PRODUCT MANUAL

Data Bridge

eDART™ & *eDART* Data Manager (EDM) Software Service

Training and Technology for Injection Molding

PRINT DATE 04.01.2020
REVISION NO. 0

PRODUCT MANUAL

Data Bridge

eDART™ & *eDART* Data Manager (EDM) Software

Service

INTRODUCTION

Read, understand, and comply with all following instructions. This guide must be kept available for reference at all times.

DISCLAIMER

Inasmuch as RJG, Inc. has no control over the use to which others may put this material, it does not guarantee that the same results as those described herein will be obtained. Nor does RJG, Inc. guarantee the effectiveness or safety of any possible or suggested design for articles of manufacture as illustrated herein by any photographs, technical drawings, and the like. Each user of the material or design or both should make his own tests to determine the suitability of the material or any material for the design as well as the suitability of the material, process, and/or design for his own particular use. Statements concerning possible or suggested uses of the material or designs described herein are not to be construed as constituting a license under any RJG, Inc. patent covering such use or as recommendations for use of such material or designs in the infringement of any patent.

PRIVACY

ALERTS

The following three alert types are used as needed to further clarify or highlight information presented in the manual:

Term

A definition of a term or terms used in the text.

NOTE *A note provides additional information about a discussion topic.*

CAUTION *A caution is used to make the operator aware of conditions that can cause damage to equipment and/or injury to personnel.*

PRODUCT DESCRIPTION

OVERVIEW

Data Bridge from RJG, Inc. is a Microsoft Windows-based *eDART™ and eDART* Data Manager (EDM) software service. The Data Bridge software service enables users of the *eDART* and EDM products to transfer summary data files from the *eDART*/EDM to enterprise resource planning (ERP), material requirements planning (MRP), manufacturing execution system (MES), or other similar third-party systems. All regular eDART and EDM services continue to run and are unaffected by the Data Bridge software service.

OPERATION

The Data Bridge software service utilizes transmission control protocol (TCP) connections on port 2275 to back up summary files (.ph2 format) from the *eDART* system(s) to a network location; the service then reads the files and generates JSON files from the .ph2 files, saving the JSON files to a location specified during installation and configuration of the service.

The Data Bridge software service runs a JSON data cleanup cycle every 24 hours; files older than the configured number of days (specified at installation) are deleted. The interval (in seconds) which the Data Bridge software service extracts and converts files can also be configured at installation.

> ***NOTE*** *The Data Bridge software service ONLY provides the conversion of .ph2 files to JSON files. Customer is solely responsible for creating and maintaining own program which can read the JSON-formatted data from stdin and convey it to the desired system for use.*

DATA CONFIGURATION

Each summary JSON file provides *eDART* system data including a UNIX Epoch timestamp (time in seconds since January 1, 1970, 00:00:00 GMT), and available process values monitored and recorded during a job; the information available depends upon the job setup and equipment installed. The process values are presented in base units of the *eDART* system, which are as follows:

- Temperature in °C
- Length in inches (in.)
- Force in pounds (lb.)
- Time in seconds (sec)
- Pressure in pounds/in^2 (psi)
- Fluid flow rate in gallons per minute (gpm)
- Acceleration in feet/sec^2
- Power in watts (W)
- Energy in kilowatt hours (KWh)

The following special values are also provided:

- “INACTIVE” shuttle position was inactive
- “FLTMAX” invalid data
- “NAN” not a number
- “INF” infinity
- “-INF” -infinity

DATA INTEGRITY

The Data Bridge software service tracks which files have been backed up in the event that connection is lost. The Data Bridge service will wait until connection is restored, and then will resume file transfer and conversion from the where it left off.

EXAMPLE

Below is an example of the exported and converted summary JSON data:

{
“File”:”05-dec-2016_14_52.summary.ph2”,
“Machine_Name”:”RJG/Machine2”,
“Mold_Name”:”MP37/matr4/38573”,
“summary_data”:[
{
“Time Stamp”:1002023628,
“Efficiency:Production”:0.000000,
“Process Time:Fill Deceleration #2”:-0.013239,
“Pack Rate:Post Gate #2”:73442.898438,
“Process Time:Fill &Pack Time #2”:0.529396,
“Process Time:Cavity Pack #2”:0.102092,
“Static Pressure Loss:Inj. to End Cavity #2”:154.118591,
“Static Pressure Loss:Post Gate to End of Cavity #2”:1724.550781,
“Static Pressure Loss:Inj. to Post Gate #2”:-1570.249634,
“Process Time:Fill Deceleration #1”:-0.012387,
“Process Time:Cavity Fill #2”:0.424761,
… (all the summary data for the given cycle)
},
{
“Time Stamp”:100202362,
…
},
…
]
}

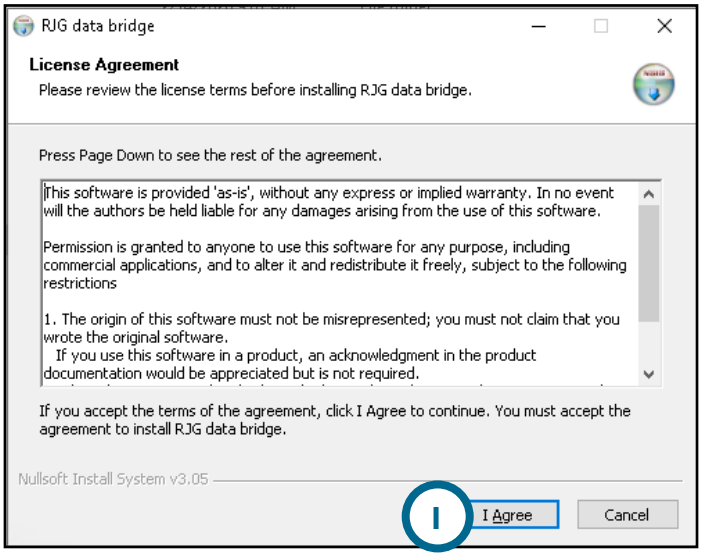
INSTALLATION

Installation of the Data Bridge software service is completed in two sections: server-side installation (the EDM server) and *eDART*-side installation. Perform the server-side installation first, followed by the *eDART*-side installation.

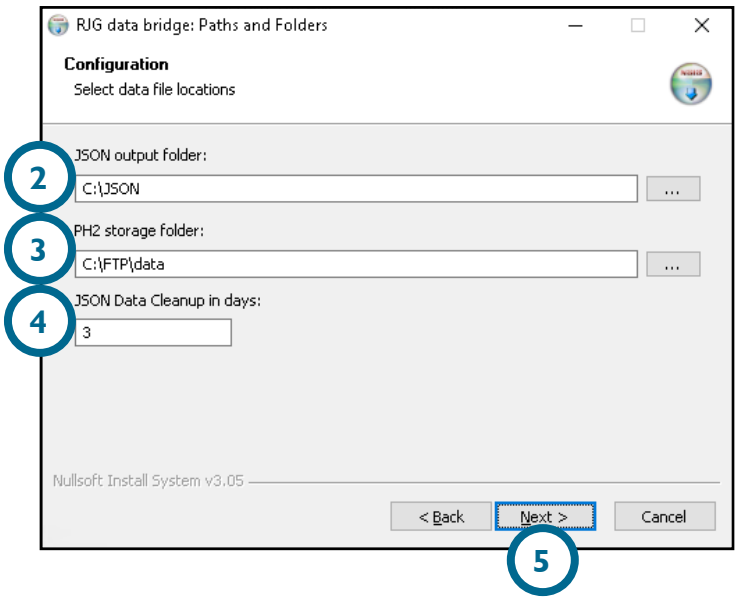
SERVER-SIDE INSTALLATION

1. Run the server-side Data Bridge software service installer.

- Open the folder containing the Data Bridge installer; run the RJG_data_bridge.exe file.
- Read the end user license agreement, then click the 1 I Agree button to accept.

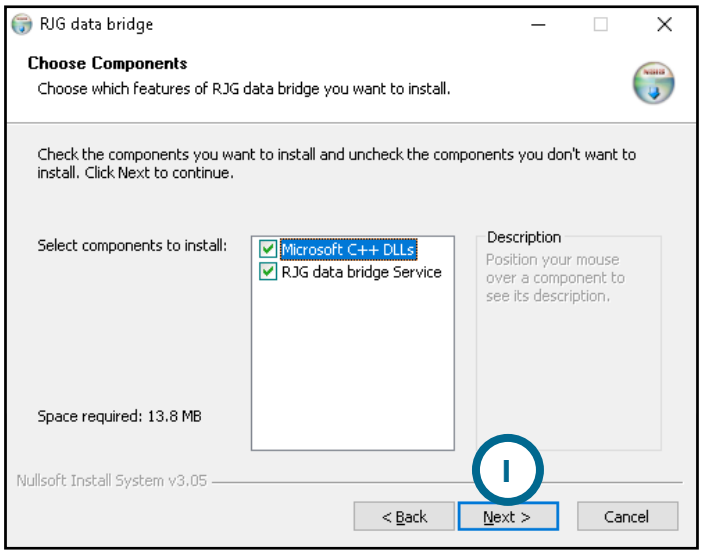


- Choose the 2 JSON and 3 .ph2 file storage locations, and the 4 JSON file data cleanup interval (in days); click the 5 Next button to continue with installation.

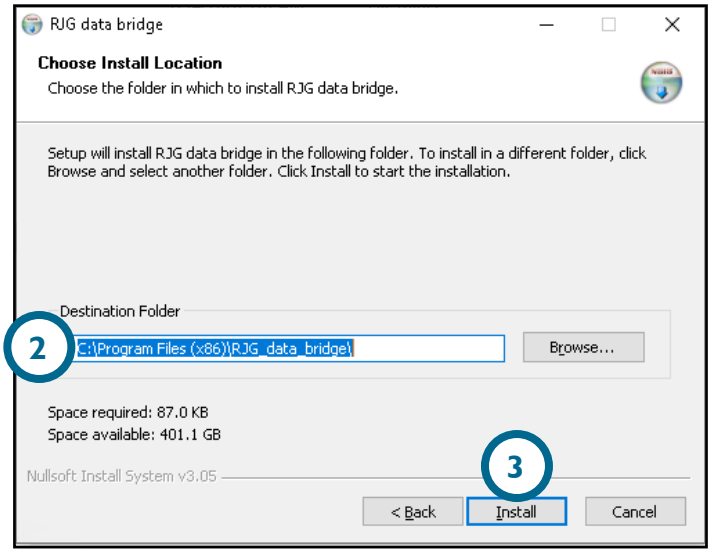


SERVER-SIDE INSTALLATION (*continued*)

- On the Choose Components screen, click the 1 Next button to continue installation.



- Choose the installation location 2 destination folder, then click the 3 Install button to begin installation.

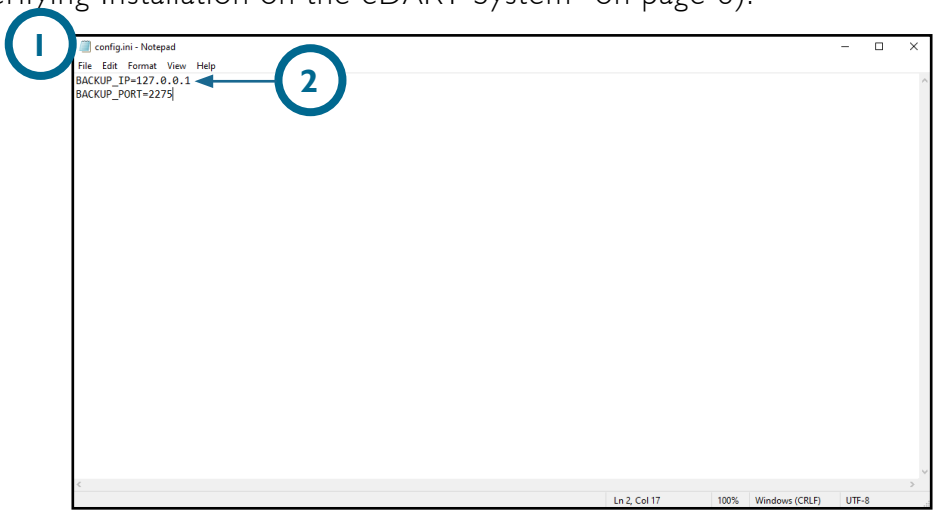


The service will run automatically at the end of installation.

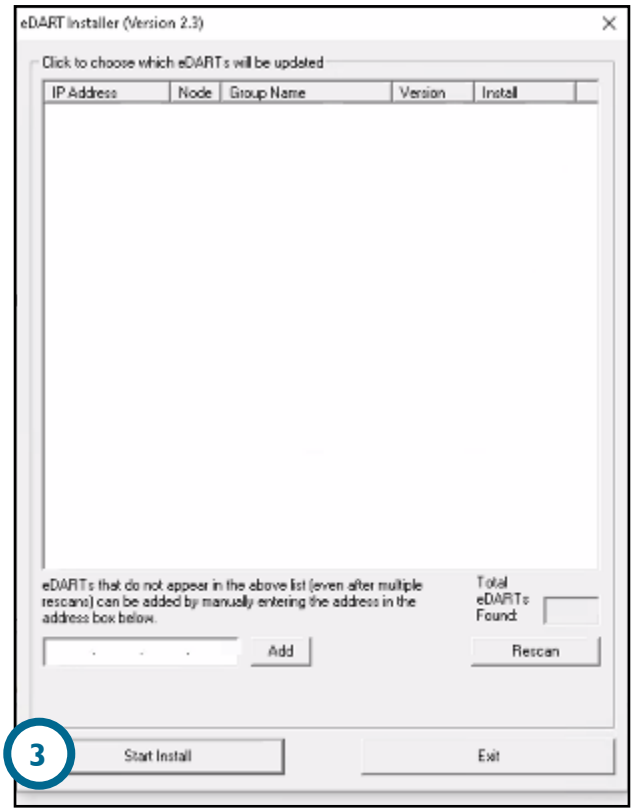
eDART-SIDE INSTALLATION

2. Run the *eDART*-side Data Bridge software service installer.

- Open the folder containing the 1 config.ini file; open the 1 config.ini file using a text editor; edit the 2 BACKUP_IP=XXX.X.X.X text to have the EDM server's IP address. After installation, this setting can be verified by referencing each *eDART* system's *eDART* Configuration software page (refer to "Verifying Installation on the eDART System" on page 6).



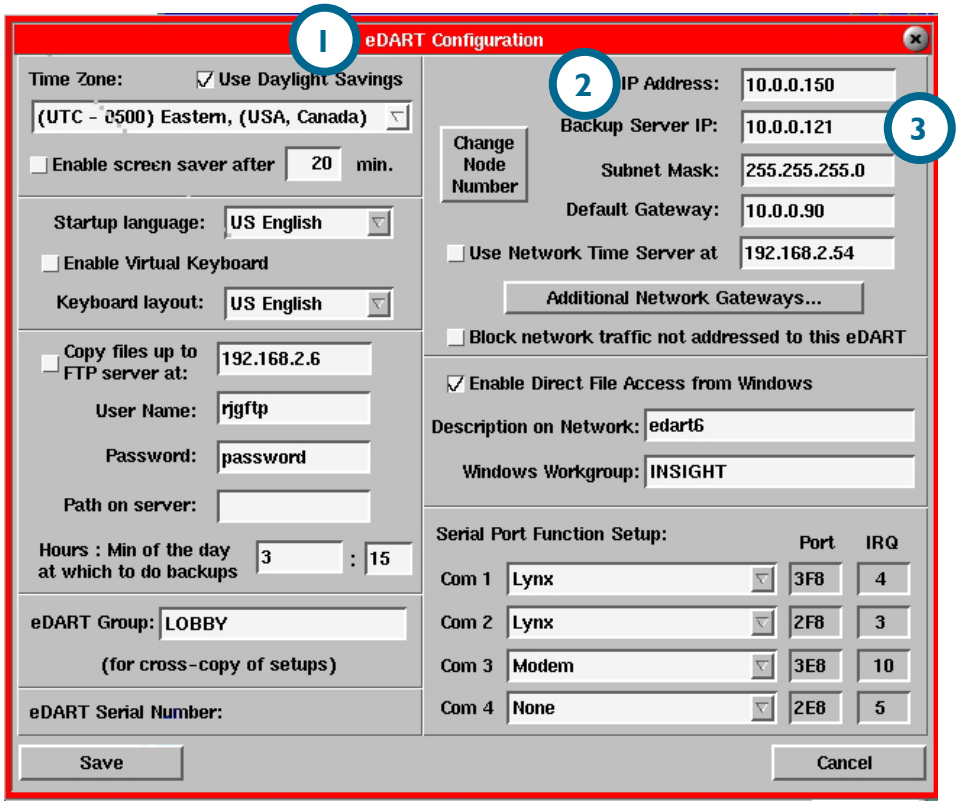
- Run the edart_installer.exe file.
- Select the desired *eDART* systems listed from which to collect summary file; click the 3 Start Install button to start the install.



The installer will automatically edit a configuration file in each *eDART* system, and set the IP address of the server. No reboot is required after the installer is finished.

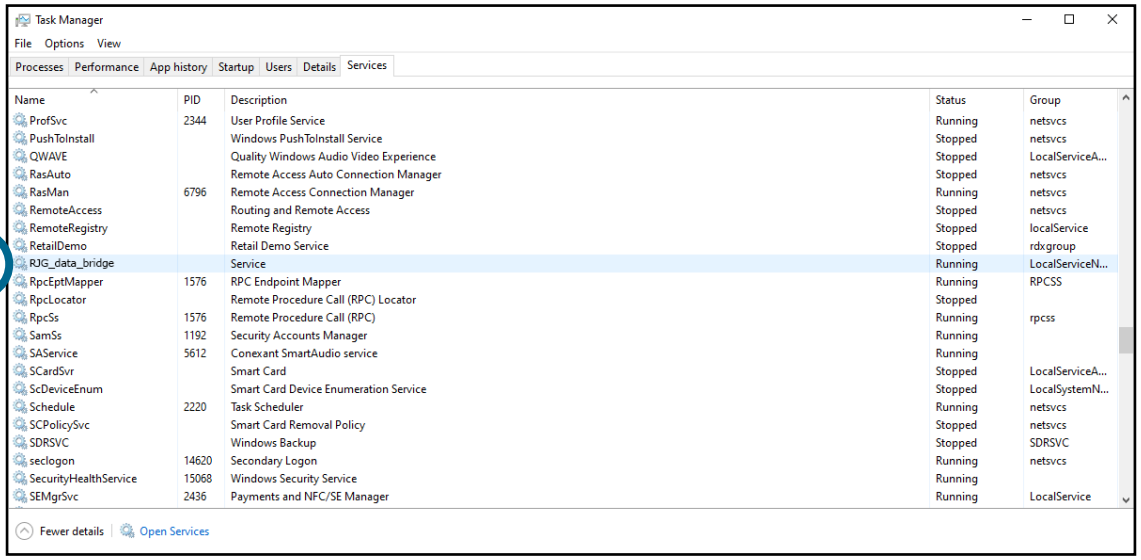
VERIFYING INSTALLATION ON THE *eDART* SYSTEM

After installation, each *eDART* system's 1 *eDART* configuration page will display the 2 IP Address and 3 Backup Server IP address.



CONFIGURATION CHANGES AFTER INSTALLATION

If any configuration changes are to be made, the service must be stopped first; changes can then be made, and the service must be restarted for them to take effect. The service can be found under 4 Task Manager>Services>RJG_data_bridge.



LOCATIONS / OFFICES

USA

RJG USA (HEADQUARTERS)
3111 Park Drive
Traverse City, MI 49686
P +01 231 947-3111
F +01 231 947-6403
sales@rjginc.com
www.rjginc.com

MEXICO

RJG MEXICO
Chihuahua, Mexico
P +52 614 4242281
sales@es.rjginc.com
es.rjginc.com

FRANCE

RJG FRANCE
Arnithod, France
P +33 384 442 992
sales@fr.rjginc.com
fr.rjginc.com

GERMANY

RJG GERMANY
Karlstein, Germany
P +49 (0) 6188 44696 11
sales@de.rjginc.com
de.rjginc.com

IRELAND/UK

RJG TECHNOLOGIES, LTD.
Peterborough, England
P +44(0)1733-232211
info@rjginc.co.uk
www.rjginc.co.uk

ITALY

NEXT INNOVATION SRL
Milano, Italy
P +39 335 178 4035
sales@it.rjginc.com
it.rjginc.com

SINGAPORE

RJG (S.E.A.) PTE LTD
Singapore, Republic of Singapore
P +65 6846 1518
sales@swg.rjginc.com
en.rjginc.com

CHINA

RJG CHINA
Chengdu, China
P +86 28 6201 6816
sales@cn.rjginc.com
zh.rjginc.com

KOREA

CAEPRO
Seoul, Korea
P +82 02-2113-1870
sales@ko.rjginc.com
www.caepro.co.kr