



# Software Product Description

---

**PRODUCT NAME: INDUSTRIAL BASIC/RT-11, Version 1**

**SPD 15.14.1**

## **DESCRIPTION:**

Industrial BASIC/RT-11 is a single-user, interactive programming language designed for the industrial computer user. It operates under the RT-11 operating system. Like standard Dartmouth BASIC, it is simple to learn; it uses English-like statements and familiar mathematical notations to describe a procedure. Industrial BASIC/RT-11 provides real-time extensions to enable the control and monitoring of analog and digital input/output. Interrupt processing, alarm, and timing functions are also included.

Specific features include:

- Sequential and virtual memory file support for RT-11 mass storage devices.
- Chaining and overlay support to accommodate large programs.
- Extensive support for the Industrial Control Subsystem (ICS11) including A/D converters, D/A converters, digital I/O, counter and interrupt modules.
- Support for the AR11 Analog Real-Time Subsystem, DR11, and DRS11/DSS11 Digital I/O Subsystems.

Industrial BASIC/RT-11 is an incremental compiler which provides access to RT-11's file structure. All files are stored contiguously for random access and elimination of the need for linkages across empty blocks. The file structure implemented under Industrial BASIC/RT-11 includes provisions for up to seven sequential files and seven virtual arrays, all of which can be open simultaneously. Virtual arrays accept data in a manner that appears to the source program to be memory resident.

The Industrial Control Subsystem (ICS11) is fully supported by Industrial BASIC/RT-11. All ICS commands are initiated by CALL statements to input/output, time-based, or interrupt processing routines.

## **MINIMUM HARDWARE REQUIRED:**

Any valid RT-11, Version 2B or 2C configuration with at least 16K words of memory and either RX11 floppy disk or RK05 cartridge disk for the load device.

## **OPTIONAL HARDWARE:**

DR11-K General Device Interface  
AR11 Analog Real-Time System  
DRS11 Digital Output Subsystem  
DSS11 Digital Input Subsystem  
ICS11 Industrial Control Subsystem (local)

IDC-IA Isolated DC Sense  
IDC-IB Isolated DC Interrupt  
IDC-IC I/O Counter  
IDC-ID Non-isolated DC Sense  
IDC-IE Non-isolated DC Interrupt  
IAC-IA Isolated AC Sense  
IAC-IB Isolated AC Interrupt  
IDC-OA DC Flip Flop Driver  
IDC-OB DC Single Shot Driver  
IRL-OA Latching Relay Output  
IRL-OB Flip-Flop Relay Output  
IDA-OB 4-Channel D/A Converter  
IAD-IA 8-Channel A/D Converter  
IMX-IA 16-Channel Multiplexer for IAD-IA

## **PREREQUISITE SOFTWARE:**

RT-11 Operating System, Version 2B or 2C only.

## **OPTIONAL SOFTWARE:**

None

## **TRAINING CREDITS:**

None

## **SUPPORT CATEGORY:**

C — Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

## **UPDATE POLICY:**

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

## **ORDERING INFORMATION:**

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Source and/or listing options are only available after a source license agreement is in effect.

The following key (E, Y) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QJ280-CE = binaries on RK05 Disk.

E = RK05 Disk  
Y = Floppy Disk

*Standard Options*

QJ280 -C— Single-use license, binaries, documentation, no support services (media: E, Y)

**ADDITIONAL SERVICES:**

None

**D15.14.1**