cable option is configurable using a jumper on the RNI motherboard.

### RNI Run-Time License

Item	Code
Model Number	6220HT
Typical Model Number	6220HT0EAAAA00

**Note 1** One run-time host license is required for each host computer communicating with an RNI through any software application.



**RNI Boot and API Toolkit – RNI V5.0 (Windows XP, Windows Server 2003 Operating System)**

Item	Code
Model Number	6220RN
Zero Fill	0
License Type	E 1 CPU Management License F 1 CPU Right to Copy License
Purchase Classification	A License Purchase D Software Media and Release Documentation Only G Product Revision with current Foundation Support H Product Upgrade with current Foundation Support J Product Revision without current Foundation Support N Product Upgrade without current Foundation Support
Software Media and Release Documentation <b>(Note 5)</b>	A None C Windows XP and Windows Server 2003 (CD ROM) <b>(Note 4)</b>
Application Toolkit Manual <b>(Note 5)</b>	A None B English size A C English- European size A4
Zero Fill	00
Media Version, Latest Revision	0
Typical Model Number	6220RN0EACB000

**Note 1** 6220RN combines the RNI Boot and API Toolkit into one media kit for Windows XP and Server 2003. This is a combination of RNI software 6220RB and 6220RW for use with P1R3.4 or greater RS3 base system software. For systems with less than P1R3.4 use RNI software 6220RB and 6220RA/6220RW (RNI V3.0).

**Note 2** One CPU Management license is required per RNI when using a third-party software application (like Matrikon OPC Server). If you are connecting the RNI to an Emerson Process Management software application (DeltaV Operate for RS3) you do not need this software license.

**Note 3** If development is being done on more than one host computer, not connected to the same RNI, the appropriate number of Management Licenses must also be purchased. If a second development PC is connected to the same RNI, the existing Management License can be used for the second development PC.

**Note 4** Requires Windows XP Pro or Windows Server 2003 Operating System

**Note 5** Manuals are in English text only



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