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FCC WARNING
Computing devices and peripherals manufactured by Daisy Data Displays generate, use, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions in this manual may cause interference to radio communications. Such equipment has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user - at his own expense - will be required to take whatever measures may be required to correct the interference.

Some components may not have been manufactured by Daisy Data Displays, Inc. If not, Daisy has been advised by the manufacturer of the component that the component has been tested and complies with the Class A computing device limits as described above.

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Limited Warranty and Liability Statement
To the original purchaser, Daisy Data Displays, Inc., hereinafter referred to collectively as SELLER, warrants each of its manufactured products, and all components therein contained to be free from defects in materials and/or workmanship for a period of 12 months from the date of purchase.

Should a malfunction, or other indication of defect attributable directly to faulty materials and/or workmanship occur, Seller will, at its option, and without charge to the customer for labor and parts, repair or replace the defective product, F.O.B. Seller’s plant, but Seller will not be responsible for freight from Purchaser to Seller’s plant.
In no event shall Seller be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise resulting from abuse, misapplication or modification of the product, improper or faulty power, damage resulting from repairs or alterations performed by unauthorized persons, or conditions resulting from any other equipment attached to the product.

Seller assumes no liability for damage occurring in transit due to the product not being returned in its original shipping material.

This warranty is exclusive and is in lieu of any warranty of merchantability or fitness for a particular purpose or other warranty of quality whether expressed or implied, except of title and against patent infringement. Correction of nonconformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Seller to the Purchaser with respect to, or arising out of the goods, whether based on contract, negligence, strict tort or otherwise.

LIMITATION OF LIABILITY: The Seller shall not under any circumstances be liable for special or consequential damages, such as, but not limited to, damage or loss of other property or equipment, loss of profits or revenues, cost of capital, cost of purchased or replacement goods, or claims of customers of Purchaser for service interruptions. The remedies of the Purchaser set forth herein are exclusive, and the liability of Seller respect to any contract, or anything done in connection therewith such as the performance or breach thereof, of from the manufacture, sale, delivery, resale, installation or use of any goods covered by or furnished under this contract whether arising out of contract, negligence, strict tort or breach of warranty or otherwise, shall not, except as expressly provided herein, exceed the price of the goods upon which such liability is based.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Seller makes every effort to provide clear and accurate technical information on the application of its products in the Operator's Manual, and assumes no liability for misuse of the information.
Power and Signal Requirements

Mounting Location
When mounting, Human Machine Interfaces (HMI) and Purge systems must be positioned to avoid radiated and induced interference. Do not mount the unit in close proximity to a device that generates strong radiofrequency interference or electromagnetic interference. HMI and Purge systems must be also positioned to avoid exposure to excessive heat. Do not mount the unit in close proximity to a steam line, heated vat or oven.

Gland Plates
Before modifications can be made, Gland Plates must be removed. Please note that metal shavings are detrimental to electronic systems.

Machining
Only make enclosure penetrations in designated locations. All metal shavings must be collected and removed.

Wiring Requirements
AC power inputs require dedicated circuits or feeds. Power from lines or circuits shared by motors, drives, welders, arc furnaces, or inductive lighting is not acceptable. Conduits for HMI and Purge power should be separated from other conduits to prevent radiated or induced interference. Devices that produce spikes, surges, and brownouts are detrimental to computers, and can corrupt data and interfere with purging systems. Do not use a transformer or other device to step down a three phase circuit to run a HMI or Purge System.

Communication wires and signals should be run in separate conduits and routed away from power conduits. Providing isolation to prevent emissions from other conduits is essential to data integrity. Long runs of parallel signal lines can cause “cross-talk” and corrupt data making communications unreliable or impossible.

DC power should be provided by a dedicated power source. If multiple units must be powered from a single DC supply, the power cables must be run directly from the unit to the supply. Chaining power from one unit to the next is unacceptable. Units can interfere with each other by developing noise due to the resistance of the wires. The filtering is provided by the source or power supply.

Additional Wiring
It is not permitted to run wiring through the unit that is nonessential to the unit. The cabinet is not a junction box.

Adding Additional Equipment
Installing additional equipment in units approved for hazardous classed environments violates the approval of the unit.
# Table of Contents

- Disclaimer ................................................................. i
- FCC Warning ............................................................. i
- Limited Warranty and Liability Statement ....................... ii
- Power and Signal Wiring Requirement ............................... iii
- Table of Contents .......................................................... iv
- Front Door Callout ........................................................ 1
- Enclosure Sides Callout ............................................... 2
- Enclosure Gland Box Callout .......................................... 3
- Inside Door Callout ........................................................ 4
- Inside Enclosure Callout ................................................ 5
- PCI Card Retainer Assembly ........................................... 6
- Specifications ............................................................... 7
- Trouble-Shooting ........................................................ 8
- Maintenance and Cleaning ............................................. 10
- Replacement Parts List ................................................ 12
- Schematic & Block Diagram .......................................... 13
- Drawing ................................................................. 14
Figure 1. Front View

1. Door
2. Touch Screen
3. Latches
4. Display
5. Keypad

Figure 2. Unlocked Latch

Figure 3. Locked Latch

Figure 4. Keypad
1. Accessory Mounting Holes (¼ - 20 threads)

2. Serial Identification Label (DO NOT REMOVE)

3. Accessory Mounting Holes (¼ - 20 threads)
1. 120 Volts AC Input
2. Network Input
3. Adjustable Cableway
Figure 11. Door Interior

1. Door Assembly
2. Backlight Inverter
3. Lamp Voltage Cables
4. Keypad Assembly
5. Backlight Power/Control Signal Cable
6. Touch Screen Controller
7. Touch Screen Power/Data Cable
8. USB Keypad Cable
9. 0-6º Thermostat (for ATX power supply)
10. 8-16º Thermostat (for all heaters)
11. Touch Screen Ribbon Cable
12. Keypad Controller Board
Figure 12. Enclosure

1. Motherboard Cage
2. Flash Drive Assembly
3. CD Drive Power Connector
4. Power Supply Assembly
5. CPU Reset Switch
6. Thermostat (for fin fans - under power supply)
7. PCI Card Retainers (see pg. 7 for assembly instructions)
8. PCI Expansion Slots (2)
9. Peripheral Component Interconnect (PCI)/USB label
10. I/O Ports Label
11. Fin Cooling Fans
1. Loosen thumb screws on CPU cage. (Qty. 4)

2. Remove 2 #6 nuts from studs.
3. Place card into bracket and slide stud assembly to about .50" from end of card.

4. Tighten thumb screws to lock PCI card in place.

5. Place single or double card bracket onto stud assembly and secure with 2 #6 nuts.

6. Angle clip bracket and attach to PCI card end. (Clip will snap tightly onto card)

7. Slide clip bracket over flush to card and secure with thumb screw. (Locktite in place to secure)

***MULTIPLE CARD AND CLIP BRACKETS SHOULD BE USED TO BETTER RETAIN THE END OF THE CARD FOR SHOCK AND VIBRATION. LOCATION AND NUMBER OF BRACKETS TO BE DECEIVED UPON BY CUSTOMER NEEDS.
Specifications

MATERIAL
Enclosure
Viewport
Design

CONNECTIONS
From Motherboard
1 Serial, 1 Parallel,
4 USB, Audio In/Out,
Network, Game Port
PS/2 Keyboard Port,
PS/2 Pointing Device

PHYSICAL
15.0"
15.50" Height (H₁)
17.50" Width (W)
14.50" Height (H₂)
8.56" Depth (D₁)
1.56" Depth (D₂)
9.16" View Height (VH)
12.16" View Width (VW)

Weight
60-65 Lbs.

Viewing Window
Polycarbonate Standard

AVAILABLE OPTIONS
451 Capacitive Touch Screen
820 Bezel
821 Sun Visor
823 Windows XP
9137 Yoke Mount

MATERIAL
Enclosure
Cast Aluminum Powder
Coat Finish
Viewport
Polycarbonate Standard
Design
NEMA 4X Non-incendive
electrical equipment

ELECTRICAL
Voltage
120 VAC @ 3.35 Amps
Power
90 W* (402 W w/ heaters)
*Computer & display only

FLAT PANEL SPECIFICATIONS
Maximum Resolution
1024x768
Dot Pitch
0.297mm
Color Depth
24 bit
Viewing Angle (Typical HxV)
80° Left & Right
x 80° Up & 60°
Down
Brightness (Standard)
600 nits

ENVIRONMENTAL
Shock
IEC68 2-7
15G bi-directional impulse
11 msc, non operational
3 axes
Vibration
IEC68 2-6
3 GRMS operational,
5-2000 Hz
5 GRMS non-operational,
5-2000 Hz, 3 axes
Operating Temperature
-40° - 150° F (-40° - 65° C)
Storage Temperature
-40° - 150° F (-40° - 65° C)
Relative Humidity
10-95% Non-Condensing
Listed Approvals
EEExnA IIC T4, ExII36

COMPUTER SPECIFICATIONS
Motherboard
Mini-ITX SBC, Integrated
Graphics, 2 PCI Slots
Dual 10/100 Base-T
Network Interface
Storage (Standard)
4GB Flash Drive,
1GB Ram
CPU (Standard)
Pentium™ M 1.8 GHz
Contact your Daisy Data Displays representative for info.
on the latest CPU, memory, and hard drive options.

*Specifications are subject to change without notice.
Trouble-Shooting

The computer will not start

Verify power source. (See model requirements)

Can the power source meet the requirements?

No
Yes

Correct power system.

Is the temperature in the unit below 0 Celsius? *See note 1

No
Yes

Manual start

Are the heaters warm?

No
Heater thermostats may be bad

Yes

Wait until the temperature inside the unit warms above 0 Celsius

Did the computer start?

No

Is the power good from the Surge Suppressor?

No
Replace Surge Suppressor

Yes

This is normal operation for a cold climate

Yes

Manual start

Power Requirements
Model 4823AC
Nominal Voltage 120VAC
Current (Warm Climate) .75 Amps Nominal
Current (Cold Climate) 3.35 Amps Nominal

Note 1
The computer is not permitted to start if the temperature drops below 0 Celsius inside the cabinet and will remain off until the temperature rises above 6 Celsius.

Note 2
The heaters turn on when the internal temperature drops below 8 Celsius and will remain on until the internal temperature rises above 16 Celsius.

Figure 13a Power problem flowchart
Figure 13b Power problem flowchart

Manual start

Open the cabinet door and press the Power-Reset buttons simultaneously

Did the computer start?

Yes

CMOS may have lost BIOS setting data. Correct BIOS settings.

No

Contact factory for service

Does the computer start when external power is applied?

Yes

A brownout from the power source may have caused a glitch in the power system resulting in the corruption of the CMOS data.

No

CMOS battery may be dead. Replace battery

Verify quality of power source.
Maintenance and Cleaning

While D3’s products are designed to be durable and dependable, certain parts need to be maintained and cleaned occasionally. This will help to keep units operating at full potential.

Conductive dust or buildups of liquids can affect capacitive touch screens. Touch screens made from glass and polycarbonate can be cleaned with Isopropyl alcohol or a 50/50 mix of Isopropyl and water. Apply solution onto a clean lint free cloth first. Do not spray the cleaner directly onto the window. Ammonia based cleaners are not recommended. Live steam should not be used in the cleaning of the units. Solvents and abrasives can damage anti-glare coatings. Scratches cannot be buffed out of touch screens.

Elastomer keyboards and mice should be cleaned using a soft brush with mild soap and water.

Stainless steel enclosures can be cleaned with just about any cleaner available but care should be used if using solvents near gaskets and touch screens or viewing windows. Enclosures and external heat sinks should be kept clean and free of the accumulation of dirt, which can cause the buildup of heat and performance degradation.
Operation

Temperature < 8°C

Heaters Off → Heaters On

Temperature > 16°C

Temperature > 6°C

ATX Power Supply Off → ATX Power Supply On

Temperature < 0°C

Temperature > 28°C

Cooling Fans Off → Cooling Fans On

Temperature < 15°C

Figure 14 Thermostat Operation

Cold Temperature Delayed Start-Up
At low temperatures, this computer won’t turn on until the heaters are allowed to bring the internal temperature up to 6°C. This may take up to 1 hour.
# Replacement Parts List

## HVAC Components

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P070-000433</td>
<td>110VAC Heater, Kapton 5&quot;x10&quot; 52.9 Ohms</td>
</tr>
<tr>
<td>I100-001809</td>
<td>Card Cage Cooler Fan Assembly</td>
</tr>
<tr>
<td>I640-001503</td>
<td>Cooling Fan Array Assembly (for Fins)</td>
</tr>
<tr>
<td>E906-00068</td>
<td>CPU Cooler Heatsink and Fan</td>
</tr>
<tr>
<td>I100-001800</td>
<td>Thermostat (0Y) –2PHSG 20”L</td>
</tr>
<tr>
<td>I100-001801</td>
<td>Dual Thermostat (8x&amp;8x) –2PHSG</td>
</tr>
<tr>
<td>I100-001813</td>
<td>Thermostat (15Y0) –2PHSG 6”L</td>
</tr>
</tbody>
</table>

## User Interface Components

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I649-000038</td>
<td>Front Door Latch Kit</td>
</tr>
<tr>
<td>P040-000045</td>
<td>Touch Screen Capacitive Tough Touch (Optional)</td>
</tr>
<tr>
<td>P040-100022</td>
<td>Touch Screen Controller (Optional)</td>
</tr>
<tr>
<td>I301-000025</td>
<td>14-Key Membrane Keypad (Legend is customizable)</td>
</tr>
<tr>
<td>P000-000123</td>
<td>15” Transflective LCD Display</td>
</tr>
<tr>
<td>P070-000520</td>
<td>LCD Backlight Inverter Module</td>
</tr>
<tr>
<td>I640-001466-02</td>
<td>15” LCD Door Assembly (must specify touch screen option)</td>
</tr>
<tr>
<td>P030-000004</td>
<td>AC Filter 110VAC, 20A, TVSS Plug</td>
</tr>
<tr>
<td>P030-000005</td>
<td>AC Filter Base, DIN Rail Mount</td>
</tr>
<tr>
<td>I024-000013</td>
<td>Keypad Controller (must specify optional firmware)</td>
</tr>
<tr>
<td>I301-000035</td>
<td>CPU Power/Reset Membrane</td>
</tr>
</tbody>
</table>

## Computer Components

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I640-001497</td>
<td>Flash Drive Assembly with Mounting Panel and Adapter</td>
</tr>
<tr>
<td>P070-000505</td>
<td>Compact Flash to IDE Drive Adapter</td>
</tr>
<tr>
<td>P060-000061</td>
<td>4GB Compact Flash Drive (Blank)</td>
</tr>
<tr>
<td>I640-001518-01</td>
<td>110VAC Power Supply, 1U Form Factor, Potted</td>
</tr>
<tr>
<td>I640-001502-01</td>
<td>SBC Card Cage Assembly</td>
</tr>
<tr>
<td>I640-001519</td>
<td>SBC, Mini-ITX, Pentium-M, S479, Potted</td>
</tr>
<tr>
<td>P050-000230</td>
<td>PCI Riser Card</td>
</tr>
<tr>
<td>A301-000018-01</td>
<td>CPU Pentium-M 1.8Ghz</td>
</tr>
<tr>
<td>A314-001024</td>
<td>Memory, RAM, DDR 400, PC-3200, 1GB</td>
</tr>
<tr>
<td>I640-001504-01</td>
<td>PCI Card Retainer Kit</td>
</tr>
</tbody>
</table>

*Part Numbers subject to revision or change without notice.*
PRELIMINARY DRAWING: DIMENSIONS MAY BE CHANGED TO MEET CUSTOMER SPECIFICATIONS.