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<td>-001</td>
<td>Original Issue</td>
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This volume, Volume 2 of the System 432/600 Hardware Reference Manual, contains all engineering schematics and drawings referenced in Volume 1. The two-volume set is the technical engineering reference for the System 432/600 family of products.

Volume 1 describes all interface specifications, timing, and protocols. It provides timing charts, state machine flow charts, detailed block diagrams, and a detailed functional description of each logic board in the set. It describes the iSBC 432/630 chassis, and all backplanes and card cages available. References are made throughout the descriptive text in Volume 1 to schematics and drawings in this volume.

Specific drawing page numbers may be located in the table of contents.

This manual contains one chapter only:

Chapter 1  Schematics and Drawings

    All engineering schematics and mechanical drawings referenced in Volume 1 are contained in this chapter.

There are no illustrations or tables in this manual.

Additional related information is available from the following documents:

System 432/600 Hardware Reference Manual, Volume 1, Order Number: 172100

System 432/600 System Reference Manual, Order Number: 172098

System 432/600 Diagnostic Software User's Guide, Order Number: 172099

System 432/600 Installation and Maintenance Manual, Order Number: 172101

Intel MULTIBUS® Specification, Order Number: 501310

Introduction to the iAPX 432 Architecture, Order Number: 171821

iAPX 432 General Data Processor Architecture Reference Manual, Order Number: 171860
Preface

System 432/600 Hardware Reference Manual

iAPX 432 Interface Processor Architecture Reference Manual; Order Number: 171863

Intel Component Data Catalog, Order Number: 210298

Intel Systems Data Catalog, Order Number: 210299
# CHAPTER 1

## SCHEMATICS AND DRAWINGS

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INTRODUCTION

Volume 2, Chapter 1 of the System 432/600 Hardware Reference Manual, contains all engineering schematics and mechanical drawings referenced in Volume 1. The schematics and drawings are placed in this volume in the order in which they are referenced in Volume 1. Specific schematic or drawing page numbers may be found in the table of contents.

All schematics and drawings are current when the manual is printed. However, minor changes may have been made on some sheets between the printing of this manual and the shipment of your product.

Intel ships current schematics with each product. If you are using this manual with a specific product, the number and revision level of the schematics shipped with that product should be compared with those in your manual, and the most current schematics inserted in this copy of the manual.
RMW LOCK AND TIMEOUT LOGIC

System 432/600 Hardware Reference Manual
NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTANCE VALUES ARE IN OHMS (Ω).
2. ALL CAPACITANCE VALUES IN MICROFARADS (µF).
3. CFI-YO SHOULDS SIGNIFY BI-DIRECTIONAL SIGNALS.
System 432/600 Hardware Reference Manual

Schematics and Drawings
System 432/600 Hardware Reference Manual

Schematics and Drawings

Page 1-47
NOTES:

1. UNLESS OTHERWISE SPECIFIED, LEADFORMS ARE DIP, 20%, 180°.
2. RESISTOR VALUES ARE IN OHMS OR W, 1%, 5%
3. RESISTORS IN DEVICES, PART # 400.
4. R実, N/A AND/or X DENOTES LED LEAD, RESISTORS, 
   VALUES ARE IN OHMS, RESISTORS, 1%, 5%
5. THIS SIGNAL IS NOT FUNCTIONAL.
Schematics and Drawings

NOTES: UNLESS OTHERWISE SPECIFIED:
1. PART NUMBER 15/127005 ON THIS DOCUMENT.
   ARTMASTER AND PARTS LIST ARE TRACKING DOCUMENTS.
2. FABRICATE AND SILKSCREEN PER 9400001.
4. ALL HOLES SHALL BE LOCATED AT INTERSECTIONS OF A .025 PITCH GRID.
5. DATUM-A AND-B WITHIN .025 DIAMETER MAX.
6. THE CENTER OF THIS HOLE SHALL BE LOCATED WITHIN .025 DIAM OF THE CENTER OF ITS PAD.
7. THE CENTER OF THESE TWO HOLES ENSURE DATUM-B.
8. DATUM-B-1.5 ESTABLISHED PERPENDICULAR TO DATUM-A:
9. THROUGH THE CENTER OF THIS HOLE.
10. 0.004 PIN CONNECTORS ARE NOT ON .025 GRID.

COMPONENT SIDE

HOLE CHART

<table>
<thead>
<tr>
<th>SYM</th>
<th>DIAMETER</th>
<th>QTY</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>N1</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>N3</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>N3</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>.025</td>
<td>10</td>
</tr>
<tr>
<td>E</td>
<td>.025</td>
<td>2</td>
</tr>
<tr>
<td>F</td>
<td>.025</td>
<td>10</td>
</tr>
<tr>
<td>G</td>
<td>.025</td>
<td>2</td>
</tr>
</tbody>
</table>

COMPONENT SIDE LAYER 1: .025
SOLDER SIDE LAYER 3: .025
POWER PLANE LAYER 5: .025
GROUND PLAN LAYER 6: .025

MULTILAYER CONFIGURATION

SCALE: NONE
NOTES: UNLESS OTHERWISE SPECIFIED:
1. ASSEMBLY PART NUMBER 15-17206-001 THIS DOCUMENT PART LIST AND TRACING DOCUMENTS, WORKMANSHIP PER 99-007-005.
2. MARK ASSEMBLY DRAW NUMBER AND REVISION LEVEL WITH CONTRASTING PERMANENTLY.
3. NON-CONDUCTIVE JEWEL APPARENTLY WHERE SHOWN.
4. MARK ASSEMBLY VENDOR ID. WITH CONTRASTING PERMANENTLY NON-CONDUCTIVE JEWEL.
5. INSTALL POLARIZING KEYS. ITENAL BETWEEN PINS PER POLARIZING KEY LOCATION CHARTS.
6. ITEMS SHOWN ARE TO BE USED ONLY IF SPECIFIED IN PARTS LIST.
7. TORQUE TO 90.4 N.LBS. (200 LBS. FORCE)
MID PARTS LIMIT ARE TRACKING DOCUMENT.
The centers of two holes establish datum within dimension III per axis Y and Z.

0.015 pitch grid is established by datums A and B, with centers of these two holes establish datum A.
NOTES: UNLESS OTHERWISE SPECIFIED:
1. ASSEMBLY PART NUMBER IS 172127-001.
2. THIS DRAWING AND PARTS LIST ARE TRACKING DOCUMENTS.
3. WORKMANSHIP STANDARDS PER 99-0007-001.
4. ASSEMBLY PART NUMBER AND KEY LEVEL WITH CONTRASTING PERMANENT CONTRASTING COLOR/PAINT.
5. ASSEMBLY VENDOR TO CORRECT PERMANENT CONTRASTING COLOR.
6. POLARIZING KEY LOCATION CHART.
7. TURNOFF 30 IN-LEBS, INSIDE NUTS ONLY.
NOTES (UNLESS OTHERWISE SPECIFIED):
1. ASSEMBLY PART NUMBER: X 172092 - XXX.
2. T/S, DRAWINGS AND PART NUMBERS ARE TRACKING DOCUMENTS.
3. WORKING P/N MUST BE COORDINATED.
4. LAY OUT PAGE NUMBER 6 NEVER ACTIVE WITH CONTRACT AG.
5. NOT COVERED NON-CURRENT DESIGN APPRENTICE (MORE.&NARCH.
6. INSTALL ITEMS SHOWN ONLY IF SPECIFIED.
7. INSTALL ITEMS SHOWN ONLY IF SPECIFIED ON PARTS LIST.
8. TORQUE TO 15 IN-LBS.
9. INSTALL PHONES FROM PAPERSIDE (SOLDER SIDE).
10. REMOVE PMA 172092 AS IDENTIFIED AS PMA 172092.
11. COLOR TO BE SAME AS ON DIAFORGARIFED PAPERS.
Schematics and Drawings

NOTES: UNLESS OTHERWISE SPECIFIED:
1. PART NUMBER IS 19212-001. THIS DRAWING AND PARTS LIST ARE PART OF DOCUMENT #151423-001.
2. WORKMANSHIP PER 99-0007-001.
3. MARK PART NUMBER, PLY, LENGTH AND JAR NUMBER ON PARTS LIST OR WITH CONTRASTING PERM COLOR, NON-CONDUCTING, JAR MARKING MATERIAL WHERE SHOWN.

TOLERANCES: ± 0.005 INCHES

ITEM SHOWN AS TO BE USED ONLY IF SPECIFIED ON THE PARTS LIST.

ITEM SHOWN AS TO BE USED ONLY IF SPECIFIED ON THE PARTS LIST.

NOTE: UNLESS OTHERWISE SPECIFIED:
1. PART NUMBER IS 19212-001. THIS DRAWING AND PARTS LIST ARE PART OF DOCUMENT #151423-001.
2. WORKMANSHIP PER 99-0007-001.
3. MARK PART NUMBER, PLY, LENGTH AND JAR NUMBER ON PARTS LIST OR WITH CONTRASTING PERM COLOR, NON-CONDUCTING, JAR MARKING MATERIAL WHERE SHOWN.

TOLERANCES: ± 0.005 INCHES

ITEM SHOWN AS TO BE USED ONLY IF SPECIFIED ON THE PARTS LIST.

ITEM SHOWN AS TO BE USED ONLY IF SPECIFIED ON THE PARTS LIST.
NOTES: UNLESS OTHERWISE SPECIFIED:

☑ OBSERVE SPACE BETWEEN EDGE OF PART AND FIRST HOLE TO ESTABLISH CORRECT ORIENTATION OF SUPPORTS.

☑ OBSERVE ORIENTATION OF CARD GUIDES.
NOTES: UNLESS OTHERWISE SPECIFIED:

1. OBSERVE SPACE BETWEEN EDGE OF PART AND FIRST HOLE TO ESTABLISH CORRECT ORIENTATION OF SUPPORTS.

2. OBSERVE ORIENTATION OF CARD GUIDES.
NOTES: UNLESS OTHERWISE SPECIFIED:

1. OBSERVE SPACE BETWEEN EDGE OF PART AND FIRST HOLE TO ESTABLISH CORRECT ORIENTATION OF SUPPORTS.
2. OBSERVE ORIENTATION OF CARD GUIDES.

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System 432/600 Hardware Reference Manual
TOP VIEW G
ALTERNATE CONFIGURATION
DASH 004 AND 005 ONLY

TOP VIEW G
ALTERNATE CONFIGURATION
DASH 001 THRU 003 ONLY
NOTES UNLESS OTHERWISE SPECIFIED:
1. CAPACITORS ARE 1.25uf, 25v, 5%
2. RESISTOR VALUES ARE IN OHMS, 1% TOLERANCE
3. RESISTOR NETWORKS ARE 5K OHMS, 5%
4. OPAMP SOURCE FOR +12V
5. > DEPENDS ON DIRECTION