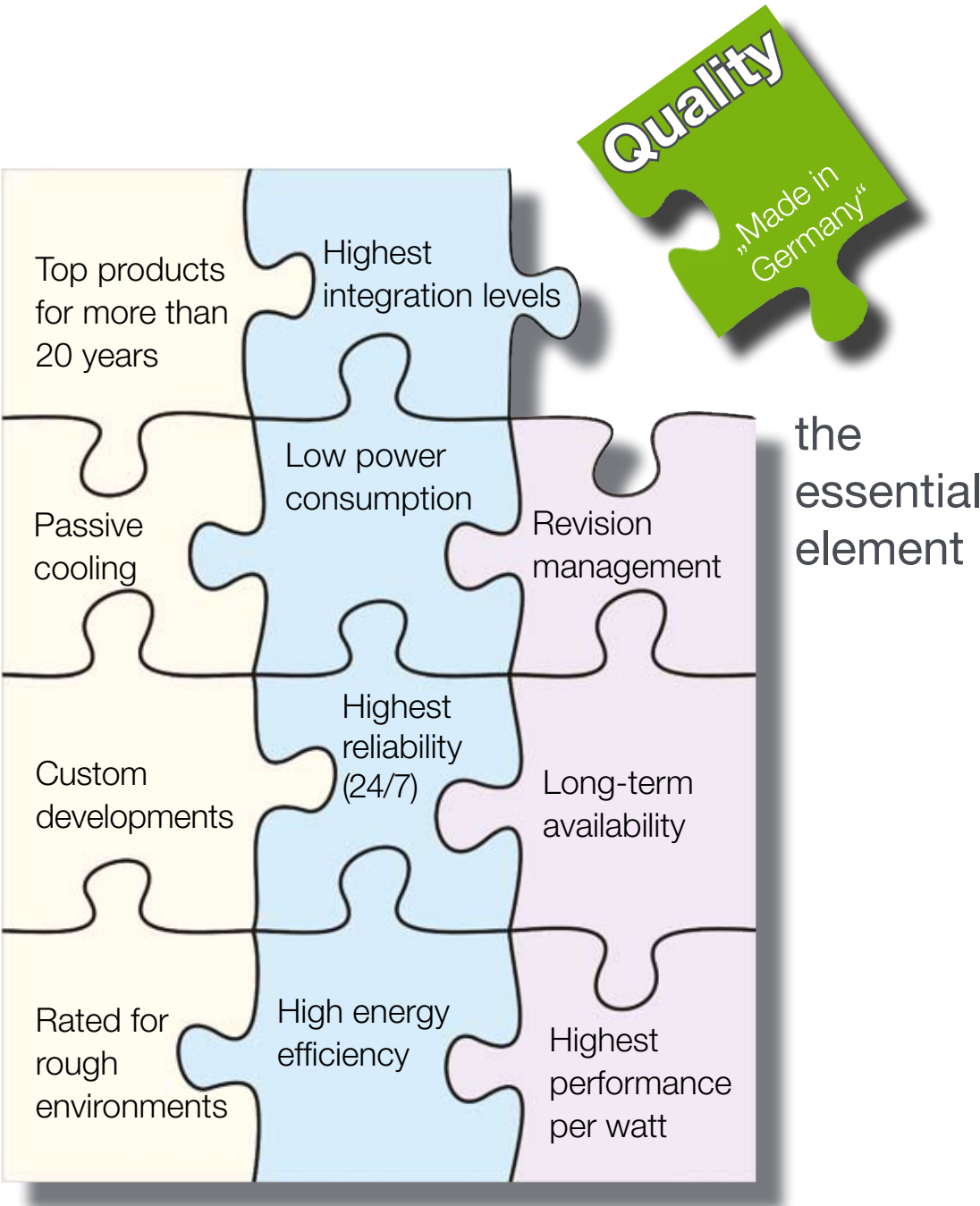


Embedded PC Technology



Product Overview

CoreExpress®
COM-Express®



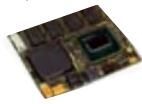
New

COM Express

New



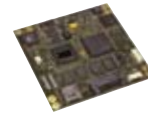
CoreExpress®-ECO



CoreExpress®-ECO2



CoreExpress®-A310



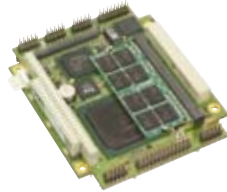
Toucan-TC



Toucan-QM57



Cool RoadRunner-945GSE



Cool RoadRunner-LX800



Cool SpaceRunner-LX800

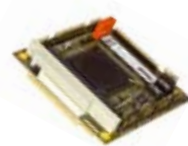
PC/104,
PC/104-Plus



Cool LiteRunner-ECO



Cool LiteRunner-86DX



Cool LiteRunner-LX800

PCI-104,
PCI/104-Express

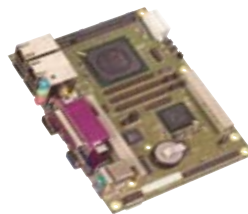


Cool XpressRunner-GS45

Epic

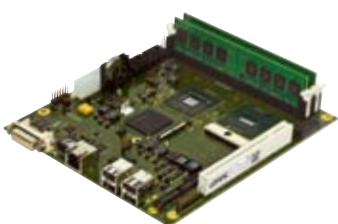


Hurricane-QM57



Hurricane-LX800

Mini-ITX



Thunderbird-GM45



Thunderbird-E3100

Form Factors And Technical Data

Model	Format	CPU, Clock	RAM (max)	Ethernet	USB	Serial	Sound	VGA	LVDS	TFT	HDD	Flash	Misc.	Ext. temp.
New CoreExpress®-A310	Core Express®	Amada 310 0.6 ... 1.0 GHz	512 MB	1 x Gigabit	4 x 2.0				✓		2 x SATA	8 MB	SDIO, LEMT	✓
CoreExpress®-ECO	Core Express®	Atom™ Z5xx 1.1 ... 1.6 GHz	2 GB		8 x 2.0		✓		✓		PATA		LEMT, 2 x PCI Express, SDVO	✓
CoreExpress®-ECO2	Core Express®	Atom™ E6xxT 0.6 ... 1.6 GHz	2 GB	1 x Gigabit MAC	6 + 1 2.0		✓		✓		2 x SATA		LEMT, CAN 3 x PCI Express, SDVO	✓
New Toucan-QM57	COM Express	Core™ i7, 1.06 ... 2.53 GHz	8 GB RS- DIMM	1 x Gigabit	8 x 2.0		✓	✓	✓		4 x SATA 1 x PATA		DisplayPort, PCI Express, LEMT, Raid Support	✓
Toucan-TC	COM Express	Atom™ E6xxT 0.6 ... 1.6 GHz	2 GB	1 x Gigabit	6 + 1 2.0	4	✓		✓		3 x SATA, PATA	64 GB SSD	LEMT, CAN 5 x PCI Express, SDVO, PCI	✓
Cool SpaceRunner-LX800	PC/104-Plus	Geode™ LX800 500 MHz	256 MB soldered	1 x Fast	4 x 2.0	2		✓	✓		PATA	2 GB SSD	LEMT	✓
Cool RoadRunner-945GSE	PC/104-Plus	Atom™ N270 1.6 GHz	2 GB soldered	1 x Gigabit	8 x 2.0	2	✓	✓	✓		2 x SATA	2 GB SSD	LEMT	✓
Cool RoadRunner-LX800	PC/104-Plus	Geode™ LX800 500 MHz	1 GB	1 x Fast	4 x 2.0	2	✓	✓	✓	✓	PATA	CF socket		✓
Cool LiteRunner-ECO	PC/104	Atom™ Z5xx 1.1 ... 1.6 GHz	2 GB soldered	2 x Gigabit	6 x 2.0	2	✓	✓	✓		2 x SATA	Micro SD	Mini PCI, LEMT	✓
Cool LiteRunner-86DX	PC/104	Vortex-86DX 0.6 ... 1.0 GHz	512 MB	1 x Fast	4 x 2.0	2					Ultra ATA	Micro SD	FPGA, GPS, LEMT	✓
Cool LiteRunner-LX800	PC/104	Geode™ LX800 500 MHz	256 MB soldered	2 x Fast	4 x 2.0	3	✓	✓	✓	✓	PATA	CF socket	Mini PCI, LEMT	✓
Cool XpressRunner-GS45	PCI/104-Express	Core™ 2 Duo	1 GB	1 x Gigabit	8 x 2.0	2	✓	✓	✓		2 x SATA	8 MB	LEMT	✓
Hurricane-QM57	EPIC	Core™ i7, 1.06 ... 2.53 GHz	8 GB	2 x Gigabit	10 x 2.0 host		✓	✓	✓		4 x SATA		2 x DisplayPort, PCI Express, LEMT, Raid Support	✓
Hurricane-LX800	EPIC	Geode™ LX800 500 MHz	1 GB	1 x Fast 2-way switch	4 x 2.0	2	✓	✓	✓	✓	PATA	uDoC	Mini PCI, Analog IO	✓
Thunderbird-E3100	Mini-ITX	Core™ 2 Duo 1.89 GHz	8 GB ECC	2 x Gigabit	6 x 2.0	2		✓			6 x SATA		ASF, MiniCard, LEMT	
Thunderbird-GM45	Mini-ITX	Core™ 2 Duo 2.53 GHz	4 GB	1 x Gigabit	11 x 2.0			via DMI	✓		4 x SATA	uDoC	Intel® AMT, Adaptive-IO™, LEMT	

LiPPERT Enhanced Management Technology Monitoring the “Engine” of your Product

Today’s Embedded PC Systems must combine optimal performance with low power consumption. This can be difficult to accomplish without the control and system management tools that help find potential weaknesses in advance.



Similarly, systems must run stably and continuously, even in critical applications and rough environments with severe shock / vibration and extended temperature. These tough requirements need a tool, which is able to monitor and gather performance and status information necessary from the hardware, quickly, flexibly and precise. This is exactly what LEMT does for you, the developer and user.

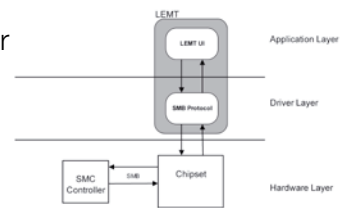
Time-to-Market (TTM) and Total-Costs-of-Ownership (TCO) are key aspects to producing competitive products. To combine TTM and TCO in a reliable manner, a solid basis is fundamental.

To assist in this endeavor, every new LiPPERT Embedded Computers Single Board Computer (SBC) contains a System Management Controller (SMC) device.

Initially designed to do power sequencing, the SMC has evolved with many new, helpful features through the years. Measuring the supply current to get a “snapshot” of the system’s power consumption is only one of the new capabilities.

Connecting the hardware to the operating system is one of LEMT’s key parts.

The on-board system management controller collects all relevant information from the chipset and other sources.



Using the SMB driver, the application layer fetches the data and presents it to user. LiPPERT also provides a ready-made application that shows the data in a well-arranged window, suitable for supervision and troubleshooting.

A whitepaper with details about the provided functionality is available at www.lippertembedded.com/whitepapers

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