

KONTRON Technology A/S

(www.kontron.dk or www.inside.dk)

presents

The ATX & μ ATX Pentium® 4 / 845G(GE) Motherboards
886LCD/ATX(GE) & 886LCD/ATXU
+ ADD-CARDS (DVO-to-DVI/LVDS)



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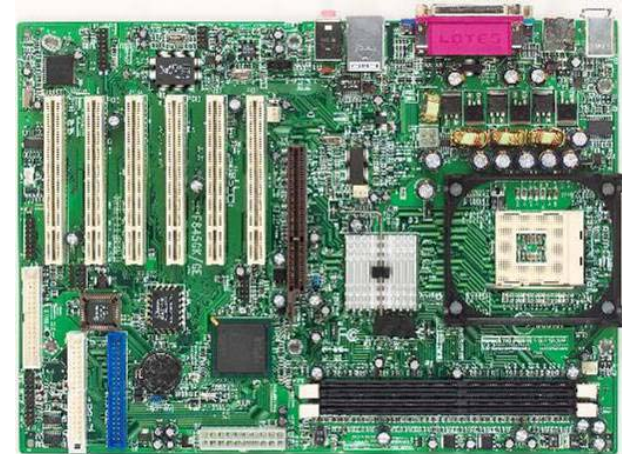
Document Revision 4.8a (886LCD_P4_Motherboards_V48a.ppt; 18th of October 2003)

886LCD P4/845G(GE) Motherboard Overview:

(incl. DVO-to-DVI/LVDS ADD-CARDS; 886LCD/ATX with 845G C.S. see Part No. Overview)



886LCD/ATXU



886LCD/ATX(GE)



DVI/TV-Out ADD-CARD



LVDS/CRT/TV-Out ADD-CARD



**Low Cost Twisted Pair
LVDS SCSI Cable (3M)**



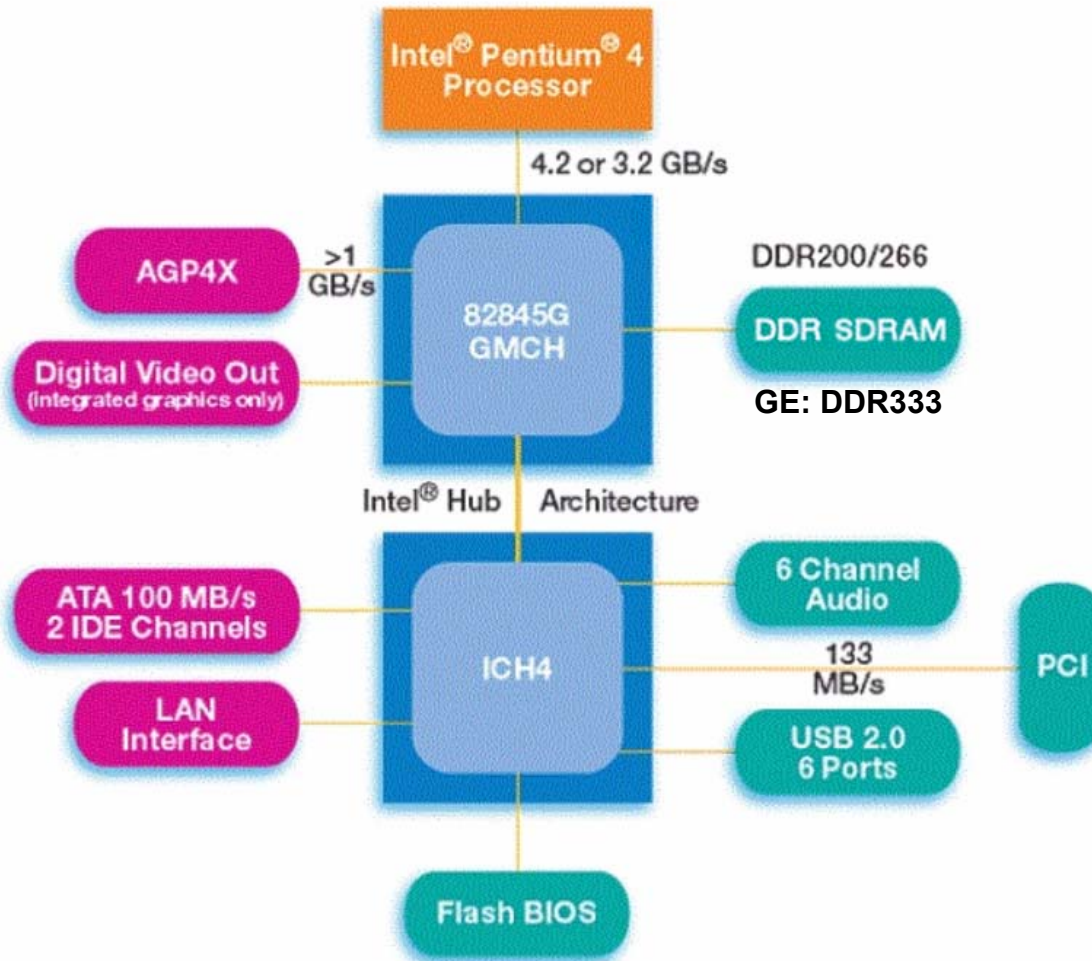
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886LCD Pentium® 4 Motherboards:

- Pentium® P4 Motherboards
- mPGA478 Socket
- Intel® 845G/845GE Chip Set
- Intel® ICH4 I/O Hub Controller (South Bridge)
- FSB400/533MHz
- DDR266 SDRAM Support (GE: +DDR333)
- USB2.0 Support (back. Comp. w/ USB1.1)
- 10/100-Base-T Fast Ethernet
- AC97 Audio and Game Port
- Intel® Extreme Graphics
- AGP/DVO Interface
- Digital LCD-Display Support (DVI or LVDS)
- ATX Form Factor w/ 6x PCI Slots (⇒ 886LCD/ATX[GE])
- Micro ATX Form Factor w/ 3x PCI Slots (⇒ 886LCD/ATXU)



886LCD Pentium® 4 Motherboard Architecture:



Unique Selling Points:

1. High Performance / Low Cost / High Volume Board Level Product available for Sales.
2. Approach of New Markets and Applications (⇒ Increase of Market Shares).
3. Pentium® 4 Embedded Design-In Activities just about to start (⇒ Product Availability On Time).
4. **Up to 3 Years Availability (call).**
5. **Digital Flat Panel Display Support (Optionally).**
6. Extensive Documentation.
7. Strong European 2nd Level Support.
8. Competitive Price/Performance Ratio.
9. Wide Motherboard System Integration
Competence available in KONTRON Group.



886LCD Motherboard System Integration from Kontron:

(please contact guenter.dumsky@kontron.com)



2U Rack System MBx203

(www.kontron.com)



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Market & Applications:

- POS (Point-of-Sales)
- Gaming & Gambling
- Communication
- Entertainment & Advertising
- Multimedia Terminals/Kiosks
- Banking, ATMs
- POI (Point-of-Information)
- Public Information Displays
- Information Appliances
- Internet Devices
- Vending Machines
- Ticket Terminals
- IPCs & Panel-PCs
- Industrial Automation
- Medical Applications
- Pay & Web Phones, ...



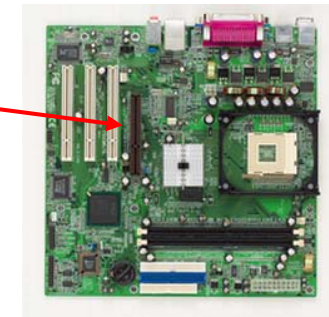
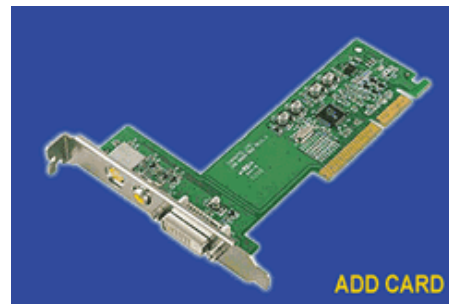
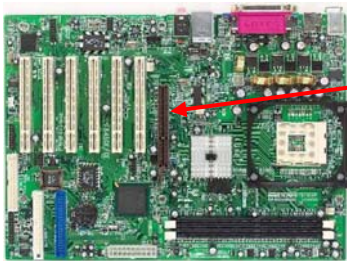
ADD-CARDS

for P4/845G(GE) 886LCD Motherboards

- **DVI** (external Solution)
- **LVDS** (OpenLDI + SPWG; internal Solution)
- **TV-Out** (S-Video + Composite Video)

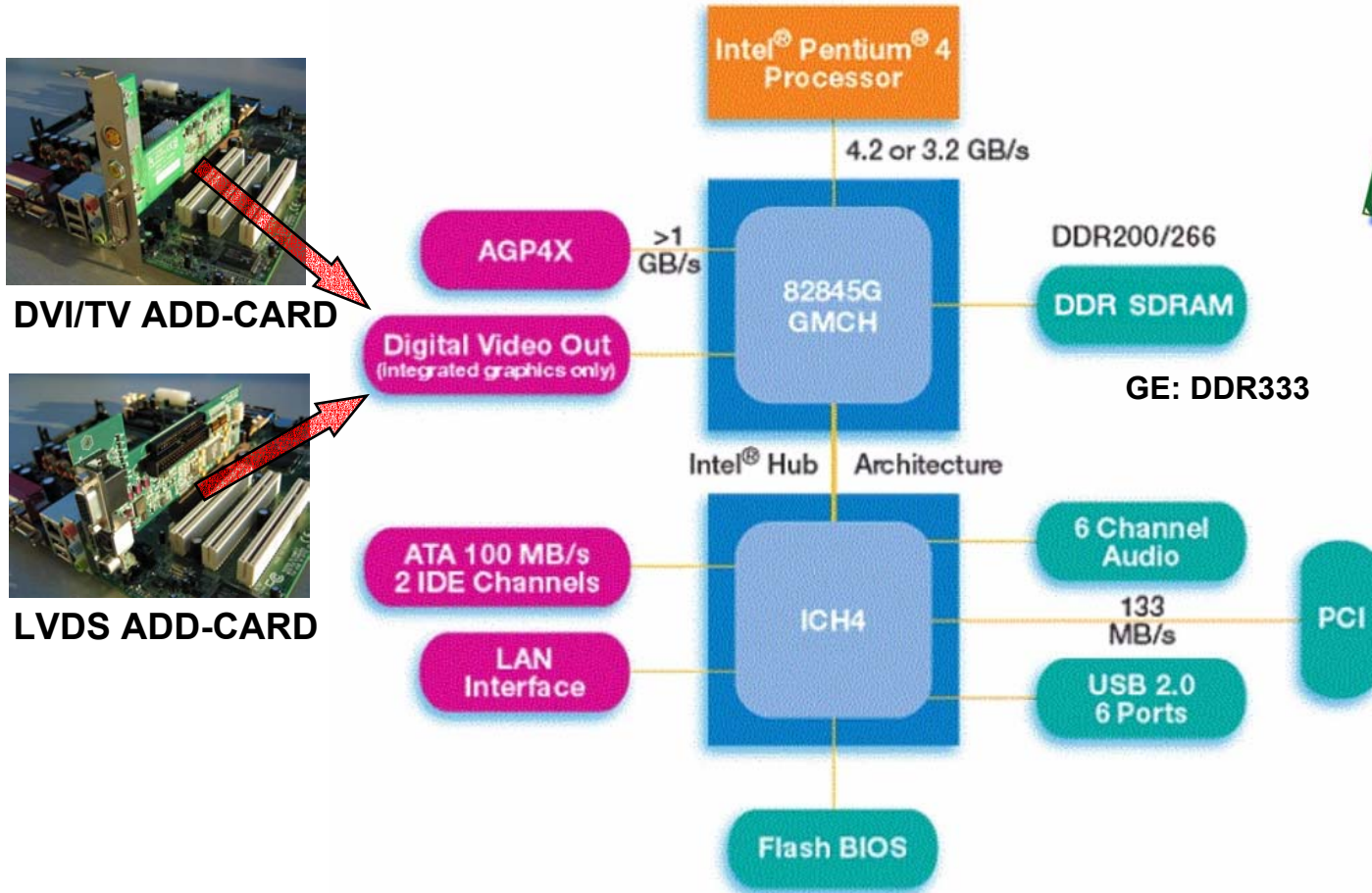
FPD Flat Panel Display Support:

- FPD Market is KONTRON Technology A/S Focus Market.
- Strong Motherboard Flat Panel Display Support.
- **DVO-to-LVDS ADD-CARD available (⇒ New!).**
- DVO-to-DVI ADD-CARD available.
- Other ADD-CARDS on Project Basis possible (call).
- Project Based Flat Panel Display Adaptation.



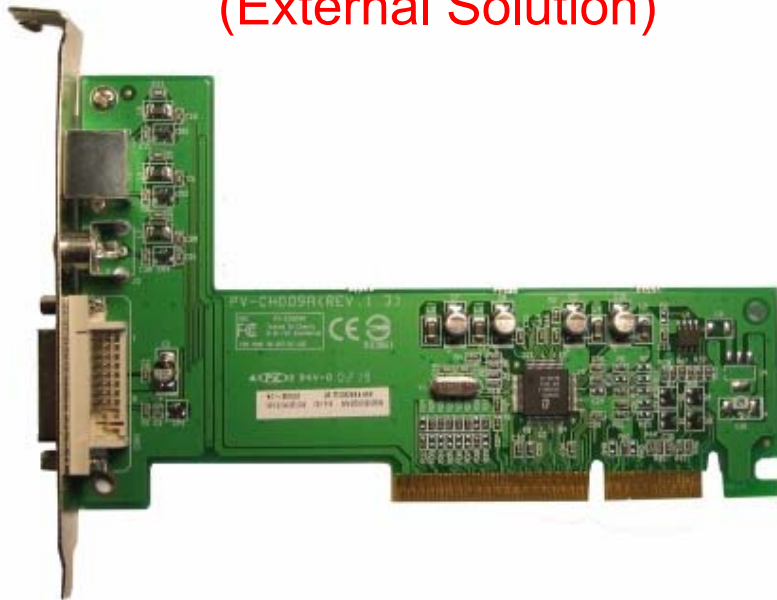


The AGP/DVO ADD-CARD Concept:



ADD-CARDS for P4/845G(GE) 886LCD Motherboards: (DVO/AGP-to-DVI/CRT/TV and DVO/AGP-to-LVDS/TV ADD-CARDS)

DVI ADD-CARD (External Solution)



LVDS ADD-CARDS (Internal Solution)*

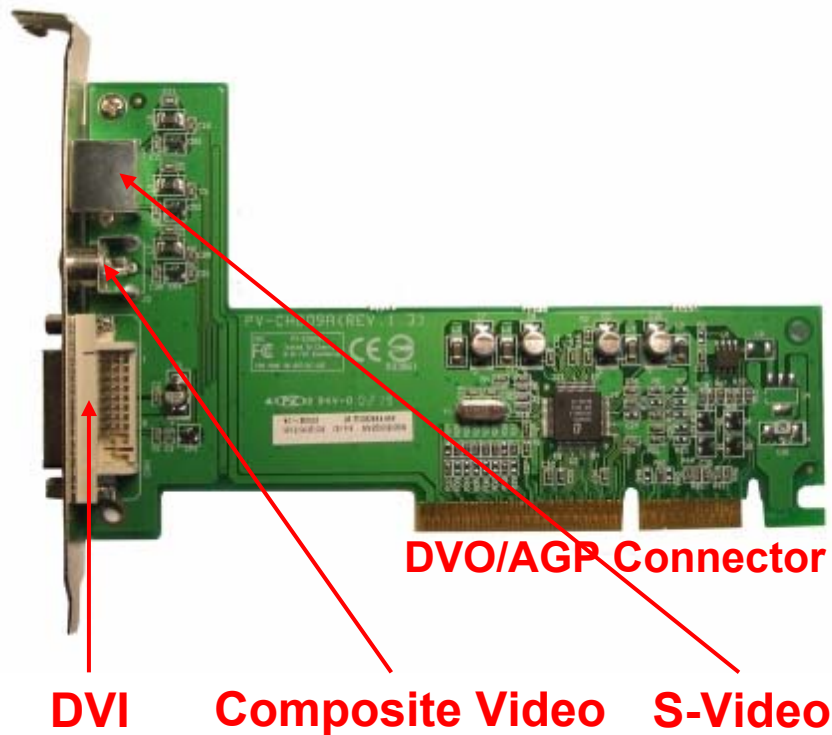


**Ribbon and Round LVDS
Twisted Pair Cables**



* Internal Solution: PC and FPD/LCD Display typically in one Housing/Cabinet!

DVI ADD-CARD for P4/845G(GE) 886LCD Motherboards:

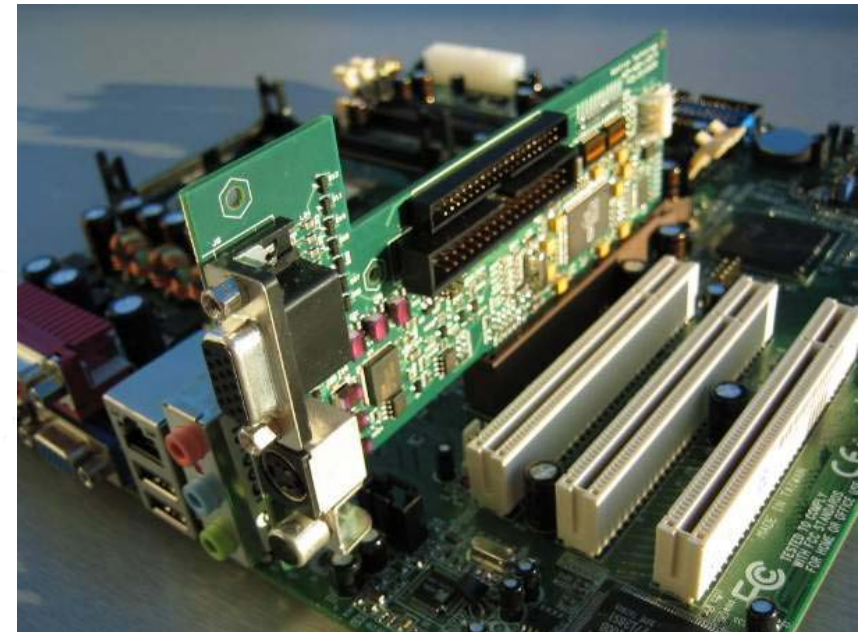
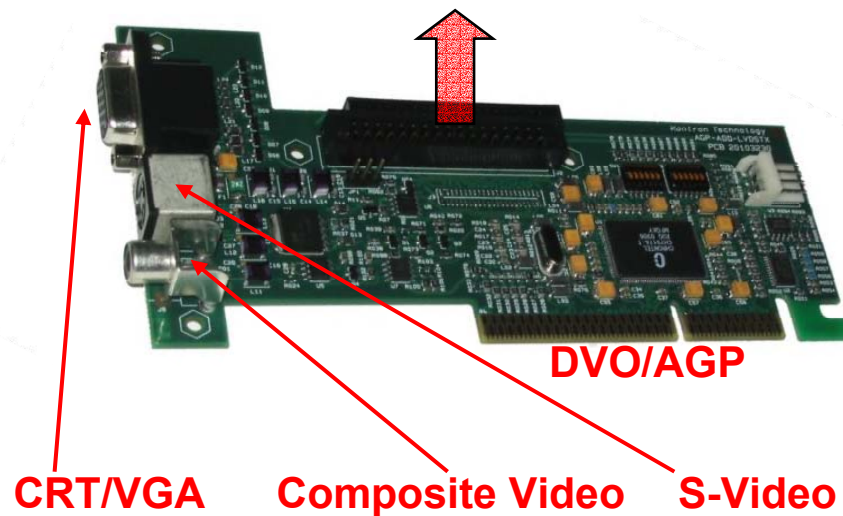


- **Up to 1600 x 1200 (UXGA) @16.7 Mio. Colours (= TrueColour)!**

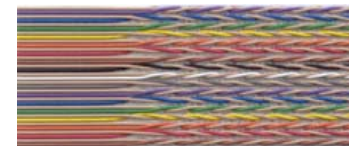
LVDS ADD-CARDS for P4/845G(GE) 886LCD Motherboards:

LVDS Connectors

34-pole (2.54mm), J1L140 (2.0mm), J1L1 (FFC)



- Up to 2048 x 1536 (QXGA) @16.7 Mio. TrueColour Support (w/o TV-Out)
- Up to 1600 x 1200 (UXGA) @16.7 Mio. TrueColour Support (w/ TV-Out)
- OpenLDI and SPWG LVDS Signal Routing/ Mapping Support (via Software Switch)



**Low Cost Ribbon
LVDS Twisted Pair
Cable (2.54mm;
3M SCSI Cable).**



**Round LVDS
Twisted Pair
Cable**

LVDS ADD-CARD Feature List:

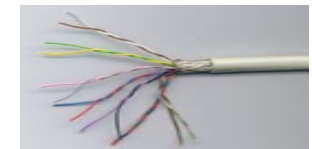
(for P4/845G(GE) 886LCD Motherboards)



- Based on Chronitel CH7017 DVO-to-LVDS Transmitter
- Compatibility to LVDS Receivers DS90CF364/384/388
- Up to 2048x1536 (QXGA) @16.7Mio. Colours/TrueColour (w/o TV-Out)
- OpenLDI and SPWG LVDS Signal Routing/Mapping Software Switch
- Single or Dual LVDS Output up to 2x24 Bits
- DIP Switch for various Settings
- Low Cost 34-pole LVDS Connector (2.54mm Pitch Dual Row)
- Low Cost Ribbon LVDS Twisted Pair Cable Support (3M SCSI Cable)
- Round LVDS Twisted Pair Cable Support (via 34-pole LVDS Connector)
- Mounting Holes to lock 34-pole LVDS Connector
- 3.3V or 5.0V Vcc Panel Supply Voltage (via 34-pole LVDS Connector) ¹⁾
- 12V Vcc Panel Supply Voltage (via 34-pole LVDS Connector)
- 5V and 12V Backlight Support
- Backlight On Signal Inverter ¹⁾
- JILI Connector (FFC; optionally)
- JILI40 Connector (2.0mm; optionally)



Low Cost Ribbon LVDS
Twisted Pair Cable
(2.54mm; 3M SCSI Cable)

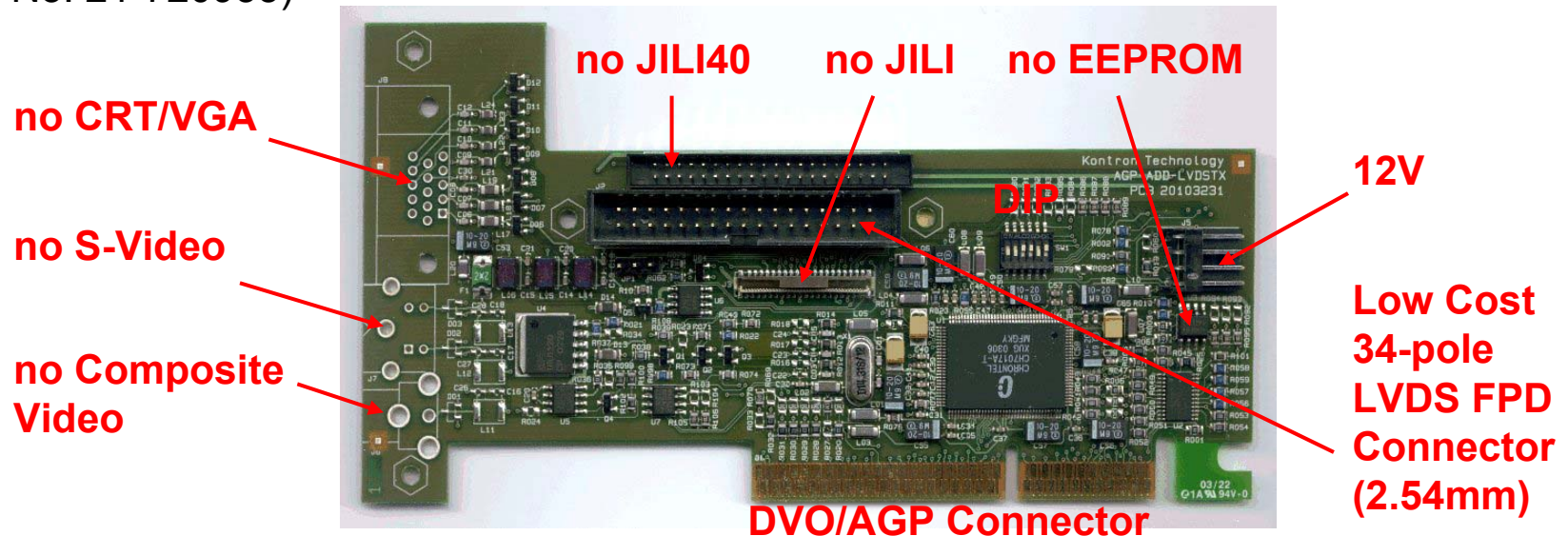


Round LVDS
Twisted Pair Cable

¹⁾ DIP Switch selectable!

LVDS ADD-CARD Variants: ADD-LVDS (Standard)

(Part No. 21-720935)

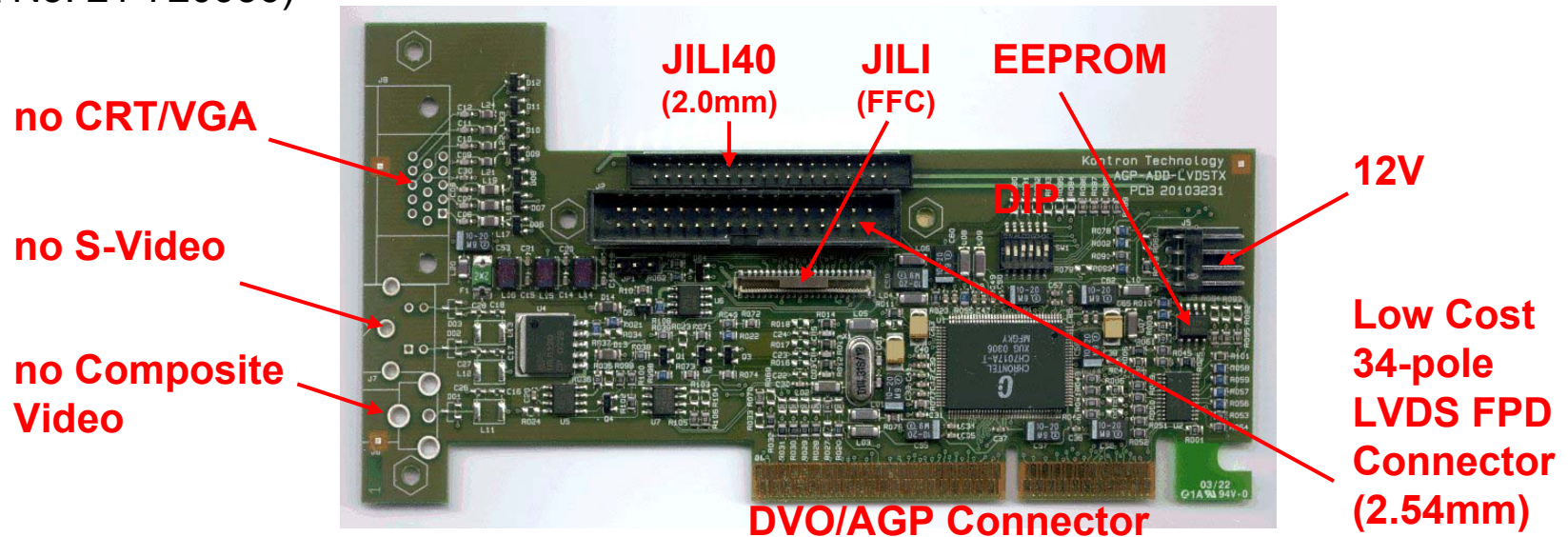


- **Standard Production Version of Kontron Technology**
- **Low Cost Variant**
- **OpenLDI and SPWG LVDS Signal Routing/Mapping Software Switch**
- **One FPD/LCD located in Motherboard BIOS (1x LCD Parameters/Timing)**
- **No EEPROM (for FPD/LCD Timing Table on Board of ADD-LVDS Card)**
- **No JILI (FFC) and JILI40 (2.0mm) Connectors**
- **No external, analogue CRT/VGA Connector (on Motherboard)**
- **No S-Video TV-Out Connector**
- **No Composite Video TV-Out Connector**
- **Document No. D00438-x (User's Manual)**
- **Part. No. 21-720935**

S-Video and Composite Video TV-Out Connectors also available on DVI ADD-CARD!

LVDS ADD-CARD Variants: ADD-LVDS/OEM

(Part No. 21-720936)

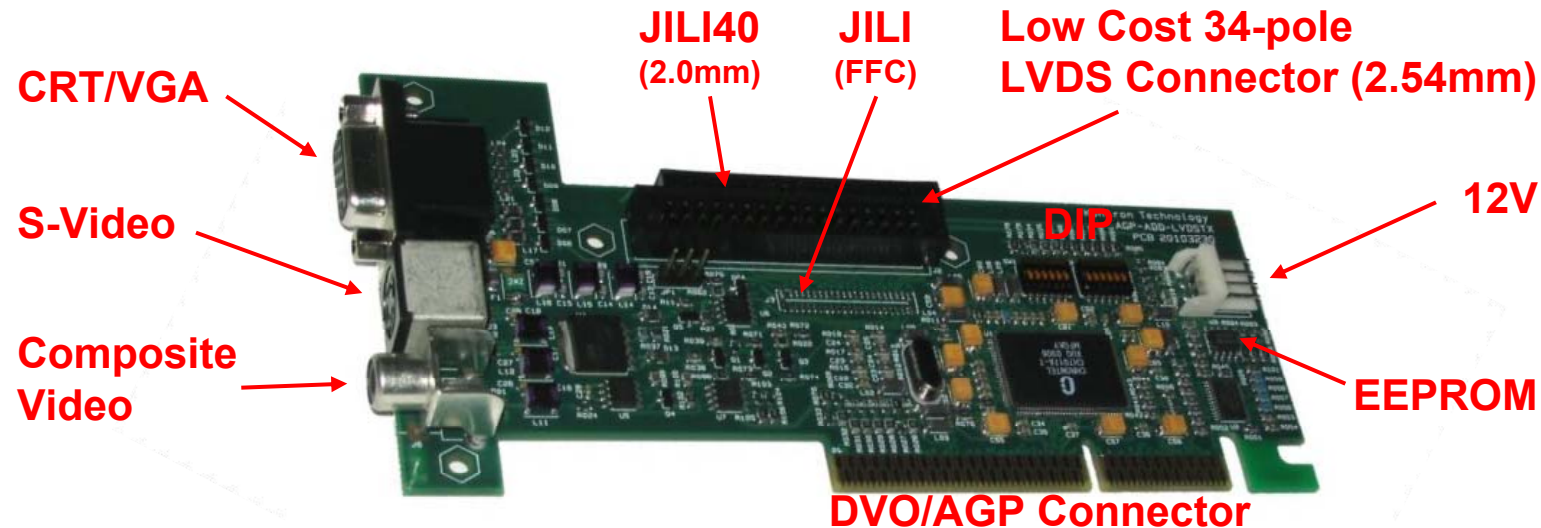


- OEM Production Version of Kontron Technology – call for Availability!
- OpenLDI and SPWG LVDS Signal Routing/Mapping Software Switch
- Several FPD-/LCD-Displays located in on Board EEPROM (Timing Table)
- Incl. EEPROM (for FPD/LCD Timing Table on Board of ADD-LVDS Card)
- Incl. JILI (FFC) and JILI40 (2.0mm) Connectors
- No external, analogue CRT/VGA Connector (on Motherboard)
- No S-Video TV-Out Connector
- No Composite Video TV-Out Connector
- Document No. D00438-x (User's Manual)
- Part. No. 21-720936

S-Video and Composite Video TV-Out Connectors also available on DVI ADD-CARD!

LVDS ADD-CARD Variants: ADD-LVDS/OEM2

(Part No. to be defined)

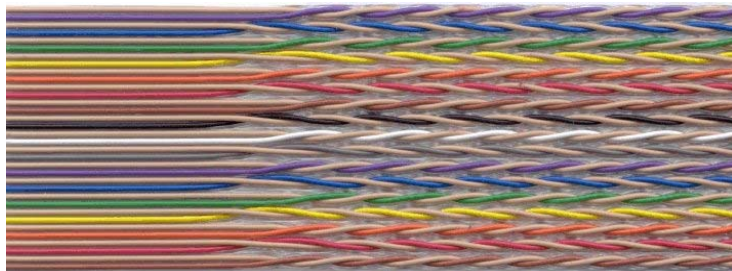


- OEMs only (Project based Production only)
- OpenLDI and SPWG LVDS Signal Routing/Mapping Software Switch
- Several FPD-/LCD-Displays located in on Board EEPROM (Timing Table)
- Incl. EEPROM (for FPD/LCD Timing Table on Board of ADD-LVDS Card)
- Incl. JILI (FFC) and JILI40 (2.0mm) Connectors
- Incl. external, analogue CRT/VGA Connector
- Incl. S-Video TV-Out Connector
- Incl. Composite Video TV-Out Connector
- Document No. D00438-x (User's Manual)
- Part. No. [TBD]

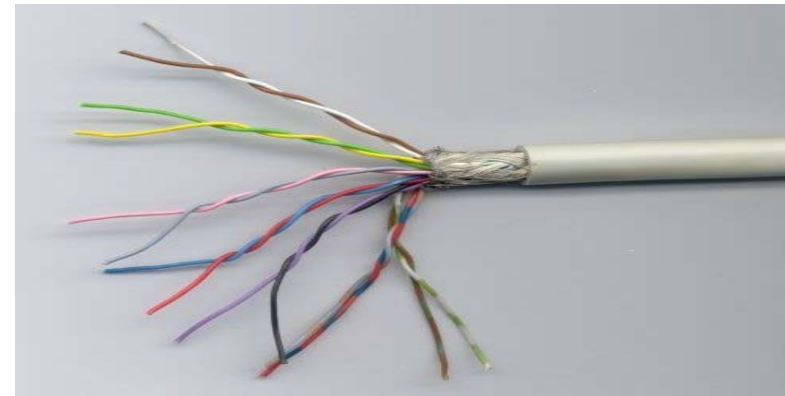
ADD-LVDS/OEM2 with all Features on Board is not produced at the Moment! Call for Availability!

LVDS Twisted Pair Cables and Connectors:

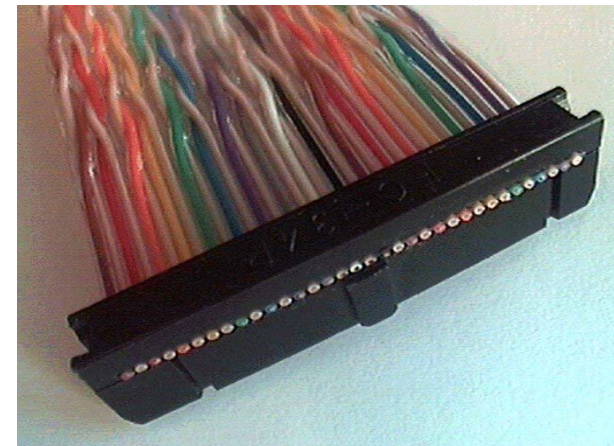
(for LVDS ADD-CARDS)



Low Cost Ribbon LVDS Twisted Pair Cable (2.54mm; 3M SCSI Cable)

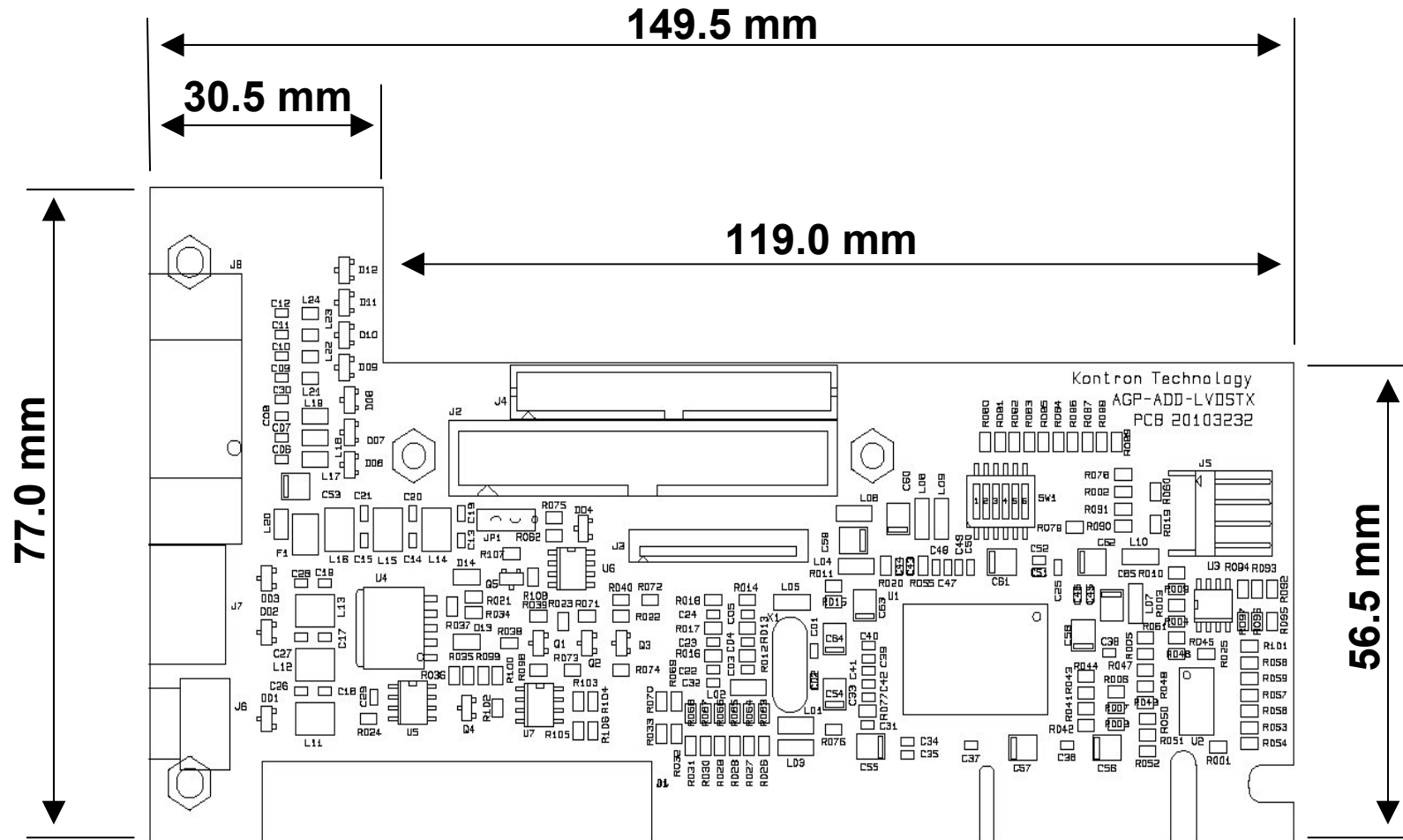


Round LVDS Twisted Pair Cable





LVDS ADD-CARD Measurement Drawing:



886LCD P4/845G(GE) Motherboard Part No. Overview [1/2]:

710015-2652	886LCD/ATX(GE), Pentium® 4, mPGA478, 845GE, 6x PCI.
710010-2647	886LCD/ATX, Pentium® 4, mPGA478, 845G, 6x PCI.
710020-2791	886LCD/ATXU, Pentium® 4, mPGA478, 845G, 3x PCI.
9160050x	886LCD Motherboard Driver & Documentation CD-ROM.
516000081	Intel® P4 Celeron CPU, 2.0GHz/FSB400/128/PGA-478.
516000080	Intel® P4 CPU, 2.4GHz/FSB400+533/512/PGA-478.
516000082	Intel® P4 CPU, 2.8GHz/FSB533/512/PGA-478.
721400	DDR SDRAM, DDR266, PC2100, 184-Pin, DIMM, 256MB.
721402	DDR SDRAM, DDR266, PC2100, 184-Pin, DIMM, 512MB.
730110	Mounting & Test of CPU & CPU-Cooler/-Fan.
730120	Mounting & Test of RAM/Memory.

Remarks:

- * P4 CPU incl. CPU-Cooler/-Fan.
- * CPU and RAM Pricing based on daily/weekly Prices (Call!).
- * 886LCD Motherboard inclusive Rear End Bracket, FDD Cable and Ultra DMA IDE Cable.
- * 886LCD Motherboard exclusive Driver and Documentation CD-ROM (Part No. 9160050x; x = latest Revision).



886LCD P4/845G(GE) Motherboard Part No. Overview [2/2]:

ADD-CARDS for P4/845G(GE) Motherboards:

21-720930	DVI ADD-CARD (incl. CRT/VGA, S-Video and Composite Video Out).
21-720935	ADD-LVDS (One FPD/LCD located in Motherboard BIOS). ¹⁾ (no EEPROM, no JILI and no JILI40 Connector)
21-720936	ADD-LVDS/OEM (LCD Table in EEPROM + DIP Switch Selection). ¹⁾
[TBD]	ADD-LVDS/OEM2 (w/ ext. VGA/CRT/TV-Out Connectors + EEPROM).
740512	LVDS ADD-CARD LVDS Cable, 0.6m, Hirose DF19-20S-1C.

¹⁾ ADD-LVDS without external VGA/CRT/TV-Out Connectors!

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Fan-less PC with Intel® Pentium® 4 2.2GHz CPU:

(Passive Cooling Market Example; 3rd Party Product; no Kontron Product)

