



# FOCAS Automation Solutions

Simple connectivity, easy data transmission and collection



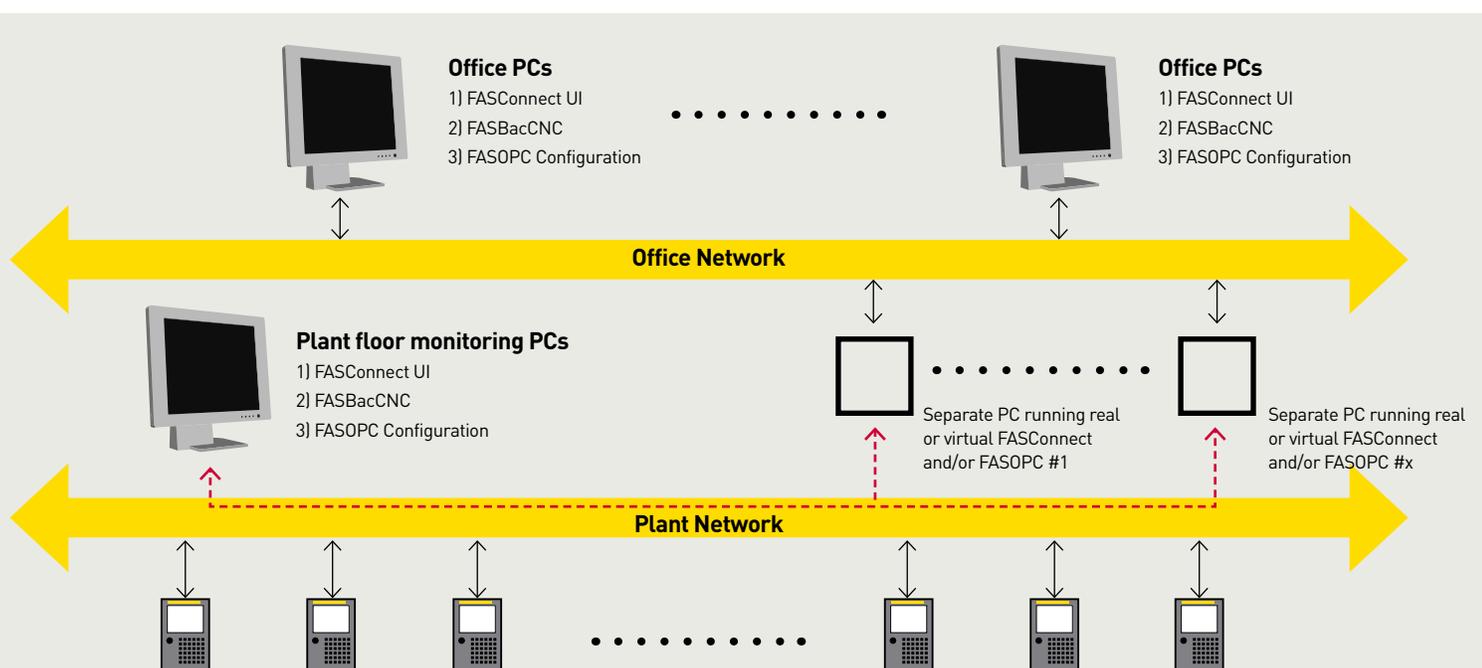
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# FOCAS Automation Solutions (FAS)– The easy choice for CNC communications and data collection

FOCAS Automation Solutions (FAS), based on the FANUC FOCAS API, are designed to simplify the connectivity of third-party hardware or software to the FANUC CNC, and they allow for easy transmission and collection of data from a FANUC CNC. FAS products are either purely software based solutions or propriety software and hardware solutions. All of the FAS solutions below are available in a 30 day trial version from your local FANUC America CNC salesperson or by contacting the FANUC America CNC options team.

- FASBacCNC – A user interface that works with FASConnect that allows browsing of all FASConnect PCs and backup data either manually or on a scheduled basis.
- FASConnect – Software that provides access and management of data to and from FOCAS enabled CNCs across a network.
- FASOPC – An OPC 3.0 compliant server for easy retrieval of data from FOCAS enabled CNCs.
- FASScreens – A collection of custom screens to help reduce time and effort to create new or modify existing UIs for the FANUC CNCs.



# FASBacCNC

## (FOCAS Automation Solution Backup CNC)

FASBacCNC is a powerful and easy to use network based backup solution for FOCAS enabled FANUC CNCs. It eliminates the risk of one of the most common and expensive service interventions - extended downtime as a result of the loss of critical files on the CNC following a hardware failure or an operational mistake.

### Automatic backup

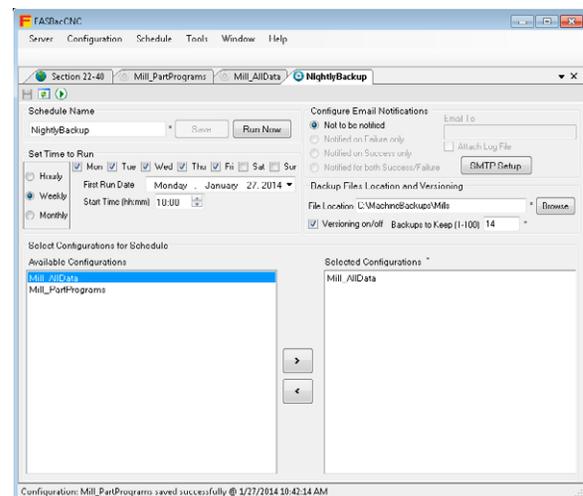
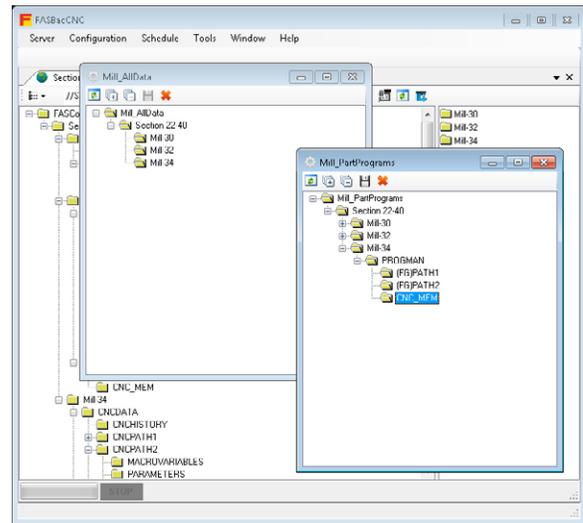
FASBacCNC provides peace of mind by automatically backing up the CNC files that have been created and customized by the machine tool builder or end user to a remote network PC. The data backed up can include CNC parameters, PMC ladder and parameters, custom macros and variables, part programs, tool offsets and workpiece coordinate system offsets.

### Complete data management solution

FASBacCNC is a front-end application that interfaces with FASConnect server for file browsing, scheduling and backup operations for all the FOCAS enabled FANUC CNCs connected on the network. This makes FASBacCNC a complete solution for managing text data from a FANUC CNC on any PC located anywhere on a network.

### Flexible scheduling & data backup

Users browse their FASConnect servers with easy drag-and-drop navigation. Individual files can be uploaded manually or multiple files from multiple CNCs on the network can be included in a configuration. Multiple configurations can then be combined into a single scheduled backup. A specific piece of CNC data can exist in multiple configurations and a specific configuration can exist in multiple schedules. Powerful and flexible scheduling allows backups to be executed automatically when needed - either hourly, daily, weekly or monthly. Users may also execute schedules manually for immediate needs - like when maintenance is about to work on a machine. Users can receive email notifications relating to the scheduled backup status. These features allow for complete flexibility in scheduling and CNC data backup control.



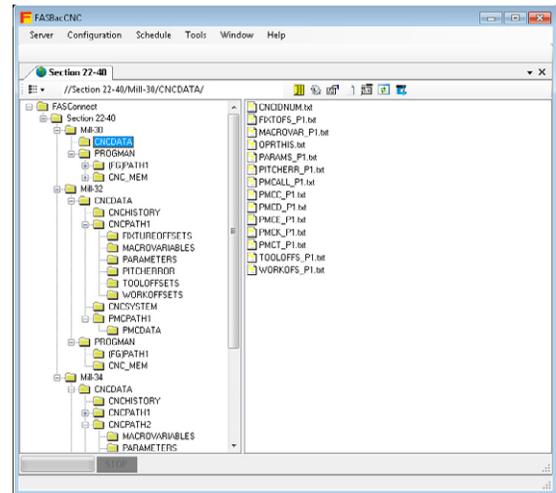
# FASConnect (FOCAS Automation Solution Connect)

FASConnect is a software solution for network distributed data management for FANUC CNC equipped machine tools. FASConnect is easy to use, FANUC CNC specific and has support for all new and legacy FOCAS-enabled FANUC CNCs.

## Ease of use

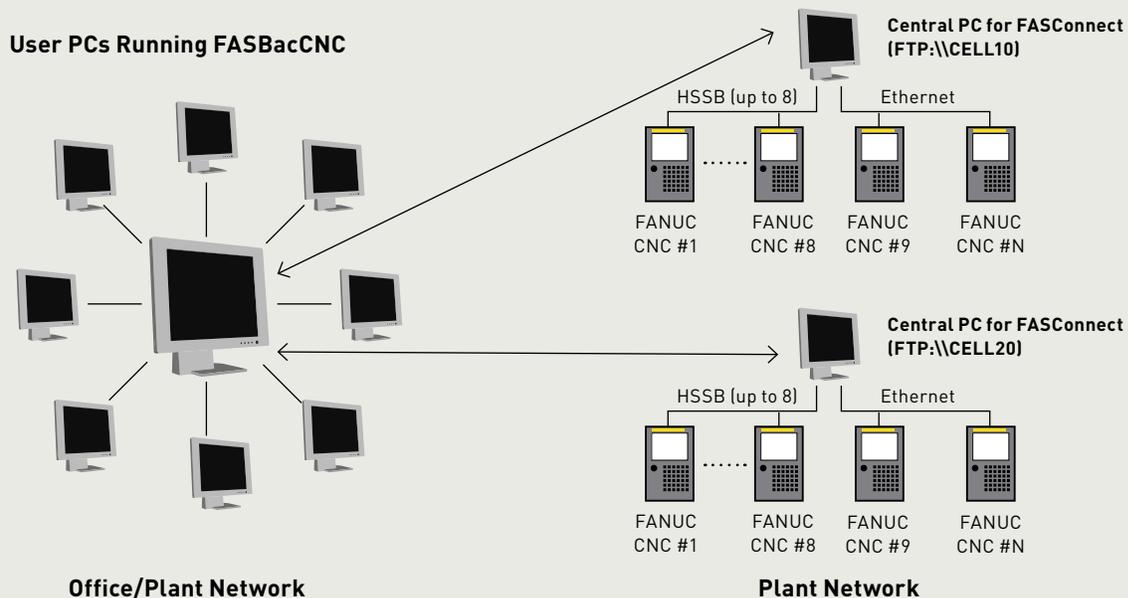
FASConnect makes it easy to access and transfer data from a FOCAS enabled FANUC CNC over a network without going down to the factory floor. FASConnect will not only allow you to access data on your FOCAS Ethernet based CNCs, but also make FOCAS HSSB CNCs accessible anywhere on a network.

The heart of FASConnect is a Windows® service that operates as a FTP server on the network. It allows all configured FOCAS enabled CNCs to be seen and navigated as files and folders under the site. FASConnect can be accessed from any PC on the network using the included FASBacCNC software as the FTP client. Although other standard FTP clients may work, the full features of FASConnect may not be available.



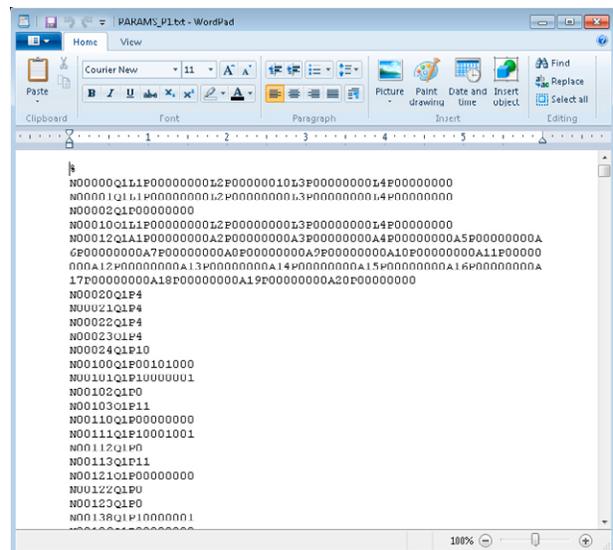
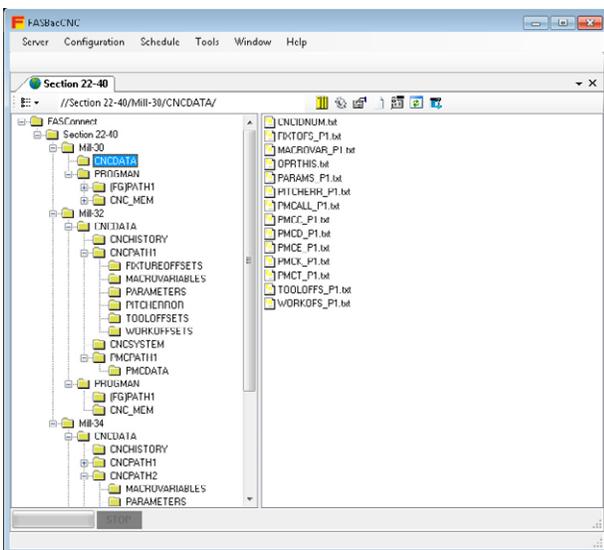
## Simple setup, convenient access

FASConnect is the server side of a client/server application. The FASConnect application is installed on one or more central PCs and then accessed either locally on that central PC or from a remote client PC that can be located elsewhere on the network. The client/server architecture allows FASConnect to be installed on one or more PCs to simplify the grouping of different CNCs while still allowing all the CNC data to be managed from one client PC.



## Text based data solution

CNC data management of all machines in a factory is easily managed from a central location through FASConnect by transferring text files similar to those backed up by older methods of RS232 or memory card. However, FASConnect's file transfer is faster and more convenient across the Ethernet network and provides less opportunity for human errors. The complete file backups can be used for various purposes such as archival, difference comparison or disaster recovery. Data management with FASConnect is a snapshot using text based data. For real time and status data, FASOPC is the more appropriate solution.



## Data supported

Sample data supported (complete list may vary based on CNC type):

- Macro variable
- Work offsets
- Tool offsets
- Operation history
- Part programs
- CNC ID numbers
- Fixture offsets
- User files in FROM
- PMC data
- SRAM backup
- Parameters
- Pitch error

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# FASOPC (FOCAS Automation Solution OPC)

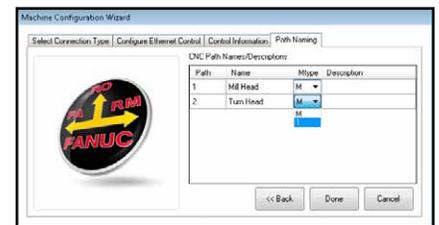
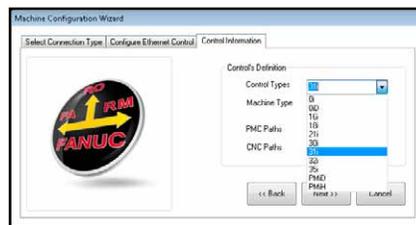
FASOPC is an OPC server designed specifically for getting machine production data out of your FANUC CNC and off the shop floor – easier than ever before.

## Flexible for today's industry standard

OPC has been an industry standard for years, and many industrial software packages have built-in support for OPC specifically for data retrieval. It makes it easy to move real-time data between factory floor devices (CNCs) and factory monitoring software (HMIs), while assuring the best interoperability with many devices. By basing the FASOPC Server off of the OPC Data Access (DA) and Unified Architecture (UA) specification, FANUC CNC data can be quickly and reliably transferred from the CNC to an OPC client application very easily with little to no programming. FASOPC supports the OPC DA 1.0, 2.0, 3.0 and UA specification giving it the flexibility to serve data to most OPC clients on the market today.

## Easy configuration

The FASOPC configuration utility is an easy-to-use tool to quickly add FANUC CNCs to your FASOPC server. The configuration utility's intuitive user interface utilizes wizards specifically designed to guide you through the processes of setting up FANUC CNCs. Once a CNC type is identified, then only data relevant to that control type is presented to the user. There is no need for advanced knowledge of FANUC CNC capabilities to use FASOPC.

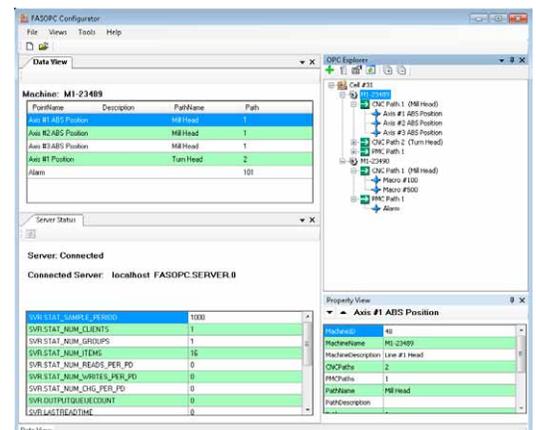


Alarm information, PMC data and axis data are just a sample of the data that can be retrieved. FASOPC is the perfect tool to pull numeric and single line string data from the CNC control. For more complex string data, such as part programs, FASConnect is a more appropriate solution.

## Data supported

Sample list of data supported: (refer to the manual for your version for a complete list)

- Alarm information
- Custom Macro variables
- Work zero offsets
- Tool offsets
- Axis names
- Axis positions
- CNC series
- CNC type
- Program number/name
- PMC data



FASOPC supports most FOCAS enabled FANUC CNCs over Ethernet and HSSB.

Please refer to the FASOPC manual or contact FANUC America – CNC for a complete list of CNCs supported.

# FASScreens (FOCAS Automation Solution Screens)

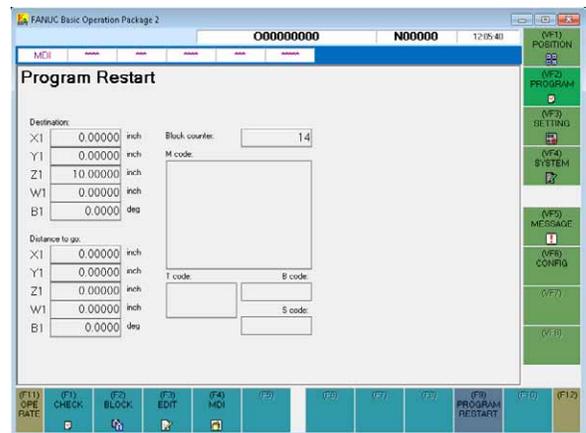
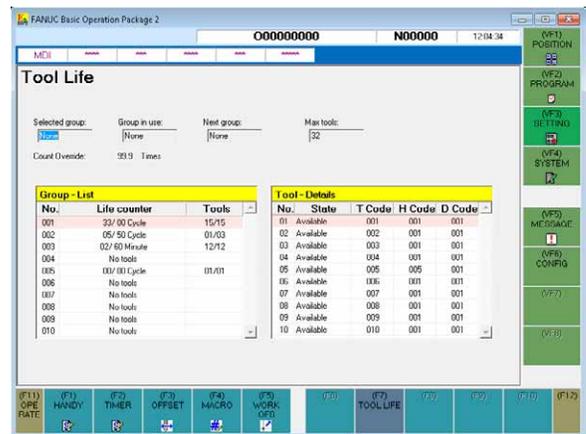
FASScreens is a collection of custom screens to reduce development time and effort customizing FANUC HMI's - allowing you to get up and running faster.

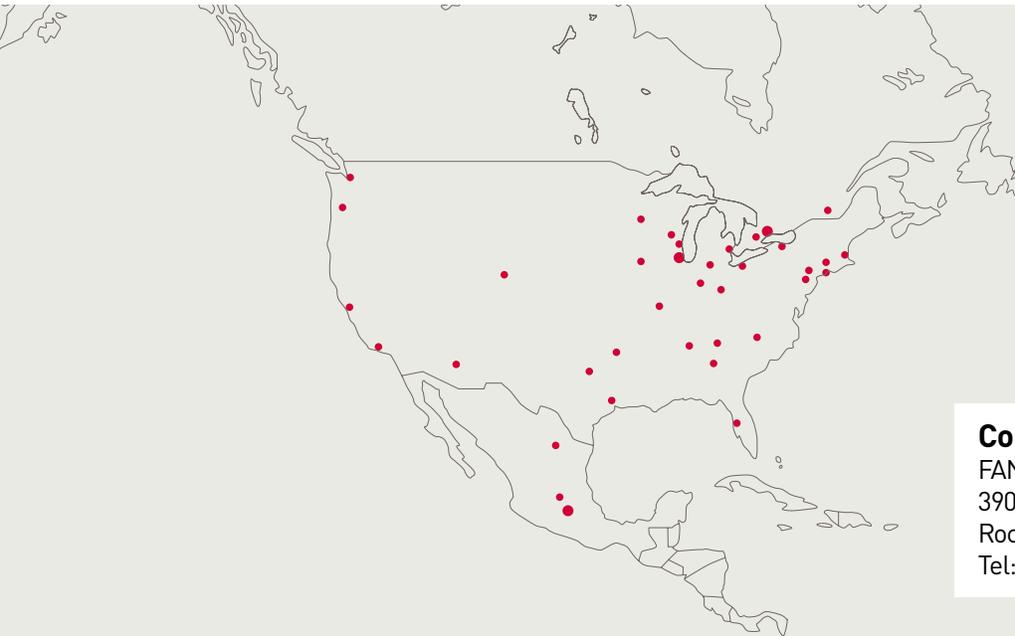
## BOP2 custom screens

FASScreens for BOP2 is a collection of custom screens that can be added to the BOP2 to expand its subset of CNC screens. The BOP2 is a set of basic operator screens to assist in running a FANUC CNC from a PC and allows for rapid user interface development. When using a PC front end, the BOP2 gives the user a basic subset of all the screens found on the CNC. This subset allows the user to run the FANUC CNC without having to develop all the screens themselves.

FASScreens for BOP2 are not standard with the BOP2 but are needed by some customers to use the FANUC CNC in their application. FASScreens requires that the BOP2 v2.3 or newer be set up on the target PC and the BOP2 option be activated on the CNC that it will be connected to for data.

The list of supported custom FASScreens for the BOP2 will continue to expand to support additional features. The current release of FASScreens includes a program restart screen and a tool life management screen for use with FANUC Series 30i-MODEL A/B (Milling support only) CNCs.





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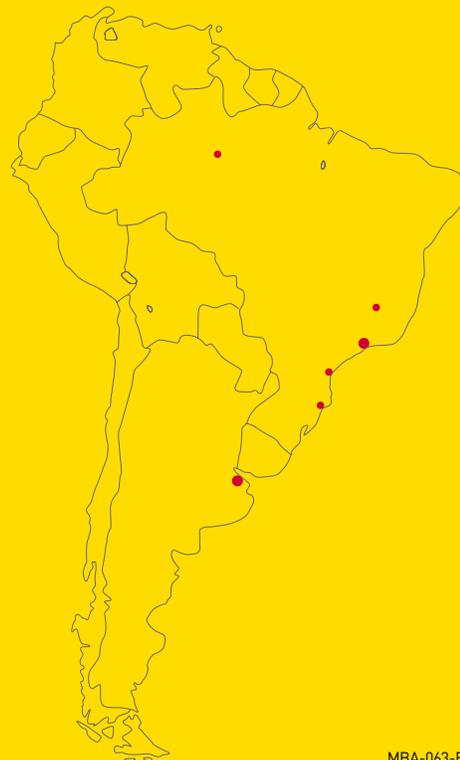
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