



## Product Information

### CN6-ECHO • *CompactPCI*<sup>®</sup> Dual Gigabit Ethernet NIC

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*Ethernet remains a megatrend for connecting systems in a heterogeneous environment. With the **CN6-ECHO** EKF introduces a dual Gigabit Ethernet networking interface controller (NIC) for CompactPCI<sup>®</sup> systems.*

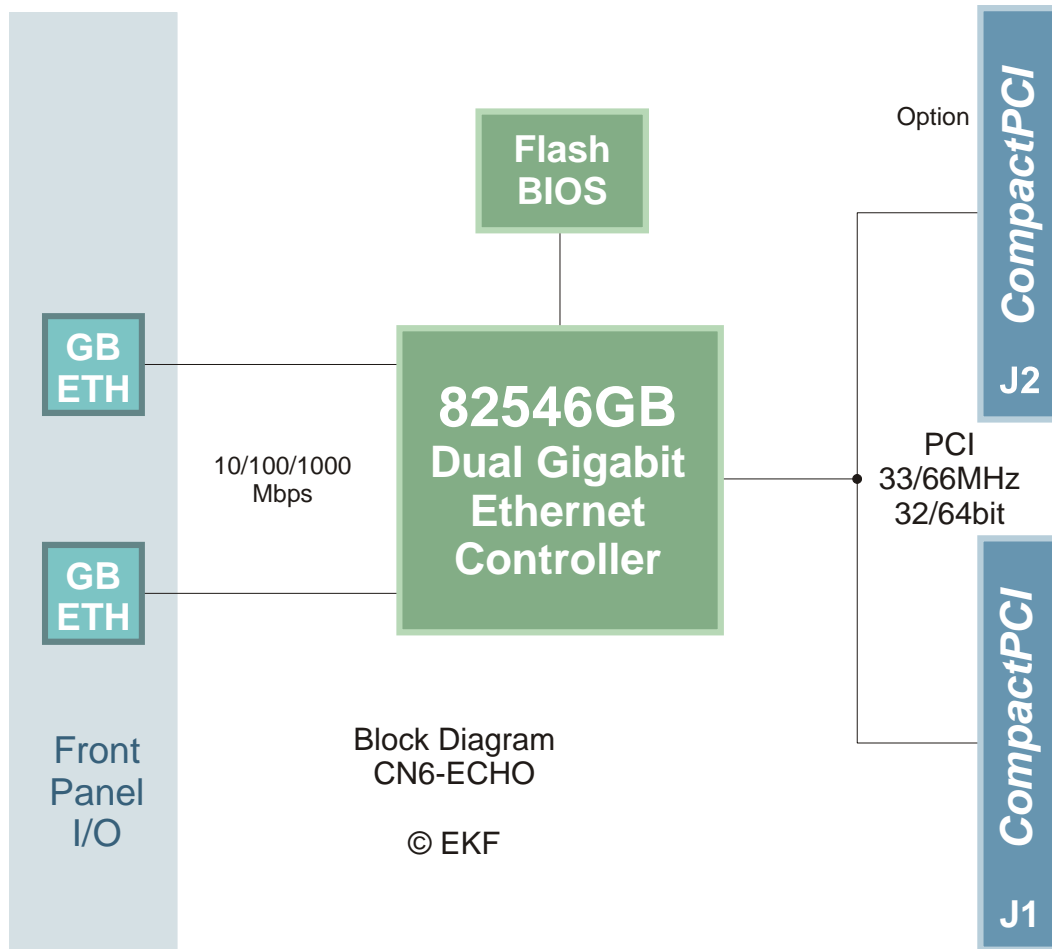
Attachment to the local network across the RJ45 jacks requires an ordinary CAT5/6 twisted-pair copper cable only, which is suitable for distances up to more than 100m. While providing the 1000Base-T standard for fastest data transfer rates, compatibility is maintained to 100Base-TX and even 10Base-T based hubs and switches.

Gigabit Ethernet has been designed to use existing cabling and equipment, hence simplifying the migration process. Integrating the 1000Mbps CN6-ECHO NIC into any CPCI system not only allows for remarkable higher data throughput, but also reduces the network load considerably due to shortened transfer times.

The CN6-ECHO is provided with a 32/64-bit CPCI interface, and can be operated at either 33MHz or 66MHz bus clock. While being compatible with all CPCI systems, the optimum performance will be achieved within a 64-bit/66MHz system.



Block Diagram CN6-ECHO



The design of the CN6-ECHO is based on a modern single-chip integrated dual MAC/PHY, thus minimizing the power consumption. The board is provided with a 128kx8 Flash EPROM, suitable for an extended BIOS (system boot from network).

The CN6-ECHO can be integrated smoothly into any existing networking environment. In order to profit from its Gigabit Ethernet capability, a Gigabit switch must be used accordingly for attachment. Existing facility cabling must provide strapping of all 8 pin positions of the RJ45 jack.

The CN6-ECHO is a 3U (single size) Eurocard. For 6U CPCI systems, a mounting kit (CR9-ADAPT) is available, which expands the front panel to 6U height.

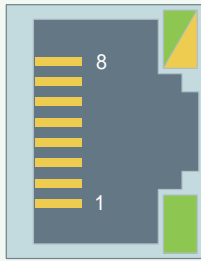


CR9-ADAPT

Feature Summary CN6-ECHO	
Form Factor	Single size 3U <i>CompactPCI</i> style Eurocard (160x100mm <sup>2</sup> ), front panel width 4HP (20.3mm)
Ethernet	<ul style="list-style-type: none"> <li>▶ Dual twisted pair RJ45, 8-position, suitable for direct attachment to any hubs, switches, routers, transceivers (cross-over patch cable not required in most cases)</li> <li>▶ Category 5/6, UTP (Unshielded Twisted Pair) or STP (Shielded Twisted Pair), length up to 105m maximum</li> <li>▶ 10Base-T 10Mbps (20Mbps @ full-duplex)</li> <li>▶ 100Base-TX (Fast-Ethernet) 100Mbps (200Mbps @ full-duplex), auto-negotiation for best performance</li> <li>▶ 1000Base-T (Gigabit Ethernet) 1000Mbps</li> <li>▶ Intel PCI Gigabit Ethernet controller, integrated single chip dual MAC and PHY (transceiver)</li> <li>▶ Jumbo Frame support up to 16KB</li> </ul>
CPCI Bus	<ul style="list-style-type: none"> <li>▶ 32/64-bit, 33/66MHz, DMA bus master</li> <li>▶ 3.3V or 5V interface</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>▶ +3.3V ±0.15V 1.25A max.</li> <li>▶ V<sub>IO</sub> +5V or +3.3V 0.01A max.</li> </ul>
Environmental Conditions	<ul style="list-style-type: none"> <li>▶ Operating temperature: 0°C ... +70°C</li> <li>▶ Storage temperature: -40°C ... +85°C</li> <li>▶ Humidity 5% ... 95% non condensing</li> <li>▶ Altitude -300m ... +3000m</li> <li>▶ Shock 15g 0.33ms, 6g 6ms</li> <li>▶ Vibration 1g 5-2000Hz</li> </ul>
EC Regulations	<ul style="list-style-type: none"> <li>▶ EN55022, EN55024, EN60950-1 (UL60950-1/IEC60950-1)</li> <li>▶ 2002/95/EC (RoHS)</li> </ul>
MTBF	tbd h
Driver Software, BIOS, Tools	Intel support available for a variety of operating systems, e.g. Windows®, Linux, Unix, Solaris, DOS

subject to change

Gigabit Ethernet RJ45 Jacks ETH-A/B

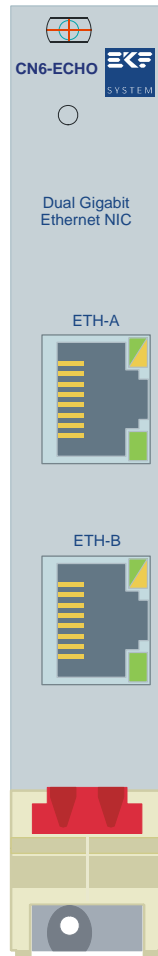


Upper dual-colour LED:  
yellow=1Gbit/s green=100Mbit/s off=10Mbit/s

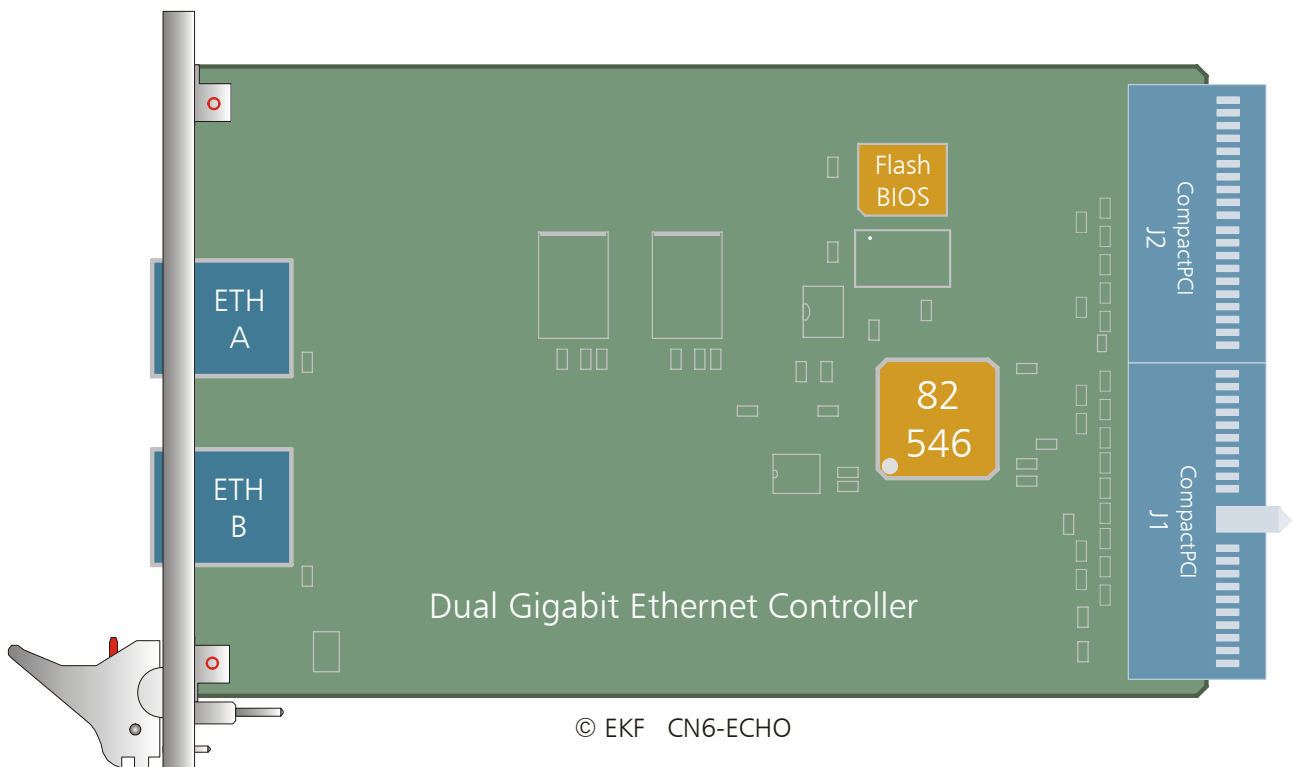
Lower green LED:  
on=link established blinking=activity (data)

1	MDX0+
2	MDX0-
3	MDX1+
4	MDX2+
5	MDX2-
6	MDX1-
7	MDX3+
8	MDX3-

Front Panel CN6-ECHO



Assembly Drawing



Ordering Information		
Alias	Ordering Number	Short Description
ECHO	CN6-1-ECHO	3U <i>CompactPCI</i> Dual Gigabit Ethernet NIC
ADAPT	CR9-5-ADAPT	Mechanical kit, expands 3U front panel to 6U

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