

Perfect 3.5" SBC For Smart Embedded Applications



By 2011 Nov.

PERFECTRON

OXY5313/5A Spec



MEDICAL



KIOSK



ENERGY



AUTOMATION



**-20~+70
Wide Temp**

Main Features:

- Intel® Atom™ Pineview D525/N455 CPU onboard
- Support 18/24-bit Single/Dual channel LVDS (24-bit Optional)
- Built-in Mini PCIe socket for WiFi/GPS/GSM/GPRS Module
- 8 x COM ports (COM1 port by D-SUB 9 pin, RS232/422/485, COM2~COM8 ports by 10 pin connector, RS-232 only)
- 12V DC-in, optional for terminal block connector
- 8 x USB ports(2 ports on Front I/O, 6 ports by 2 x 5 pin header)
- Dual Gigabyte LAN
- -20~70 degrees operating temperature



D525
N455

Mini
PCIe

VGA

LVDS
24 Bit

Dual
LAN

CF

8
COM

Wide
Temp

LPT

GPIO
8 Bit

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Successful Solutions For Process Control & Semi Food Industry

1

**Wide Temp. & Wide Voltage
Industrial Controller**



**3.5" N455 SBC
LPT & 6 COM Ports Support**



2

**12.1" IP65 Touch Panel PC
Semi- Food Industry**



**3.5" N455 SBC ; 18 Bit LVDS
-20 ~ +70 degree Support**



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Successful Solutions In Bus PPC & Clinic Multi Display

3

21.5" Full HD Display in Bus



3.5" D525 SBC ; 24 Bit/Dual Channel LVDS



4

Multi Display in Dental Clinic



3.5" D525 SBC ; 24 Bit LVDS ; 18 Bit LVDS ; VGA ; MD1000



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Successful Solutions For *Industrial Controller*

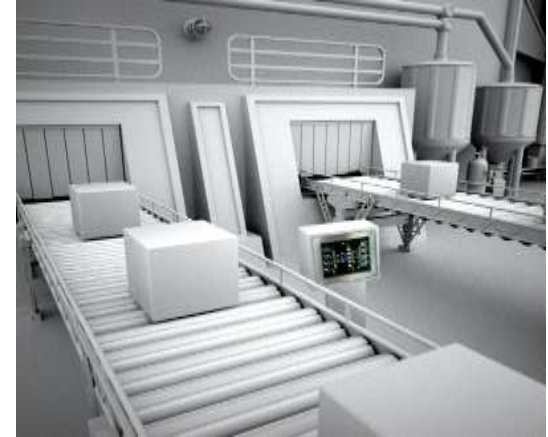
1

■ **Application**

- ✓ *Factory Automation- PLC control & equipment control*
- ✓ *Process Monitoring – SCADA system & Shop flow system*
- ✓ *Value for quick data Record and transaction*

■ **PERFECTRON Solution**

- ✓ *Connect several controllers: RS-232/485 & DIO (4in/4out) & LPT*
- ✓ *Wide Temp : Support from -20 up to 70 degree*
- ✓ *Wide Voltage : Support from +9V up to 36V*



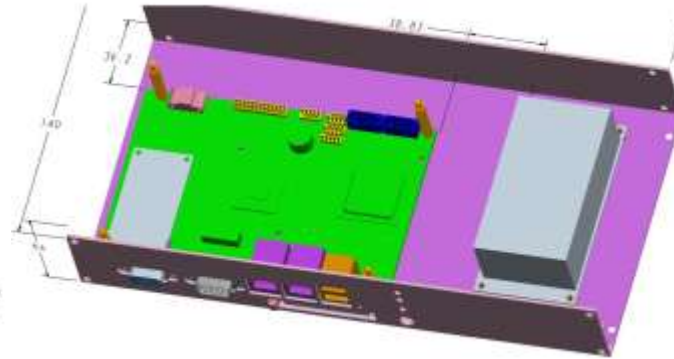
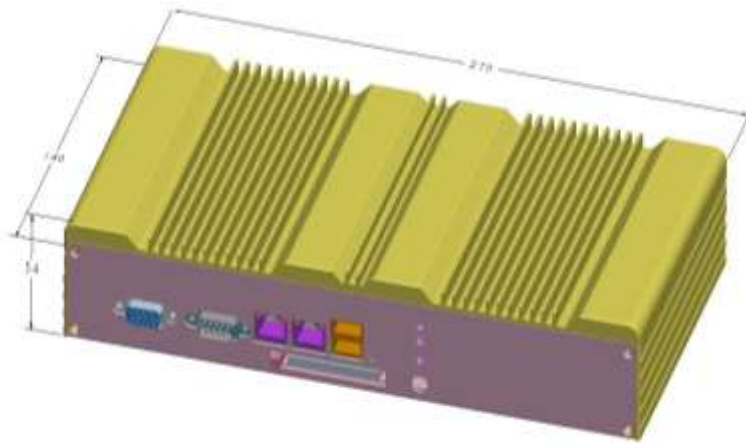
20~+70
Wide
Temp



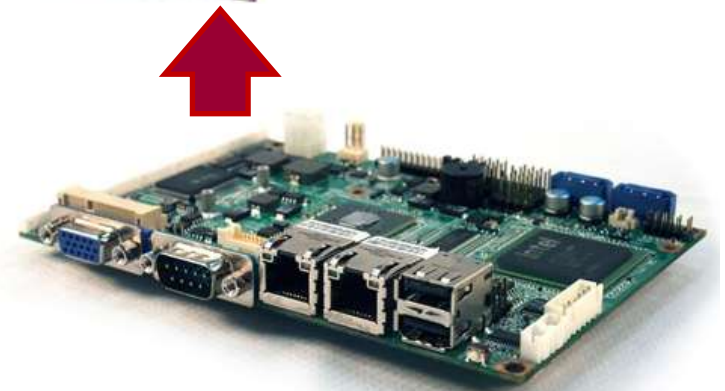
+9V~36V
Wide
Voltage

PERFECTRON

Successful Solutions For *Industrial Controller*

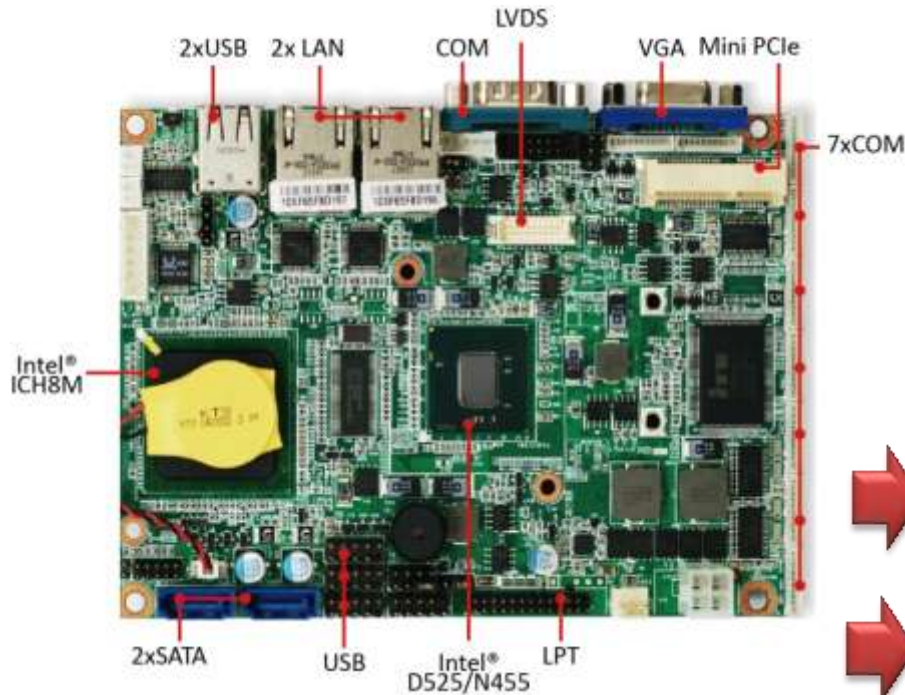



OXY5313A
Inside



Successful Solutions For *Industrial Controller*

1




20~+70
Wide
Temp


+9V~36V
Wide
Voltage



**8 Serial
Ports**



**Digital I/O
(4in/4out)**



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Successful Solutions For *Semi Food Industry*

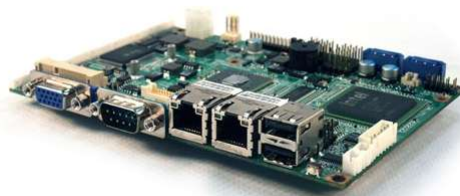
2

■ **Application**

- ✓ *Indoor Restaurant*
- ✓ *Harsh Environment – Oil & Dust & Strong PH*
- ✓ *Heavy Duty – High/Low temp., High Humidity*

■ **PERFECTRON Solution**

- ✓ *Front bezel: Antirust stainless, IP65 Guarantee*
- ✓ *Anti-vandal/Anti-Scrape Capacitive Touch*
- ✓ *Connect several controllers: RS-232/485 & DIO (4in/4out)*



OXY5313A
Inside

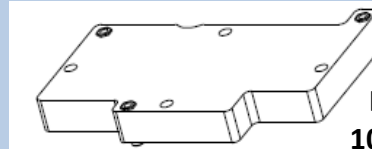


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Successful Solutions For *Semi Food Industry*

2

FANLESS *Thermal Solution*



Height
10.54mm

**OXY Series
Heat-Spreader**

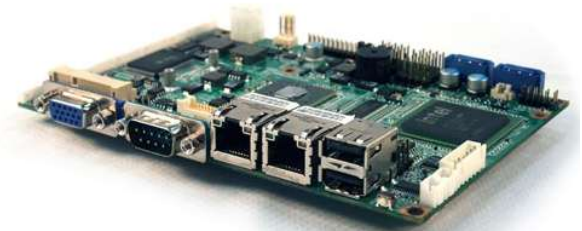


Height
20.5mm Width : .97mm



Depth
51mm

OXY Series Heat-Sink



Successful Solutions For 21.5" Display In Bus

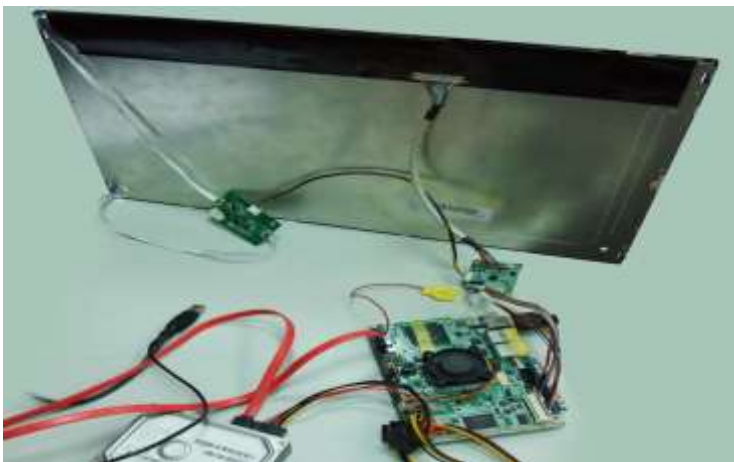
3

■ Application

- ✓ Harsh Environment –Heavy Duty – High/Low temp., High Humidity
- ✓ 24x7 none-stop system
- ✓ High reliability for Shock and Vibration

■ PERFECTRON Solution

- ✓ SK201 for 24bits dual channel LVDS lighting up LQ215M1LGN2
- ✓ Reliability verification
- ✓ ESD/EMI protected



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Value for Multi Display application

4

■ Project Requirements

- ✓ Multi Display - Frame extension , DVR Center Room, Clinic Display
- ✓ Video synchronization
- ✓ Different kinds of Monitor support

■ PERFECTRON Solution

- ✓ LVDS Lighting by both 18bits/ 24bits
- ✓ 4:3 and 16:9 available
- ✓ Max. resolutions to Full HD 1920x1080p



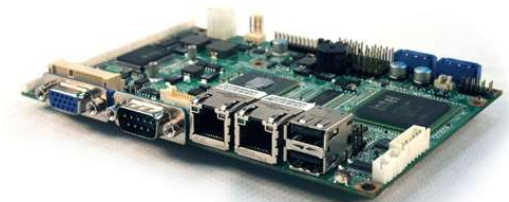
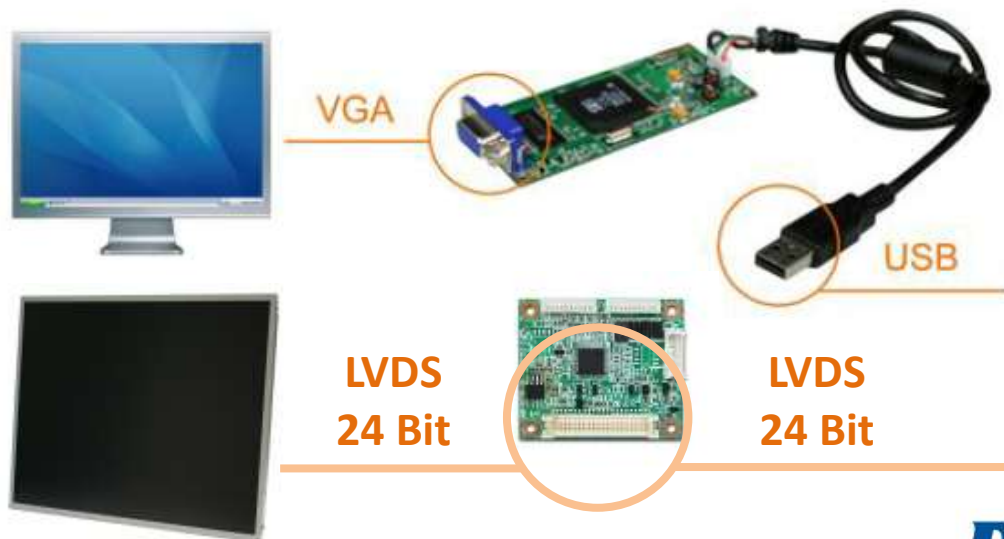
3.5" D525 SBC

+

24 Bit LVDS Converter

+

USB to VGA Converter



PERFECTRON

Value for Multi Display application

4

Panel & Monitors verification configuration

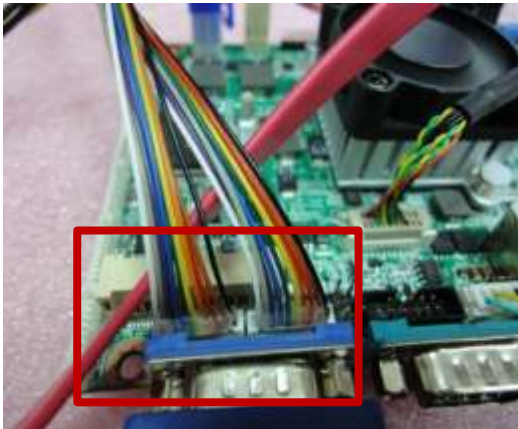
M/B	Form Factor	Model name	Remark
SBC	3.5"	OXY5313A/OXY5315A	Intel D525(1.8Ghz/1MB L2 Cache) Intel N455(1.6Ghz/512KB L2 Cache)
Panel	Model name	Max resolution	Remark
12.1"	G121XN01 V0	1024x768	AUO
19"	G190EG01-V0	1280x1024	AUO
22" Monitor "	VX2239WM3	VGA	View Sonic 22" Monitor
22" Monitor "	VX2239WM3	VGA	View Sonic 22" Monitor
17" Monitor	Syncmaster 172s	VGA	Samsung 17" Monitor
Item list	Model name	Max resolution	Remark
USB to VGA converter-1	MD1000	VGA	
USB to VGA converter-2	MD1000	VGA	
Item list	Model name	Max resolution	Remark
VGA to 24 bit LVDS	SK201	1920x1080	

Value for Multi Display application

(1) 18 Bit LVDS with 12" LCD Panel G121XN01 V0

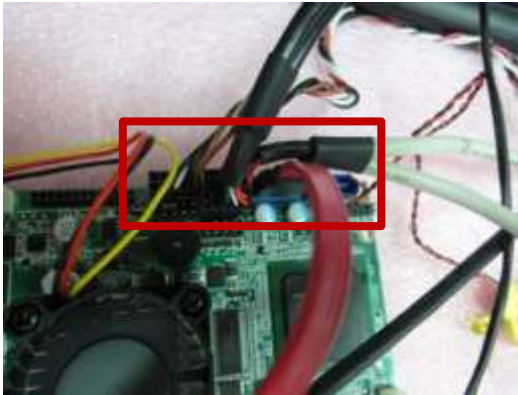


(2) SK201 (24 Bit LVDS Converter) with 19" LCD Panel (G190EG01)

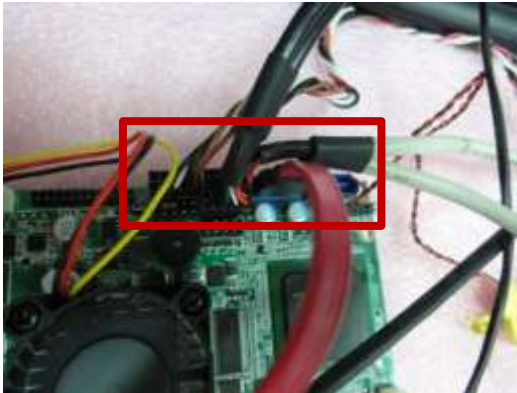


Value for Multi Display application

(3)USB to VGA converter (MD1000) and View Sonic 22"VX2239WM3

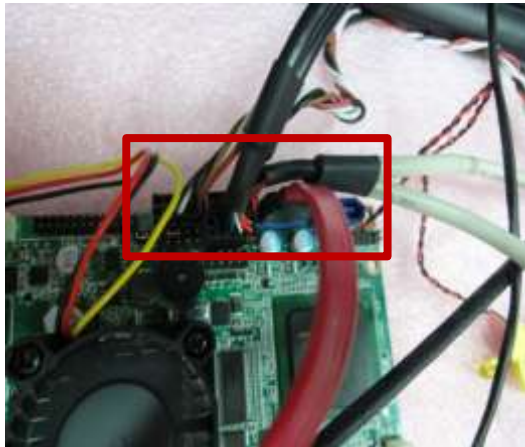


(4)USB to VGA converter (MD1000) and View Sonic 22"VX2239WM3

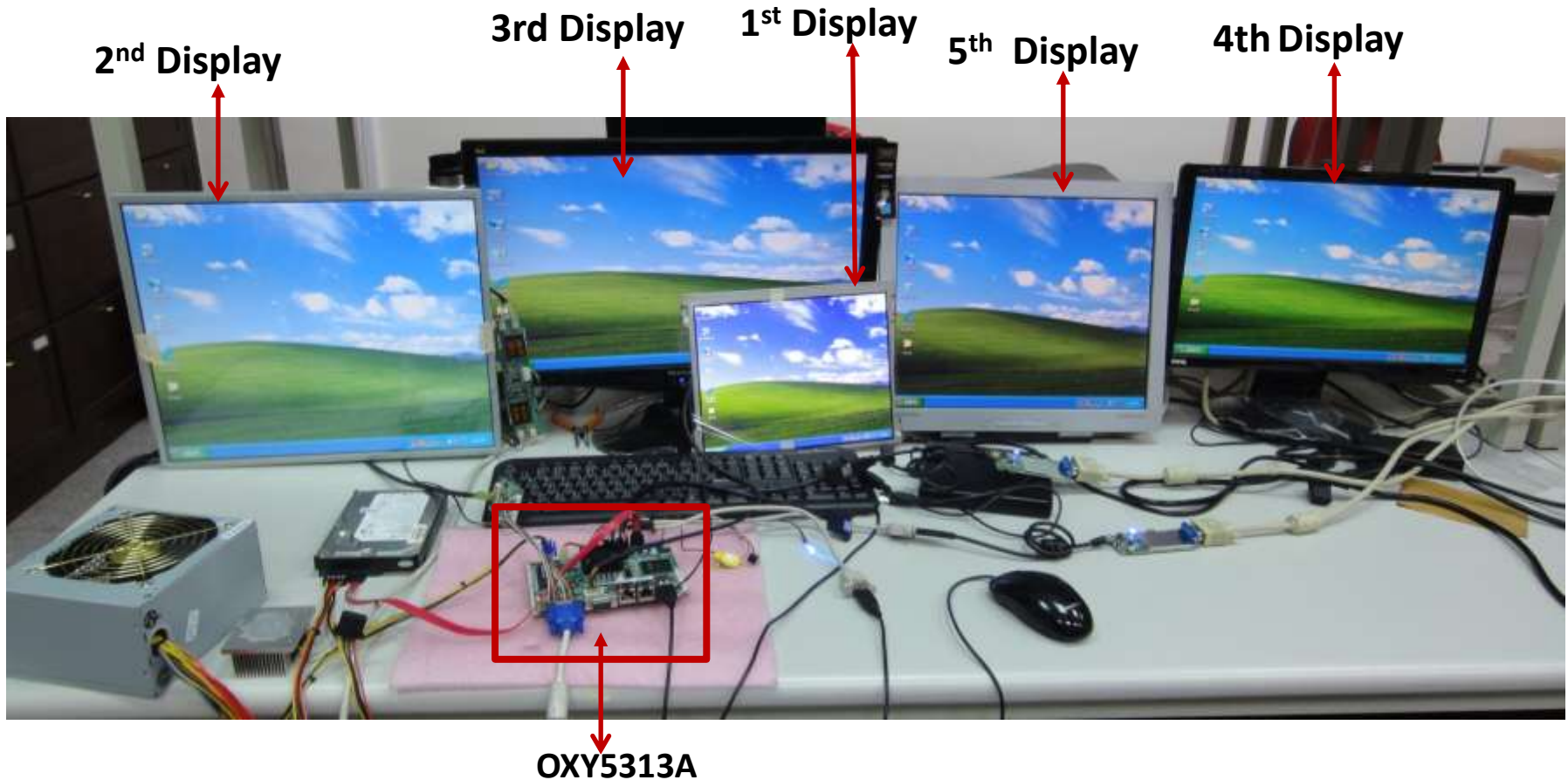


Value for Multi Display application

(5)USB to VGA converter (MD1000) and Samsung 17" Syncmaster 172S



5 Displays Lighting Up with OXY5313A



Successful Solutions For Dental Clinic



■ *Application*

- ✓ *Monitor for X-Ray*
- ✓ *Monitor for Medical History*
- ✓ *Display for Digital Signage*

■ **PERFECTRON Solution**

- ✓ *OXY5313 + MD1000 + SK201 for 5 displays*

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IP
54-67

IP Protection
IP54 ~ 67



Embedded System



Extend temp.
-30 ~ 70 °C



Single Board Computers



Wide Range Voltage
9V ~ 36V



Display Solutions



Automation



Digital Signage



Surveillance



Energy



Transportation



Self-service



Medical



Gaming



Military