Software Product Description

PRODUCT NAME: ADF01/VMS Subroutine Library, Version 4.0 **(for VMS Operating Systems)** **SPD 26.61.02**

DESCRIPTION:

The ADF01/VMS Subroutine Library provides the user with a simple FORTRAN interface to the ADF01-B Analogue-to-Digital Converter.

The ADF01-B is a high speed, multichannel Analogue-to-Digital Converter. It is connected to a UBA (UNIBUS adapter) via the DRE11-C or to Q-bus (MicroVAX II) via the DRQ11-C.

The device has 16 single ended or 8 differential input channels. With the AMF01-A multiplexer board the number of channels can be extended to 64 single ended or 32 differential channels.

Triggering of conversions by the ADF01-B can be initiated by either the internal programmable clock or by a user-supplied external clock. For each conversion, the gain and channel number are contained in one of 1024 entries in the ADF01-B control table. The control table can thus be set up to perform a large, fixed sequence of conversion operations.

The Library contains calls such as:

- ADF$INIT initialize system
- ADF$REASTA read status of the device
- ADF$RESET reset device

To enable/disable functions:

- ADF$SETSBE enable sequence break
- ADF$CLRSBE disable sequence break
- ADF$ENAECE enable external clock
- ADF$CLRECE disable external clock
- ADF$ENACTT enable control table transfer
- ADF$CLRCTT disable control table transfer

To load or read Registers:

- ADF$REACTA read control table address register
- ADF$LOACTA write into control table addr. register
- ADF$SETPCR load programmable clock register
- ADF$LOACWT load control word register
- ADF$REACWT read control word register
- ADF$SETDAC load DAC data register

To start conversions and convert values:

- ADF$CONVER start A/D conversion
- ADF$CONLAR start A/D large buffer conversion
- ADF$REAADC convert A/D value into volt

To load sequence Timer Register (with AMF01-A):

- ADF$SETSTR enable sequence timer
- ADF$DISSTR disable sequence timer

In addition to the Subroutine calls above, the package includes a set of command files to generate a Control Word Table, to link Control Table and User Program and to build the ADF01/VMS Subroutine Library. The package also contains programs to calibrate the system and to run a DAC-ADC loop back test.

PERFORMANCE

The highest conversion rate depends highly on the VMS Operating System configuration/load and on the way, how the incoming data are handled/saved. The maximum transfer rate of 400K words/sec into memory can be achieved in burst mode on all valid VAX systems with the standard DRX11-C/VMS Driver (SPD 26.64.xx).

HARDWARE REQUIREMENTS

VAX, MicroVAX or VAXstation configuration as specified in the System Support Addendum (SSA 26.61.02-x)

- One DRE11-C or DRQ11-C interface
- One ADF01-B Interface
- Hardware capable of reading one of the distribution media upon which this product is offered.

SOFTWARE REQUIREMENTS*

- VMS Operating System
- DRX11-C/VMS Driver

OPTIONAL SOFTWARE*

- VAX-11 FORTRAN

* Refer to the System Support Addendum for availability and required versions of the Prerequisite/Optional Software (SSA 26.61.02-x).

ORDERING INFORMATION

Software Licenses: QL-735A*-**
Software Media: QA-735A*-**
Software Documentation: QA-735AA-GZ

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

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For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 25.01.xx) or the VMS Operating System documentation set.

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