

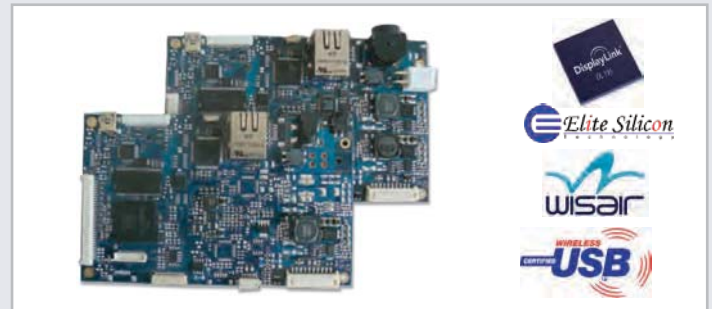
USB / Ethernet Controller Board with optional Wireless USB-Interface

USB / Ethernet Controller Board with optional Wireless USB-Interface



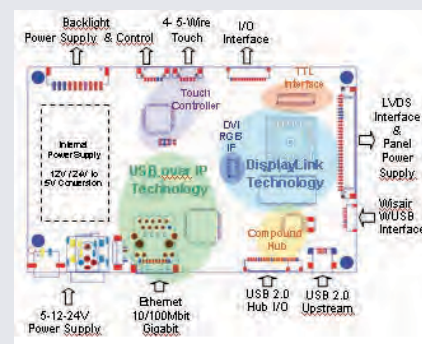
d.screen-Hybrid is a cost-effective innovative board solution for high performance USB 2.0 and / or Ethernet connected displays based on DisplayLink's latest DL1x5 device family and EliteSilicon's USB over IP technology.

It is designed to act as a direct interface between either USB 2.0 or Ethernet network and LCD TFT displays from VGA up to Full-HD/WUXGA/QWXGA. A highly efficient powermanagement and the supported WUSB technology from Wisair makes the d.screen-USBHybrid the perfect solution for portable multifunctional monitors.



**Features**

- USB-Interface
- Ethernet-Interface 10/100 Mbit & Gigabit
- Optional WUSB-Interface for Wisair's WUSB technology
- Optional DVI / RGB-analog Interface
- 12/24V or 5V-only power supply supports also large displays from a single 24V power supply
- On-board USB 2.0 Highspeed Hub
- On-board 4-/5-Wire touch-controller



**DisplayLink Technology - DL125/165/195**

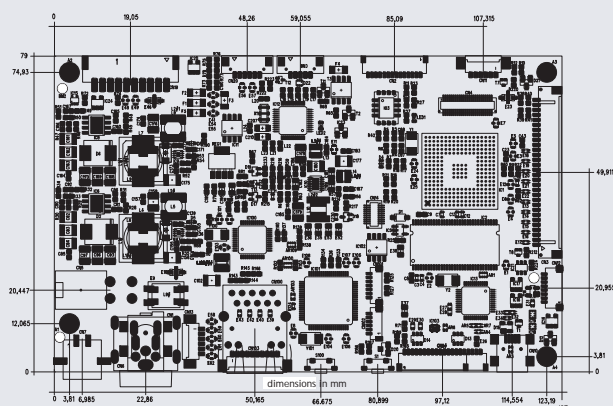
- ✓ Connect a PC with USB 2.0 port directly to any LCD TFT panel
- ✓ Lossless compression protocol
- ✓ Supports Windows 2000, XP, Vista, Win-7
- ✓ Supports Apple OS X-Tiger 10.4.11, Leopard 10.5.6
- ✓ Supports screen rotations and Mirror mode or extended desktop
- ✓ Supports resolutions up to Full-HD /WUXGA /QWXGA
- ✓ Optional Linux support
- ✓ Up to 6 Displays are supported

**Wisair WUSB Support**

- ✓ UltraSpeed technology for optimized performance
- ✓ User-friendly Wireless USB association
- ✓ Regulation compliant to US, Japan, Europe, Korea
- ✓ Certified WiMedia PHY and MAC

**Elite Silicon Technology**

- ✓ SoC USB-Server solution
- ✓ Supports 10/100Mbase-Tx and Gigabit Ethernet
- ✓ Supports Interrupt-, Control-, Bulk- and isochronous USB transfers
- ✓ Supports DHCP, configures IP Address automatically
- ✓ USB 2.0 host controller, USB1.1/USB2.0 (Hi-speed) compliant
- ✓ Driver fully Microsoft WHQL signed



**Specification**

**Supported Panel Resolutions (LVDS / TTL)**

	DL-195	DL-165	DL-125
Maximum Resolution	1920 x 1200 2048 x 1152	1600 x 1200 1920 x 1080	1280 x 1024 1440 x 900
Integrated USB 2.0	✓	✓	✓
Dual Core Decode Engines	✓	✓	
DisplayLink DL 2+ Compression	✓	✓	✓

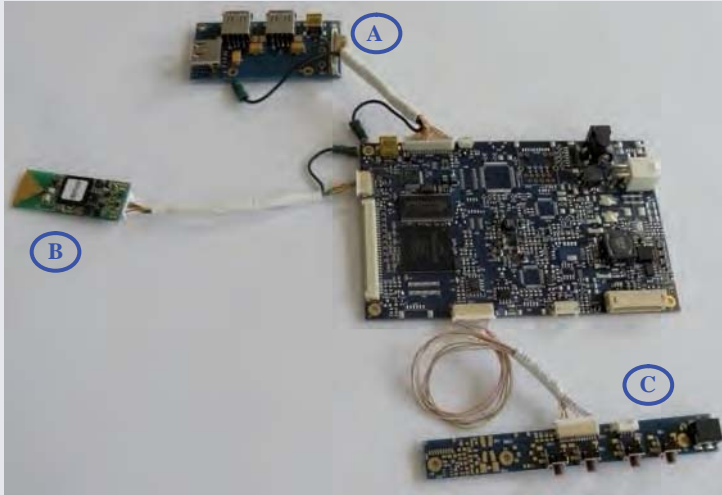
**Touch Controller - optional**  
• Resistive Technology 4/5-Wire (auto-detection)

**Input Voltage**  
• 12/24V or 5V Only (Backlight voltage = Input Voltage)

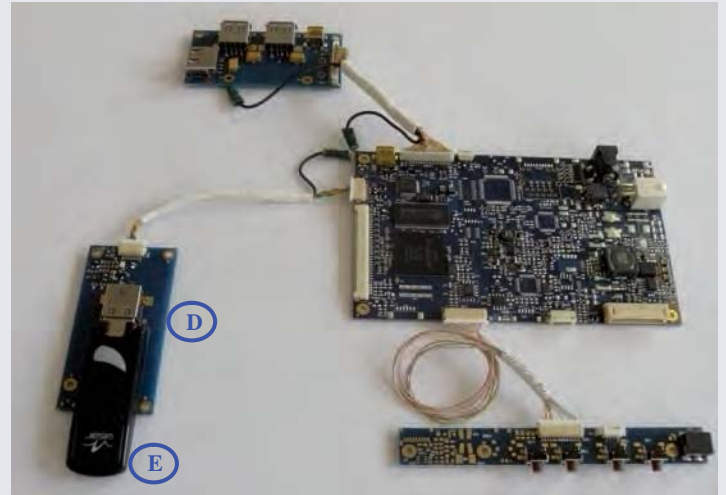
**Environmental**  
• Operating Temperature: 0°C to 70°C  
• Relative Humidity: 5%-85%, non condensing

## d.screen Hybrid - Accessories

In order to use all on-board features of the d.screen-Hybrid board Display Solution offers several interface boards, cables and modules



- A** USB Up-/Downstream & WUSB Association Interface Board
- B** WUSB device module for fixed embedded solutions
- C** Keypad for backlight-control/power-supply input



- D** WUSB-module module with enclosure for simple integration
- E** WUSB-module module with enclosure for simple integration

### **A** USB Up- / Downstream & WUSB Association Interface

The adapter board AB106 provides standard connectivity and an offset solution for USB up-/downstream ports and WUSB association.



#### Features

- USB Downstream connectors (Type A)
  - o 2x if there is an touch-controller available on d.screen-Hybrid
  - o 3x if there is no touch-controller available on d.screen-Hybrid
- USB Upstream (Type Mini-B)  
Available only if the USB Upstream connector is not assembled and AR3 is mounted on d.screen-Hybrid
- WUSB association (pairing) interface
  - o tactile switch
  - o 2-pin connector for external customized switch

#### Please order as follows:

##### 2x Port Version

Adapter Board: BOA-AB-06-001B0 USB Adapter-Board, 1xUp, 2xDown  
Suitable cable: CAB-DS-DA-038 USB-IF 1+2Port Cable, 80mm

##### 3x Port Version

Adapter Board: BOA-AB-06-002B0 USB Adapter-Board, 1xUp, 3xDown  
Suitable cable: CAB-DS-DA-039 USB-IF 1+3Port Cable, 80mm

## d.screen Hybrid - Accessories

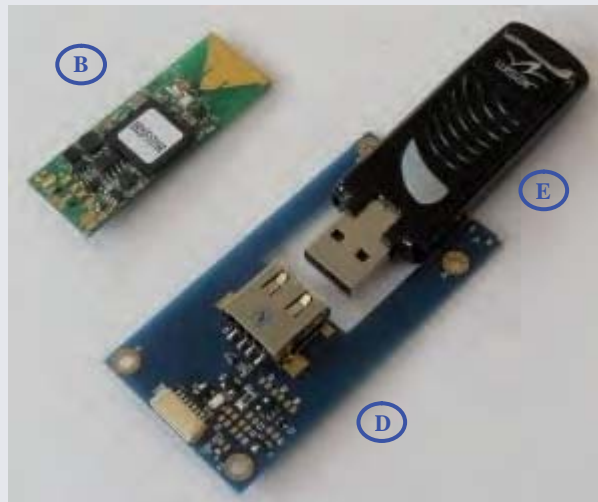
### **(B) / (D) + (E) WUSB Embedded Device Module**

If the selected d.screen-Hybrid version provides WUSB-Interface there are two possibilities to set up the WUSB feature

#### WUSB-Host-Dongle



+



### **(B) WUSB device module for fixed embedded solutions**

The embedded WUSB-device module comes without an enclosure and is intended to be used for a fixed mounting

#### Features

- The WUSB-device module comes with an on-board antenna
- Optional an external antenna can be connected.

In order to route the RF chain to the onboard U.FL SMT connector a minor H/W change is necessary. For further Information please see d.screen-Hybrid manual.

#### Please order as follows:

Embedded WUSB device module: ITA-DS-NN-014  
Suitable cable (90mm): CAB-DS-DA-040

WUSB-Host-Dongle: ITA-DS-NN-010  
(The WUSB Host Dongle is needed if your Host doesn't provide WUSB-connection by default)

### **(D) + (E) WUSB modules with enclosure for simple integration**

The WUSB-device module comes as a dongle (module with enclosure) and is intended to be used in applications where it should be removable. In order to use this module with the d.screen-Hybrid an additional adapter board is necessary.

#### Please order as follows:

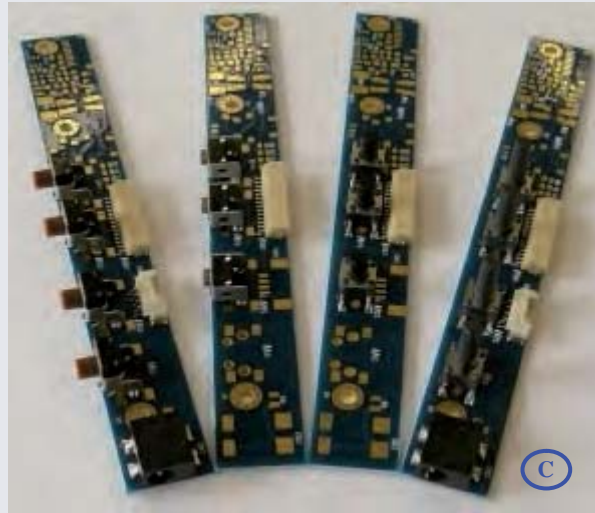
WUSB device dongle: ITA-DS-NN-017  
Adapter board: BOA-AB-07-001 BO  
Suitable cable (90mm): CAB-DS-DA-040

WUSB-Host-Dongle: ITA-DS-NN-010  
(The WUSB Host Dongle is needed if your Host doesn't provide WUSB-connection by default)

## d.screen Hybrid - Accessories

### Ⓒ Keypad For Backlight-Control / Power-Supply Input

The Keypad provides access to several features of the d.screen-Hybrid like display backlight control and power supply input. Depending on customer's requirements various assembly options are available on demand.



### Ⓒ Keypad For Backlight-Control / Power-Supply Input

#### Features

- Brightness control up/down via 2 push-buttons
- Backlight toggle via push-button
- Additional power input with hot-swap control for USB bus-powered application
- Optional Standby-control button for complete power-down
  - o Standby circuitry must be integrated on d.screen-Hybrid (recommended for 5.0V and +12V power supply applications)
  - o Standby circuitry including power switch integrated on the keypad
- Various horizontal and vertical push-buttons are possible on request

#### Please order as follows:

Adapter board:	BOA-AB-08-xxx (please see table below)
Suitable control cable (160mm):	CAB-DS-DA-040
Suitable power connect cable (70mm):	CAB-DS-DA-042

BOA-AB-	08-001	08-002	08-003	08-004	08-005	08-006
<b>Brightness Control</b>	X	X	X	X	X	X
<b>Backlight Toggle</b>	X	X	X	X	X	X
<b>Power Input with hot-swap control</b>		X		X	X	X
<b>Standby-Control</b>		X		X		X
<b>Standby Power Switch</b>						X <sup>1)</sup>
<b>Push-Button</b>	Straight 7mm height	Straight 13mm height	Right angle	Right angle	Straight 13mm height	TBD
<b>MOQ</b>	1	1	500	500	500	500

1) +12V power supply and connector: PJ-018H-SMT