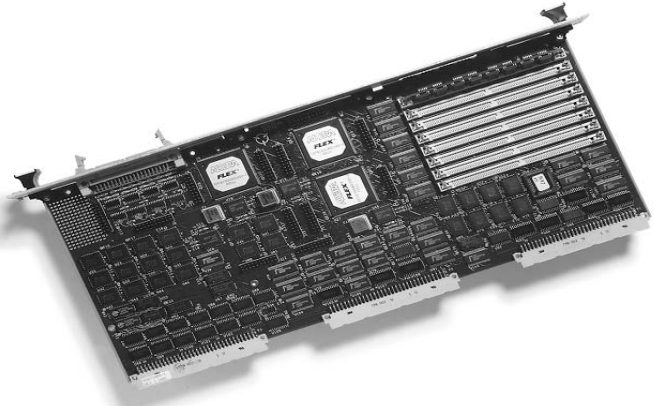


Ground Systems

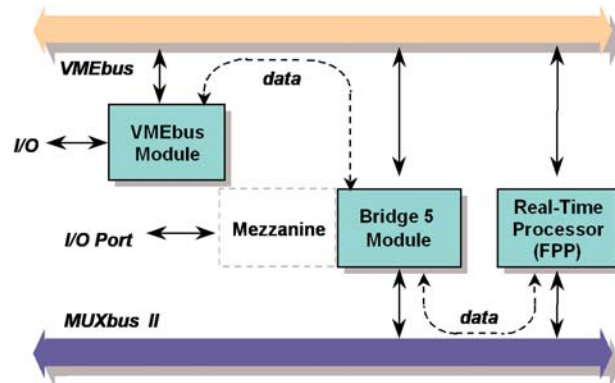
Bridge 5 Module

BRG595A

- Captures ½ GB data bursts at rates of up to 70 MB/sec
- Offers a bidirectional data path between an I/O port, the MUXbus, and the VMEbus
- Sustained 35 MB/sec transfer rate between the MUXbus and the VMEbus in either direction
- Additional Bridge modules can be added to accommodate additional VME modules
- Controls playback of non-real-time data from the MUXbus to match capabilities of the VMEbus environment
- Data transfer between the MUXbus and the VMEbus can start/stop using MUXbus parameters in real time in both directions
- Offers programmable rate control from 400 to 4 MB/sec from the VMEbus
- Retags parameters destined for the MUXbus
- Selects tag and data or data alone for transfer to the VMEbus
- Optional I/O Mezzanine module provides cost-effective signal conversion solutions for special interface requirements
- Filters data from the VMEbus to the MUXbus and/or I/O port



The Bridge 5 module provides a half-duplex, bidirectional physical data path between the MUXbus, VMEbus, and very high-speed I/O port. The Bridge 5 offers mechanisms to easily integrate both standard off-the-shelf VME modules and very high-speed I/O into the System's high-performance real-time MUXbus environment. Up to a one-half gigabyte of on-board buffer enables the System to capture very high-speed data bursts and then meter the data to either the MUXbus or VMEbus environments.



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BRG595A Specifications

Data Transfer Modes

MUXbus to VMEbus:

Mode 1	.16-bit data only (MXD <15..00>)
Mode 2	.32-bit data only (MXD <31..00>)
Mode 3	.32-bit tag and data
Mode 4	.48-bit tag and data*

VMEbus to MUXbus:

Mode 1	.16-bit data with reserve tag**
Mode 2	.32-bit data with reserve tag
Mode 3	.32-bit tag/data with or without retag**
Mode 4	.48-bit tag/data with or without retag

* Tag <15..0>, Tag <15..0>; Data <31..0>

** When modes 1 or 3 are selected the upper 16 bits

MXD<31..16> are either sign-extended or zero extended

Data Rates

MUXbus Data Capture:

Burst	.Full MUXbus bandwidth
Sustained	.34 MB/sec (system-dependent)

MUXbus to VMEbus Data Transfer (all modes):

Burst	.55 MB/sec (VME64)
Sustained	.34 MB/sec (system-dependent)

VMEbus to MUXbus Data Transfer:

Burst	.55 MB/sec (VME64)
Sustained	.Mode 1 - 16 MB/sec
	.Mode 2 - 32 MB/sec
	.Mode 3 - 32 MB/sec
	.Mode 4 - 35 MB/sec
	.(system dependent)

MUXbus Playback Rate (user-programmable):

Minimum	.100 parameters/sec
Maximum	.1M parameters/sec

I/O Port Data Capture:

Burst	.70 MB/sec
Sustained	.35 MB/sec
Buffer Size	.64, 256, or 512 MB

Rate Control

MUXbus to

VMEbus or I/O Port .Automatic MUXbus flow control; start/stop parameter

I/O Port or VMEbus

to MUXbus .Programmable rate control, automatic MUXbus flow control, start/stop parameter

VMEbus

VMEbus Slave Interface:

Conforms to VMEbus spec. - Rev. C.1/Rev. D A32: D32: I (1-7) and A32: D64: I (1-7) Address Modifier: 08, 09, 0B, 0C, 0D, 0F Single cycle or block move (response time from DS to DTACK is 80 to 200 ns, typically 120 ns)

Standard Configurations

Model	Buffer Size
BRG595-64	.64 MB
BRG595-256	.256 MB
BRG595-512	.512 MB

General

Chassis Requirement	.1 9U slot in Base 550 or Avalon System Chassis
Rear Panel	.I/O dependent
Maximum per Chassis	.7 (550) / 2 (Avalon)
Maximum per System	.Virtually unlimited
Power	.5V @ 3.5 A
Environment	.See Base 550 System Chassis (PRO550A, PRO550B) or Avalon System Chassis (AVALON-R) data sheets
Dimensions	.365mm (9U) x 160mm (Eurocard Standard)
Diagnostic Display	.16 status LEDs: BDOK, DACK, LIRQ, DSRQ, SFTN, OVFL, MXRQ, FLCT, STRT, MXFF, VMFF, IOFF, RCVI, XMTI, RCV2, KMT2

Compatibility

Base 550 System Chassis (PRO550A, PRO550B)
Avalon System Chassis (AVALON-R)
SWA500 Applications Software
VISTA Software

Ordering Information

BRG595A .Bridge 5 Module

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