

Core Analysis Solutions

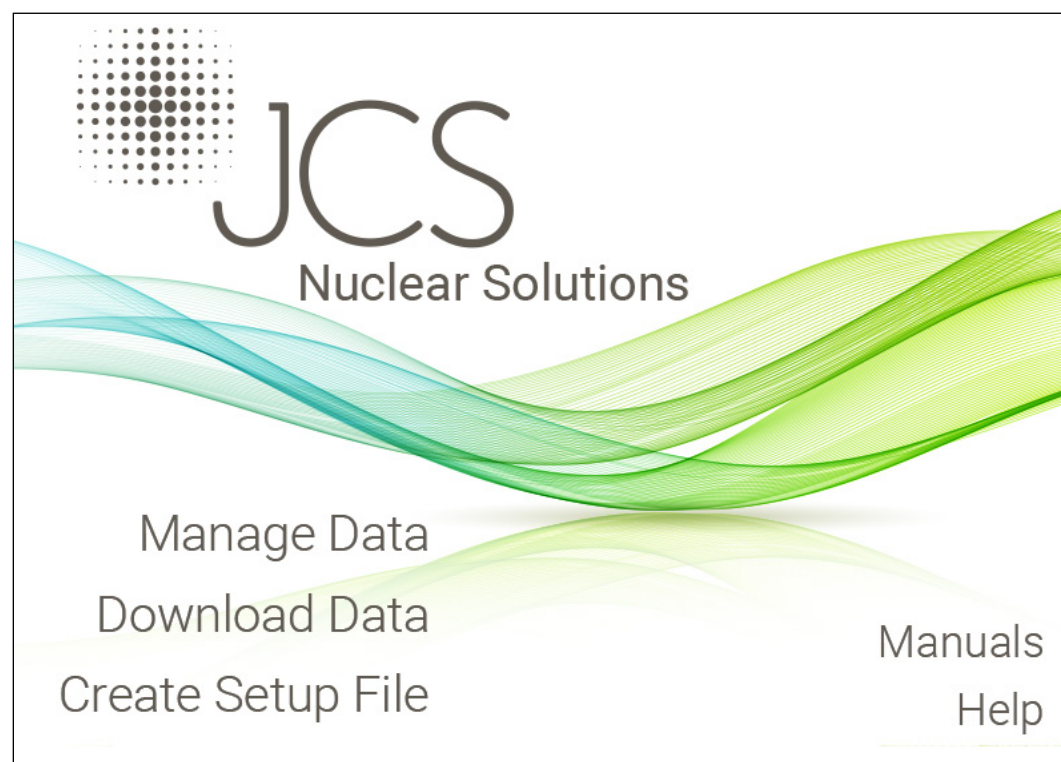


Data Manager Software

(V 1.1.0)



The GMS300 Series Data Manager Software



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1. Introduction

This document provides an overview of the installation and use of the GMS Core Analyser Data Manager software application.

The GMS Core Analyser Data Manager is used in conjunction with the ‘GMS-3 Series’ Instruments which form part of the JCS Core Analysis Solutions.

The Data Manager allows the user to perform the following functions:

- Download & Delete of Instrument sample data files
- Analysis & Export of sample data
- Creation of Instrument setup files

This version of the User Guide refers to version ‘1.1.0’ of the Data Manager software application and supersedes all previous versions.

Previous versions of the software application will be upgraded by installing this version.

2. System Requirements

The GMS310 Data Manager requires the following minimum system:

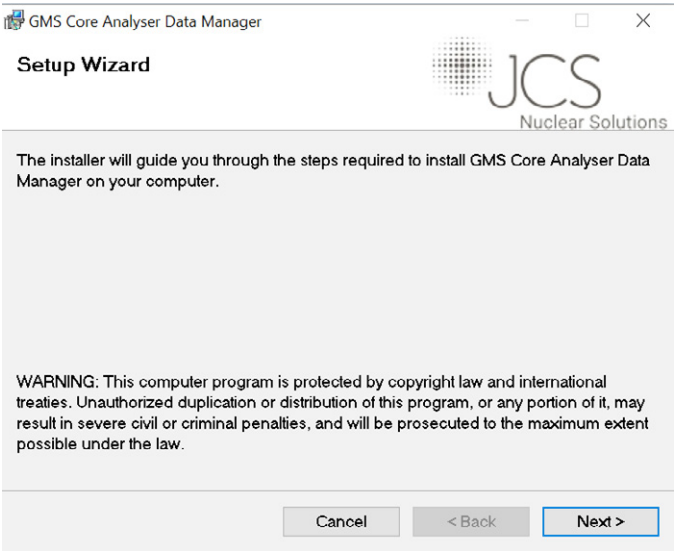
- Windows XP (Service pack 3 or higher)
- 1GB RAM
- 250MB Disk space
- 1024 x 768 Screen Resolution
- USB port



3. Installation

The GMS310 Data Manager is supplied on an installation CD.

Once the CD has been inserted into the PC you will be prompted to run the ‘JCS Installer’. The installation CD comes preloaded with an ‘autoplay’ file that will instruct Windows to prompt you to install the application. If you are not prompted automatically, run the ‘setup.exe’ on the CD to start the installation process.



During the installation process several sub-folders are created under the root ‘Program Files*’ directory, as per the following structure:

- Program Files *
 - JCS
 - GMS310 Data Manager
 - Downloads**
 - Downloaded data files
 - Errors
 - Data files that ‘error’ during the download process
 - Exported Data**
 - Exported data files (‘XLS’, ‘CSV’ and ‘PDF’)
 - Instrument Guides
 - Instrument Guides deployed during application installation
 - Instrument Setup Files
 - Instrument Setup files created by the Data Manager

*Dependant on the PC environment (i.e. 32 or 64bit)

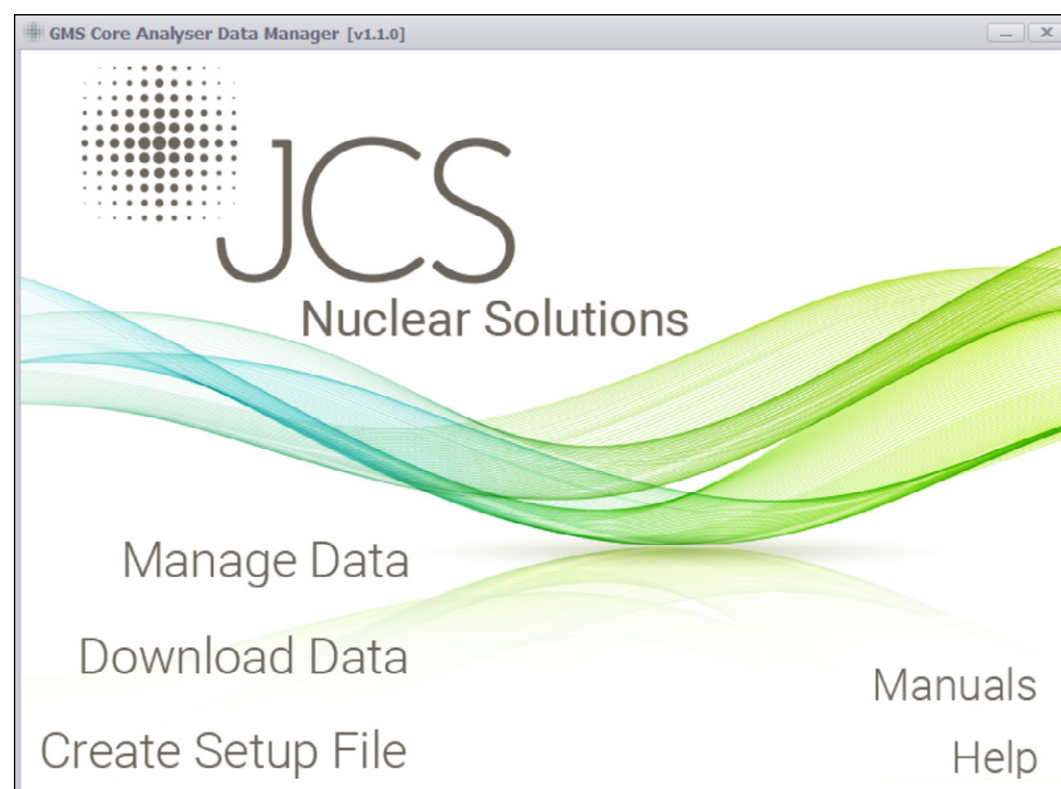
**Previous versions of the software application installed ‘Uploads’ and ‘Extracts’ sub-folders, these are replaced by ‘Downloads’ and ‘Exported Data’ as part of the upgrade to this version. All previous data is kept and moved to the new folders.



4. Using the GMS310 Data Manager

4.1 Launching the GMS310 Data Manager

The GMS310 Data Manager can be launched as usual within Windows environment from several places, including the desktop icon, as created during the installation process.

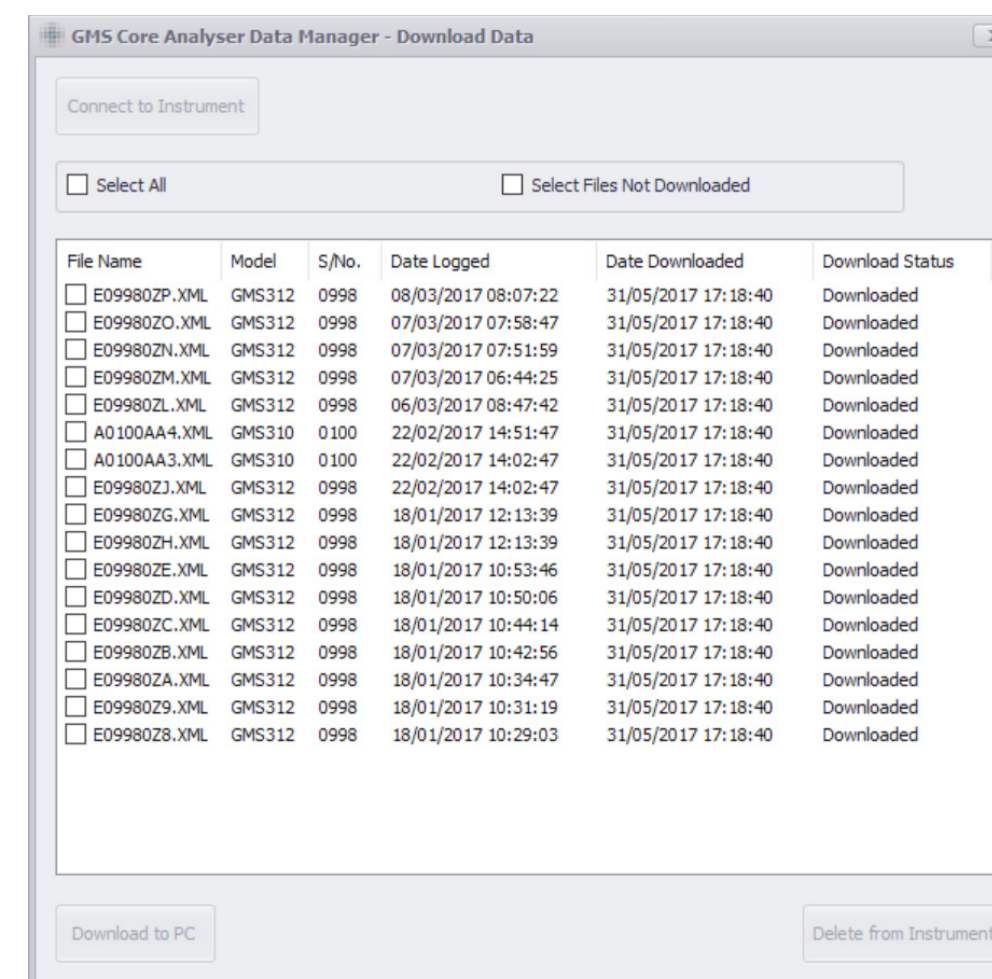


The main screen allows the following actions to be carried out:

- 'Manage Data' – launches the Manage Data screen
- 'Download Data' - launches the Download Data screen
- 'Create Setup File' – launches the Create Instrument Setup File screen
- 'Manuals' - opens the Instrument User Guide sub-folder
- 'Help' - opens the Data Manager User Guide
- JCS logo – hyperlinks to the JCS website – www.johncaunt.com

4.2 Download Data

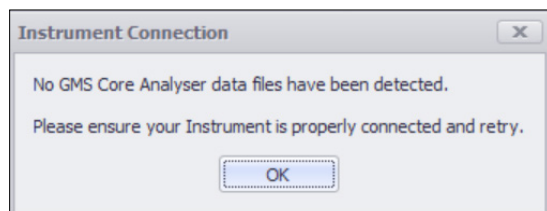
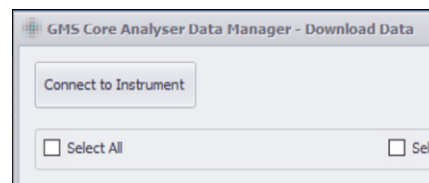
Selecting 'Download Data' from the main screen will open the 'Download Data' screen as shown below:





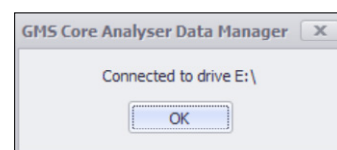
4.2.1 Connecting to the Instrument

Once the Instrument has been connected to the PC (via. USB port) the GMS310 Data Manager makes contact by using the 'Connect to Instrument' button ►



◀ If no data files can be detected by the GMS310 Data Manager then this message will appear.

To confirm which external drive/port you are connected to, press the 'Shift' and '~' keys together and the following message will appear ►



4.2.2 Downloading and Deleting data files

Once connected to the instrument, the GMS310 Data Manager allows for data files to be downloaded to the PC and permanently deleted from the instrument.

You can select and download and delete one, many or all the data files on the instrument.

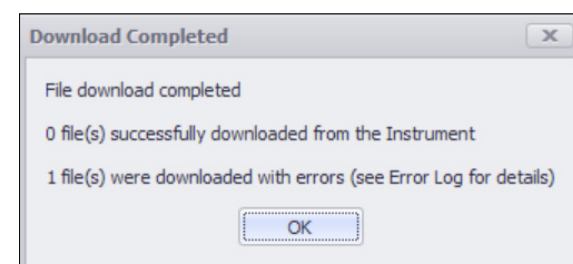
The Download Data screen shows all data files held on the instrument together with the current 'Download Status' for each file.

Once files have been selected, both the 'Download to PC' and the 'Delete from Instrument' buttons are enabled for use.

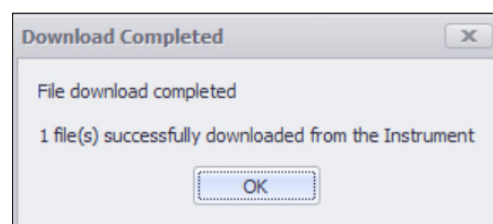
4.2.3 Downloading data files

Data files are downloaded from the instrument to the PC using the 'Download to PC' button.

On completion of the download process, the following message appears ►

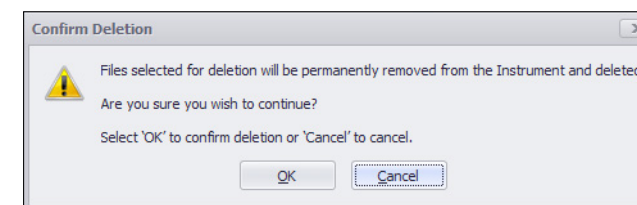


◀ Should there be a problem with one or more of the files during the download process then the 'error' files will be downloaded to the 'Error' folder and this message will appear.



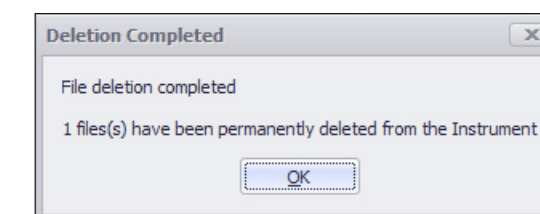
4.2.4 Deleting data files

Data files are deleted (permanently) from the instrument using the 'Delete from Instrument' button.



◀ Before the deletion process starts this message appears:

On completion of the deletion process, the following message will appear ►

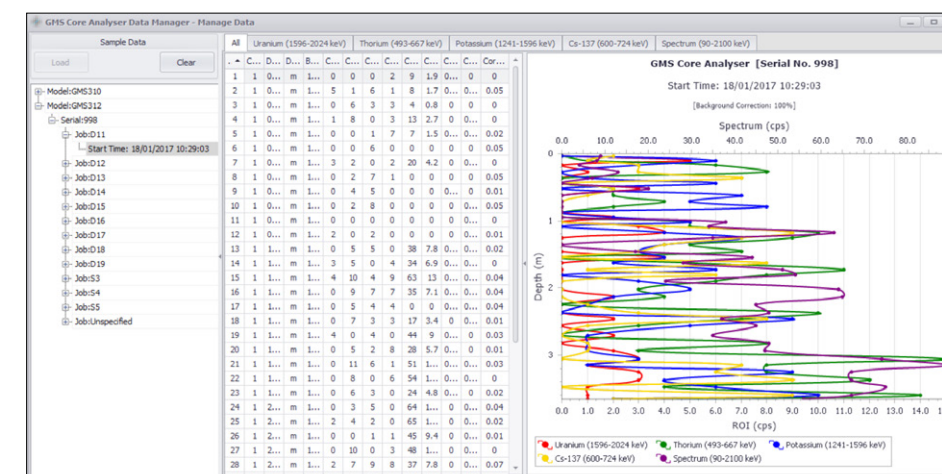


4.3 Manage Data

Selecting 'Manage Data' from the main screen will open the 'Manage Data' screen as shown below. The Manage Data screen is used for analysis and export of session Sample Data.

The screen is divided into three sections, each of which can be adjusted in terms of size/width using the section frame dividers:

- Sample Data (selection and load)
- Grid Data area
- Chart area





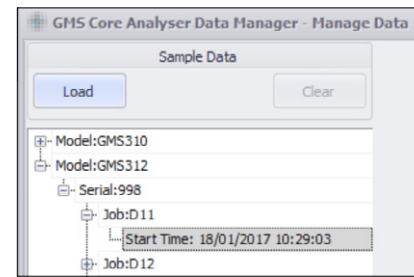
4.3.1 Selecting and Loading Sample Data

Session Sample Data is selected and loaded using the 'Sample Data' tree view and the 'Load' & 'Clear' buttons, as shown:

Available sessions are initially grouped by Instrument Model then by Serial No, Job and then session Start Time.

The 'Load' button becomes enabled once a session has been selected in the tree view; the 'Clear' button becomes available once a sample has been loaded into the 'Grid Data' & 'Chart' areas.

Pressing 'Load' will load the sample data into the 'Grid Data' and 'Chart' areas for analysis and pressing 'Clear' will empty/clear the sample data from the 'Grid Data' and 'Chart' areas.



4.3.2 Analysing Sample Data

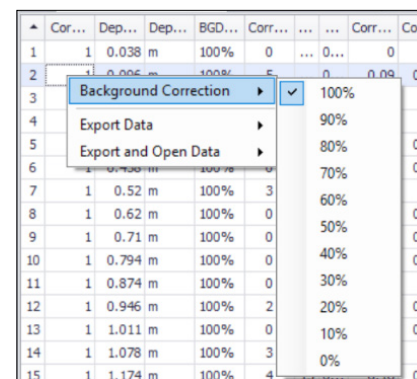
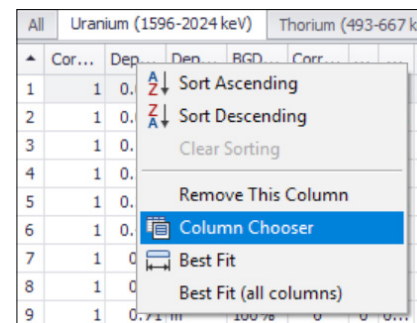
Once loaded, the session sample data is shown in both the 'Grid Data' and 'Chart' areas. The data recorded in each ROI can be shown by selecting the appropriate tab, the 'All' tab shows the data for all ROIs at the same time.

4.3.2.1 Grid Data

The 'Grid' data area allows for the data to be sorted and filtered by using the column header.

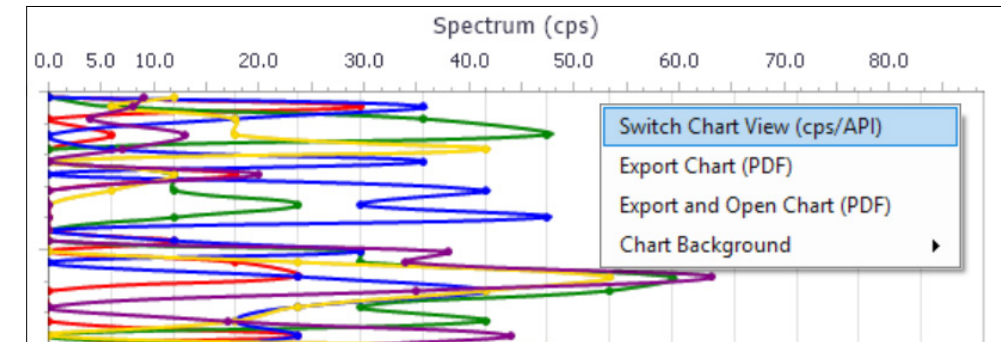
The Grid column ordering can be changed as well as columns made visible/invisible using the mouse right click menu option whilst on the column headings (only a subset of the columns are initially made visible by default)

The amount of Background Correction applied to the 'Corrected' values (in both the Grid and Chart) can be adjusted using the mouse right click menu option whilst in the Grid data area.



4.3.2.2 Chart

The 'Chart' area allows the user to zoom into the chart for closer analysis of the data, whilst also switching between 'cps' (ROIs and Spectrum) and 'API' (API, U, TH & K) views using the mouse right click menu option.



4.3.3 Exporting Sample Data

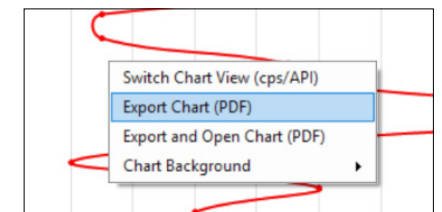
Data can be exported from both the 'Grid Data' and the 'Chart' areas separately as required.

The export options are selected using the mouse right-click function. You can either export straight out to a file or export and open using the PC's default application.

| | | | | | | |
|---|-------|------|-----|------|------|-----|
| 1 | 0.6 m | 100% | 0.9 | 32.3 | 0.02 | 0.1 |
| 1 | | | 1.1 | 32 | 0.02 | 0.1 |
| 1 | | | 2.3 | 31.4 | 0.02 | 0.1 |
| 1 | | | 1.1 | 29.3 | 0.03 | 0.1 |
| 1 | | | | | 0.02 | 0.1 |
| 1 | 1.6 m | 100% | | | | 0.1 |
| 1 | 1.8 m | 100% | 0.6 | 29.9 | | 0.0 |
| 1 | 2 m | 100% | 0.6 | 27.5 | | 0.0 |
| 1 | 2.2 m | 100% | 0.8 | 26.7 | 0.02 | 0.0 |
| 1 | 2.4 m | 100% | 0.3 | 24.3 | 0.02 | 0.0 |

The 'Grid Data' area offers two options as to what can be exported, 'Data Only' and 'Full':

- Data Only:
Visible Column Data
- Full:
All Column Data



Data within 'Grid Data' area exports out to 'XLS' (native to Microsoft Excel) and 'CSV' file formats. The 'Chart' area exports out to the 'PDF' file format.

Exported data files are saved in the 'Exported Data' sub-folder with a unique date/time stamp.



4.4 Create Setup File

The Create Instrument Setup File screen allows the user to generate Setup files that can then be uploaded to an instrument for Sample data capture.

- The screen is divided into two areas:
- Top – User configurable Session information
 - Bottom - ROI settings (fixed by the system)

The configurable Session information area allows the user to create setup files for different Instruments, in different modes with various attributes.

On the pressing the ‘Create’ button the Data Manager will attempt to upload a setup file to the Instrument (assuming one is connected to the PC via USB) as well as saving a local copy of the setup file in the ‘Instrument Setup Files’ sub-folder together with a unique date/time stamp.

The following message will be provided to the user on creation of the file:

5. About JCS

John Caunt Scientific Ltd.

John Caunt Scientific Ltd. (JCS) has been involved with nuclear radiation detection, measurement and shielding products since 1975.

We have long standing history in key nuclear sectors where we have built a strong reputation for quality, service and support.

The JCS Product Range

The JCS range of products includes hand held instruments for detecting and measuring neutron, gamma and x-ray radiation, a vast range of scintillation detectors, laboratory counting equipment, explosives / contraband detection equipment, standard format & bespoke neutron shielding materials, bespoke x-ray & gamma shielding materials.

Dynamic Model

JCS runs a dynamic business model, which has a strong emphasis on partnerships and a valued supply chain. In-house core skills, capability and expertise ensure effective response and understanding of our customers’ requirements.593 support@johncaunt.com





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