

Toucan

COM Express Board

Intel® Core™ Duo Processor L2400/T2500

Intel® Celeron® M 423

Features

Intel® Core™ Duo Processor

4 GB dual channel DDR-SODIMM

Graphics: Intel GMA950, 2048 x 1536 pixel

Dual channel LVDS for displays

1000/100/10 BaseT Ethernet

8 x USB 2.0

Extended temperature range -40°C ... +85°C

Passive cooling

Active Management Technology (AMT)

Supervision LED for power supply and
life signalization

More Features

- Wake On LAN
- Watchdog
- Heatspreader for passive cooling



COM 
Express



Intel® Core™ Duo

The COM-Express CPU board Toucan is a powerful yet versatile processor kernel for custom specific base boards. It provides all the functions of a standard PC, with the interfaces brought out on the board's plug-in connectors. This allows easy scaling of the processing power to the application's performance requirements.

The board conforms to the COM-Express specification for SOM's (System On Module), which was created to support modern chipsets with PCIe interfaces. These serial interfaces allow up to 64 Gbps transmission rate.

The Toucan features an Intel® Core™ Duo processor with two Pentium® kernels, which allow parallel processing of the application's task, thus giving outstanding performance. This processor is also optimized for low power requirements, making it a very good choice for embedded devices. Versions with the Intel® Core™ 2 Duo Processor (Merom) are available on request. The matching Mobile Intel 945GM Express chipset gives the Toucan the best functionality possible.

The built-in Intel Active Management Technology (AMT) remote management allows handling the computer from a central station and greatly reduces the cost of ownership. Individual information can be stored in non-volatile memory, and out-of-band management allows to remotely heal systems after OS failures.

The Toucan chipset sports an integrated graphics and display controller. A PCIe x16 lane allows the usage of an external graphics controller if there are very high requirements.

Troubleshooting is made easy with supervision LEDs for power supply and life signalization on the module.

The Toucan can optionally be used in the extended temperature range of -40°C ... +85°C. Using the especially designed heat spreader and a suitable cooling concept, the module can even be passively cooled without the need for a cooling fan.

LiPPERT is an independent design house and manufacturer that develops and builds special customer specific solutions. Please ask for a specific quotation.

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Technical Specifications

Board Format	COM-EXPRESS basic module, type 2 125 mm x 95 mm	IDE	1 x EIDE port according to ATA100
Processor	Intel® Celeron® M 423 Processor Intel® Core™ Duo Processor L2400 Intel® Core™ Duo Processor T2500 Intel® Core™ 2 Duo Processor T7400 (option)	Sound I/O	AC97 Link for external codec
Speed	U1300 processor: 1.06 GHz L2400 processor: 1.67 GHz T2500 processor: 2.00 GHz	Watchdog	yes
FSB	667 MHz	Power Consumption (maximum)	1.06 GHz: ~18W 1.67 GHz: ~28W 2.00 GHz: ~40W
Core logic	Root Complex: Intel® i82945GM Southbridge: Intel® i82801GBM	Operating temperature	-20°C ... +60°C -40°C ... +85°C (optional)
RAM (max.)	4 GB dual channel DDR2-SODIMM	MTBF	t.b.d.
RAM clock	400 / 533 / 667 MHz	Cooling	The Toucan must always be operated with sufficient cooling measures.
Graphics	Integrated Intel® Graphics Media Accelerator 950 Graphics Core up to 224 MB video memory up to 2048 x 1536 pixel at 75 Hz	Status LED	Power supply and life signalization
CRT	Analog VGA	PCIe	1 x 16 lane for graphics/SVDO 4 x 1 lanes
LVDS	Single channel, 18 bits Dual channel, 2 x 18 bits	PCI Bus	32 bit, 33 MHz, 5 V compliant
USB	8 x USB 2.0	LPC Bus	Available
Ethernet	1000/100/10 BaseT (Gigabit) with i82573E	Power Supply	+12 V only. All necessary voltages are generated on-board.
SATA	2 x Serial ATA 2	Remote Management	Active Management Technology (AMT)
		BIOS	Phoenix BIOS parameters are also saved in FEPROM
		Supported OS	Windows, Linux



Ordering Information

Ordering Number	Description
809-0001-10	COM Express board with 1.67 GHz Intel® Core™ Duo L2400,
809-0002-10	COM Express board with 2.00 GHz Intel® Core™ Duo T2500,
t03-0009-10	COM Express board with 1.06 GHz Intel® Celeron® M ULV423

Note: t denotes the temperature range. Substitute with **8** for standard and **9** for extended temperature range

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