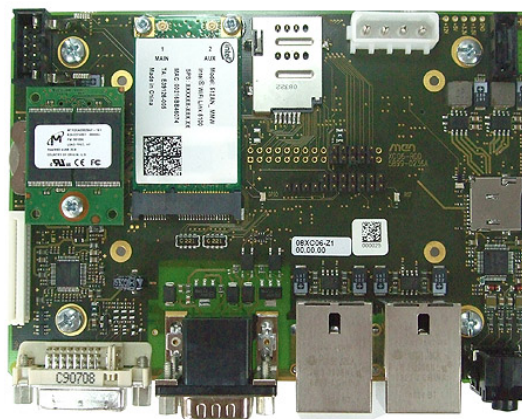# XC6 – ESMini™ COM Carrier Board for 3.5" PCs

- **1 ESMini™ computer-on-module slot**
- **2 Fast Ethernet , 4 USB 2.0, 1 UART**
- **DVI-I, audio I/O, TTY**
- **PCI Express® Mini Card slot and SIM card holder**
- **USB Flash disk slot**
- **microSD™ card holder**
- **SATA for external hard disk on board**
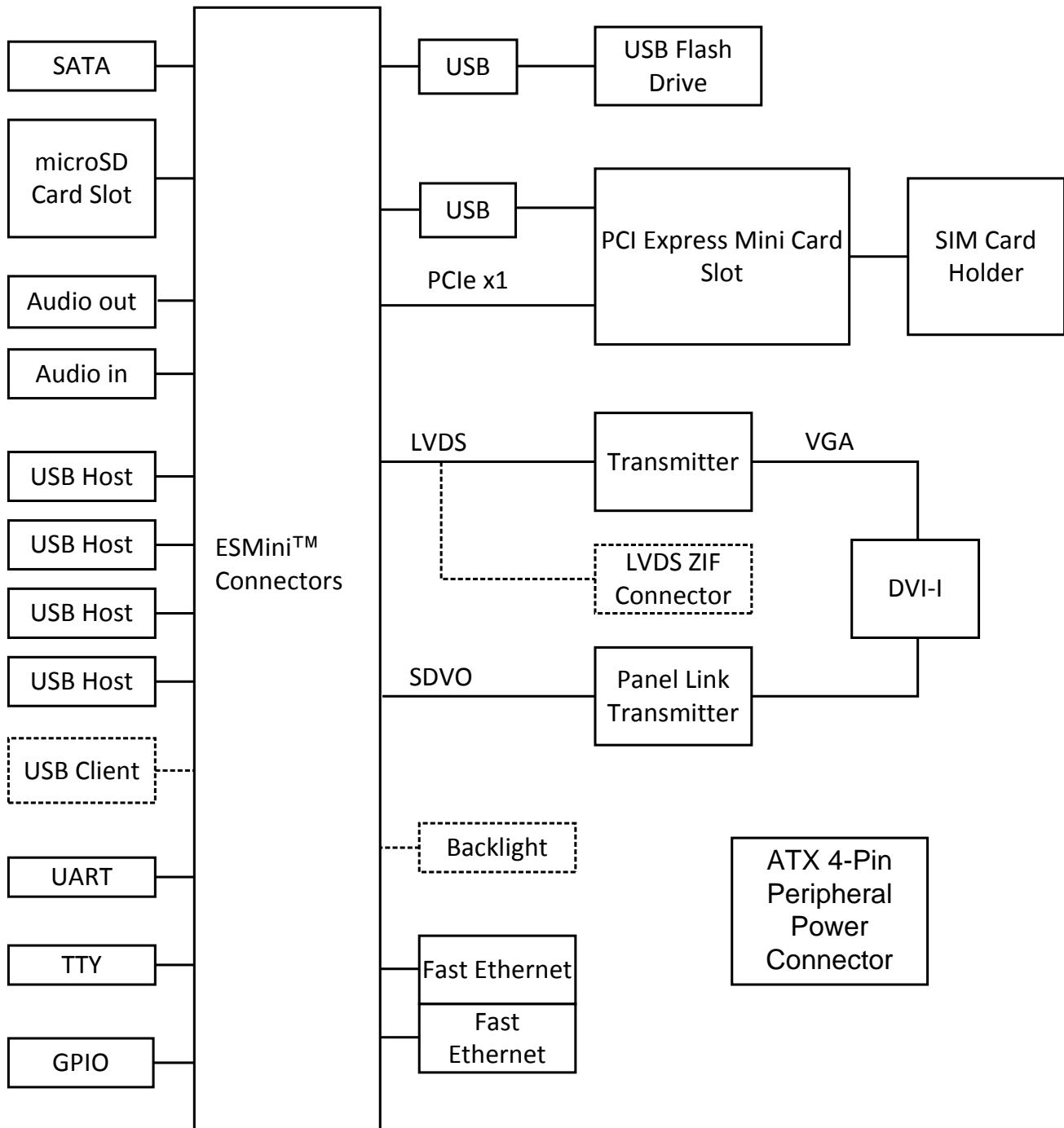- **-40 to +85°C screened**

The XC6 is an ESMini™ carrier that can be used together with any type of ESMini™ module. It provides a PCI Express® Mini Card slot with SIM card holder for wireless applications. A USB Flash disk slot and a microSD™ card slot as well as a SATA connector for an external hard disk allow a further extension of the storage capacity. As graphics the XC6 provides a

DVI-I connector. As I/O the XC6 offers 2 Fast Ethernet, 4 USB host ports (one also configurable as a client), audio in and out, a configurable RS232/RS422/RS485 interface on a 9-pin D-Sub connector, a TTY interface for a modem, eight GPIO lines with +5V level and 16 GPIO lines with 3.3V level. The I/O of the XC6 can be extended by connecting an SA-Adapter™ to the +5V GPIO connector, e.g. for IBIS or CAN bus functionality.
Its dimensions correspond to a 3.5" PC.

Diagram

```
SATA ─────┐
          │
microSD   │
Card Slot ─┤
          │                              ┌─ USB ──── USB Flash Drive
Audio out ─┤                    USB ──── PCI Express Mini Card Slot ──── SIM Card Holder
          │                    PCIe x1 ──┘
Audio in  ─┤
          │     ESMini™       LVDS ──── Transmitter ── VGA
USB Host  ─┤     Connectors                              DVI-I
USB Host  ─┤                   LVDS ZIF Connector
USB Host  ─┤
USB Host  ─┤                   SDVO ──── Panel Link Transmitter
USB Client ┤
          │                   Backlight
UART      ─┤
          │                   Fast Ethernet        ATX 4-Pin Peripheral Power Connector
TTY       ─┤                   Fast Ethernet
          │
GPIO      ─┘
```


Legend

▭ Option

Technical Data

ESMini™ Carrier Card	■ One ESMini™ slot ■ J1 and J2 assembled
Memory	■ One SATA connector ■ One USB Flash disk slot □ Via one USB onboard connector ■ One microSD™ card slot
Graphics	■ One DVI-I connector □ Analog VGA signals via LVDS interface

I/O	■ Four USB 2.0 host connectors, one optionally usable as client
	■ 10/100Base-T Ethernet
	  □ Two interfaces on RJ45 connectors
	■ Audio
	  □ Audio in
	  □ Audio out
	  □ Via 3.5 mm jack
	■ RS232/RS422/RS485
	  □ One interface via 9-pin D-Sub connector
	  □ Configurable via software
	■ TTY
	  □ Max. transfer rate 4800 bit/sec
	  □ Active or passive
	  □ Electrically isolated
	■ GPIO
	  □ 8 lines on a 10-pin connector (5 V level, for connection of an SA-Adapter™)
	  □ 16 lines on an 18-pin connector (3.3 V level)

One PCI Express® Mini Card slot	■ With SIM card slot ■ Via one PCI Express® x1 links and one USB port
Miscellaneous	■ Goldcap ■ Battery holder ■ Power button signal on pin header ■ Reset in/out on pin header

Electrical Specifications	■ Supply voltage/power consumption:
	  □ ATX standard power supply via 4-pin connector
	  □ +5 V, 2.1 A max.
	  □ +12 V (12 V only for LVDS backlight), (depends on the display) 0.7 A with SHARP LQ121S1LG61 (12.1 " / 800x600) with full brightness
	  □ Power supply cable should have a cross section of at least 1.5 mm²
	■ MTBF: 683,499 h @ 40°C according to IEC/TR 62380 (RDF 2000)

Mechanical Specifications	■ Dimensions: 146x102 mm ■ Weight: 142 g (without ESMini™ module)

Environmental Specifications	■ Temperature range (operation):
	  □ -40..+85°C (screened)
	  □ Airflow depending on ESMini™ module
	■ Temperature range (storage): -40..+85°C
	■ Relative humidity (operation): max. 95% non-condensing
	■ Relative humidity (storage): max. 95% non-condensing
	■ Altitude: -300 m to +2,000 m
	■ Bump: 10 g/16 ms
	■ Conformal coating on request

Safety	■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

Configuration & Options

Standard Configurations

Article No.	Interfaces
08XC06-01	1x TTY, 1x RS232, 1x DVI-I, 1x Audio I/O 4x USB2.0, 2x Fast Ethernet

Options

Graphics	■ One LVDS ZIF connector
	  □ For direct connection of an LVDS display
	  □ Instead of VGA signals on the DVI-I connector
	■ One LVDS backlight 10-pin connector

I/O	■ One USB client port instead of one of the host ports ■ Connection of SA-Adapter™ on 10-pin GPIO connector (e.g. with IBIS or CAN bus functionality)

Please note that some of these options may only be available for large volumes. Please ask our sales staff for more information.

Ordering Information

Standard XC6 Models	08XC06-01	Carrier board for ESMini™: 1x TTY, 1x RS232, 1x DVI-I, 1x Audio I/O, 4x USB2.0, 2x Fast Ethernet, USB Flash slot, PCI Express® Mini Card socket, SIM card holder, microSD™ card socket, 8x GPIOs, -40°C..+85°C screened
Related Hardware	15MM01-00	Intel® Atom™ Z510, 1.1 GHz, 512MB RAM, 1 Fast Ethernet, 1 CAN, -40..+85°C Tcase screened
	15MM01-01	Intel® Atom™ Z530, 1.6 GHz, 1GB RAM, 2 Fast Ethernet, 2 CAN, -25..+85°C Tcase screened
	15MM02-00	Intel® Atom™ E680T, 1.6 GHz, 1GB DDR2 DRAM, 2 Gigabit Ethernet, 1 CAN, 4 COM, with J1 and J2, -40..+85°C with qualified components, with cover and frame
	15PX01-00	GLONASS & GPS PCI Express® MiniCard (full size), 3-axis Gyro sensor, -40..+85°C with qualified components
Miscellaneous Accessories	0712-0019	Standard ATX PSU, 350 W, 0..+40°C
Documentation	20APPN004	Application Note: How to make a USB stick bootable
	20XC06-ER	XC6 Errata
	20XC06-00	XC6 User Manual

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