

# Software Product Description

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**PRODUCT NAME: BASEstar Open Client for Microsoft Windows Version 2.0**  
**SPD 47.84.00**

## DESCRIPTION

BASEstar Open software facilitates the integration of manufacturing applications and plant equipment. Accelerated development of integrated manufacturing systems is assured through an architecture that also encourages consistency of application development.

BASEstar Open takes advantage of the client/server computing architecture. While the server software library supplies all supported services, the client software library allows the application to access the same services. A client can access the services also from a different node connected on the network. Client and server communications within BASEstar Open are provided through TCP/IP network communications.

BASEstar Open Client for Microsoft Windows allows Microsoft Windows applications to have transparent access to BASEstar Open objects regardless of their physical location in the distributed BASEstar Open environment. The Application Programming Interface provided allows Microsoft Windows applications to:

- Define, reference, and access datapoint objects
- Define, reference, notify, subscribe, and receive event objects
- Define, reference, and exchange packets data objects

These objects reside in a BASEstar Open server node.

Device services are not directly accessed from the Microsoft Windows Application using BASEstar Open Client for Microsoft Windows.

BASEstar Open Client is licensed for "Unlimited System Use". To use the BASEstar Open Client license you must have the BASEstar Open server license installed on the server node. The BASEstar Open Server is available for both VAX and Alpha AXP processors.

## Features

The following features are those that a BASEstar Open Client for Microsoft Windows requests from a server:

### *Application Integration*

- Data Management

BASEstar Open Data Services provide a standard mechanism for defining, organizing, and accessing data in a distributed manufacturing environment from a variety of sources including: plant devices as well as area, plant, and work cell applications.

BASEstar Open defines discrete data elements (datapoints) to manage manufacturing information. Datapoint definitions can be of various types, ranging from scalar data elements to user defined data structures. This maximizes the flexibility of data definition and acquisition.

Because each datapoint is referenced by name, applications are independent of data sources and, consequently, do not require alteration when data sources change. In addition, simple datapoints can have a predefined value specified at startup time. Data services allow applications to define and manage datapoints.

Each datapoint can be associated with one or more triggers. A trigger defines a relationship between a datapoint, a filter, and an event. Each time the value of a triggered data point changes, associated filter expressions are evaluated. Whenever the Boolean result of an evaluated filter expression is TRUE, the associated event is declared.

One or more versions of a datapoint value can be stored. A version is made up of, in addition to the value, the time when the datapoint value changed and its status at that time.

A new version is generated each time the value of a datapoint changes for any reason. A user can request the current version, and thus the current value, or alternatively the value associated with any cached version.

- Event Services

BASEstar Open event services allow users to subscribe to one or more events. Events are occurrences that are of interest to an application program—threshold exceeding, alarms firing, job

completion, and so on. Users can also define the occurrence of such events and specify the context information that should be passed. This context information can also include typed data.

To be notified of the occurrence of a specific event, the application must issue a subscription to the event.

When an event is declared, event services create and deliver the notifications that can be received by subscribers. A single event declaration can generate many notifications in a one to many relationship. This depends on the number of active subscriptions.

- **Packet Services**

BASEstar Open Packet Services allow users to directly exchange packets of information. Two users can establish direct communication through a port to be used to send a packet, and from which a partner can be connected to receive it.

A packet contains a description of the information that must be exchanged. Each input and output parameter of a packet is described by means of a datatype.

BASEstar Open delivers a packet to a port in a protocol independent manner and regardless of the location of the involved users and ports.

*Configuration Management*

- **Named Objects**

The BASEstar Open environment is a collection of named objects that represent plant devices and datapoints—alarms, data status, production counts, and so on. Manufacturing applications can access these resources according to a functional use rather than in a system dependent manner which would require, for instance, information on physical locations.

BASEstar Open objects reside in domains. Domains are hierarchically linked to form a BASEstar Open realm. Several realms can be active at the same time.

- **Local and Remote Objects Access**

BASEstar Open objects can be directly accessed within a realm by using the object's full pathname. The full pathname includes the local name preceded by the relevant domain names. Alternatively, the user can set the default domain and access objects in that domain using local names, and objects in lower domains using partial pathnames.

- **System Configuration and Tuning**

BASEstar Open software provides command procedures that can be used to tune object configurations. A system manager can use the suggested values as guidelines in setting parameter values to optimize the usage of system resources.

*BASEstar Open Interface*

- **Application Programming Interface (API)**

The BASEstar Open API allows software programmers to create and integrate manufacturing applications using the BASEstar Open services.

**Documentation**

BASEstar Open Client for Microsoft Windows includes the following documentation:

- *BASEstar Open Introduction* provides an overview of the services and concepts within BASEstar Open.
- *BASEstar Open Reference Guide* provides the definition and specification of the object model within BASEstar Open.
- *BASEstar Open Application Programming Interface* provides the specification of the callable interface to access BASEstar Open services.
- *BASEstar Open Messages* provides the definition and the description of BASEstar Open error messages and suggested solutions.
- *BASEstar Open Guide for MS Windows Systems* provides information on how to use BASEstar Open Client for Microsoft Windows.

**HARDWARE REQUIREMENTS**

Processors and hardware configurations as specified in the System Support Addendum (SSA 47.84.00-A).

**SOFTWARE REQUIREMENTS**

The following software is part of the requirements for BASEstar Open Client for Microsoft Windows:

- Microsoft Windows
- PATHWORKS for DOS (TCP/IP) (SPD 33.45.xx)

Refer to the System Support Addendum (SSA 47.84.00-A) for the availability and required versions of prerequisite and optional software.

**ORDERING INFORMATION**

*BASEstar Open Client for Microsoft Windows:*

Software Licenses : QL-0YCAW-AA  
 Software Media: QA-0YCAA-\*C  
 Software Documentation: QA-0YCAA-GZ

\* Denotes variant fields. For additional information on available licenses, services, and media refer to the appropriate price book.

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# System Support Addendum

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**PRODUCT NAME:** BASEstar Open Client for Microsoft Windows Version 2.0  
SSA 47.84.00-A

## HARDWARE REQUIREMENTS

PC Intel 386-class  
Intel 486-class

### *Other Hardware Required*

- No optional hardware is required.

### **Disk Space Requirements**

Disk space required for installation:

- 1.5 MBytes

Disk space required for use (permanent):

- 1.5 MBytes

These values refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options.

## SOFTWARE REQUIREMENTS

- Microsoft Windows V3.1

### *Layered Products:*

- PATHWORKS for DOS (TCP/IP) V2.0

## GROWTH CONSIDERATIONS

The minimum hardware and software requirements for any future version of this product may be different from the requirements for the current version.

## DISTRIBUTION MEDIA

RX23 Floppy Diskette

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Software Media: QA-0YCAA-\*C

Software Documentation: QA-0YCAA-GZ

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The above information is valid at the time of release. Please contact your local Digital office for the most up-to-date information.

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