P1-1553
PC•MIP Module with One MIL-STD-1553B Terminal

Application Information
The P1-1553 PC•MIP module provides one complete dual-redundant MIL-STD-1553B bus terminal in a single-wide Type I PC•MIP module. Complete multiprotocol support of 1553B as a Bus Controller (BC), Remote Terminal (RT) and Bus Monitor (MT) is provided. A Remote Terminal Only version is also available.

Included is an intelligent communications protocol engine, dual transceivers and encoder/ decoders, 64 K words of shared memory, and management logic for all modes.

Bus Control (BC) features include automatic retry, programmable gap times, and frame auto-repeat.

Remote Terminal (RT) features include programmable illegalization and busy, choice of single message, double buffering and circular buffering. The RT address is software selectable with RT Latch option.

Advanced Monitor Terminal (MT) features include choice of work monitor, selective message monitor, or simultaneous RT / Monitor mode.

64 K x 16-bit words of dual-ported RAM provides message space on the PC•MIP module. Both commercial and extended operating temperature versions are available.

The P1-1553 is implemented with an advanced communications engine, DDC Mini-ACE BU-61688 hybrid, plus two interface transformers. Support for both direct coupled (short stub) and transformer coupled (long stub) interfacing to the 1553 bus cable is included.

The P1-1553 is compatible with the PC•MIP draft specification (ANSI/ VITA-29).

Features
- Fully integrated MIL-STD-1553B
- Software compatible with BU-61580 series
- 64K x 16 shared RAM (BU-61688)
- 4K x 16 shared RAM (BU-65178)
- Automatic BC retries
- Programmable BC gap times
- Programmable illegalization
- Simultaneous RT / MT mode
## Specifications

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<th>Specification</th>
<th>Details</th>
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<tr>
<td><strong>Form Factor</strong></td>
<td>Single-wide Type I PC•MIP</td>
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<tr>
<td><strong>PC•MIP Interface</strong></td>
<td>PC•MIP draft specification (ANSI/ VITA-29), Revision 0.6</td>
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<tr>
<td><strong>PCI</strong></td>
<td>PCI Specification, Revision 2.2</td>
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<tr>
<td><strong>1553 Controller</strong>**</td>
<td>ILC DDC BU-61688, BU-65178</td>
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<tr>
<td><strong>1553 Modes Supported</strong></td>
<td>BC, RT, MT (BU-61688) RT Latch option available</td>
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<td></td>
<td>RT only (BU-65178*) RT Latch option available</td>
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<tr>
<td><strong>Dual-access Memory</strong></td>
<td>64K x 16-bit words (BU-61688)</td>
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<tr>
<td></td>
<td>4K x 16-bit words (BU-65178*)</td>
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<tr>
<td><strong>I/O Access</strong></td>
<td>Flexible I/O connector</td>
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<tr>
<td><strong>Weight</strong></td>
<td>TBD kg (TBD lb)</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>47.0 mm x 90.0 mm</td>
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<tr>
<td><strong>Power Requirements</strong></td>
<td>+3.3 VDC, TBD mA typ, TBD mA max</td>
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<tr>
<td><strong>Environmental</strong></td>
<td>Operating temperature: 0 to 70°C. -ET version -40 to +85°C</td>
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<td>Humidity: 5 to 95% non-condensing</td>
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<td>Storage: -40 to +85°C</td>
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*RT only available by special order subject to minimum order quantities. Contact factory for more information.

**Other DDC modules are available (eg 65179, 61689, 61588) subject to minimum order quantities. Contact factory for more information.
Order Information

P1-1553-BRM  PC•MIP module with one Mil-Std-1553B terminal
             BC, RT, MT
P1-1553-BRMR PC•MIP module with one Mil-Std-1553B terminal
               BC, RT, MT, RT Latch
P1-1553-R    PC•MIP module with one Mil-Std-1553B terminal
             RT
P1-1553-RR   PC•MIP module with one Mil-Std-1553B terminal
             RT, RT Latch,
P1-1553-BRM-ET PC•MIP module with one Mil-Std-1553B terminal
                BC, RT, MT, Extended temperature
P1-1553-BRMR-ET PC•MIP module with one Mil-Std-1553B terminal
                BC, RT, MT, RT Latch, Extended temperature
P1-1553-R-ET  PC•MIP module with one Mil-Std-1553B terminal
              RT, Extended temperature
P1-1553-RR-ET PC•MIP module with one Mil-Std-1553B terminal
              RT, RT Latch, Extended temperature
UM-P-1553    Printed User Manual for P-1553 (all models)
SP-P-1553    Product Support Package for P-1553 (all models). Floppy disk containing:
             User manual in PDF
             Example code provided by DDC
EK-P1-1553   Engineering kit for P-1553 (all models). Includes:
             Product Support Package for P-1553 (SP-P-1553)
             Data sheet reprints for DDC ACE module and transformers
             Bill of materials
             Circuit schematic
             Assembly diagram
VD-P-1553    VxWorks driver for P-1553. Floppy disk includes:
             Manual in PDF
             Driver software source code
             BC, RT, MT support

Associated Products

PM-1553      Dual Mil-1553B interface on PMC
IP-1553      Mil-1553B interface on IndustryPack
XM-1553      Transition module 50-conductor ribbon to Twinax for IP-1553 and P-1553
PCMIP-DEVKIT Development kit for PC•MIP modules. Contains:
               MC-101 desktop PCI slot carrier for a single PC•MIP
               Six foot 50-conductor ribbon cable (CABLE-IP50-6)
               50 screw terminal block with ribbon header (IP-TERM-IP50)

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