
**Ncore develops world's lightest notebook
Yantra will weigh 2.1 kgs with CD-ROM drive, cost \$3000**

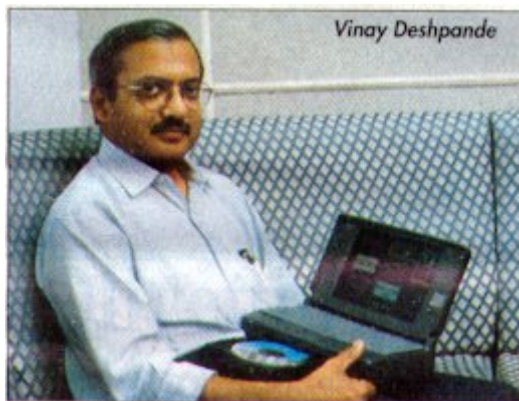
AT a time when most hardware vendors in the country have hung up their manufacturing boots and have taken up easier and apparently more lucrative options, such as playing distributor for multinationals, a tiny Bangalore-based company is polishing its tools, to manufacture notebook computers.

Ncore Technology, starting January, plans to roll out indigenously-made notebook PCs at a rate of a thousand a month.

What sets Ncore's effort apart from the others is that its notebook, christened Yantra, is designed inhouse. Weighing 2.1 kgs, it is the lightest notebook the industry has got on offer. Better still, the low weight is inclusive of a standard built-in CD-ROM drive.

Yantra is however not the domestic market. Vinay Deshpande, Ncore's chairman said, "It's Japan and the US that interests me more."

While Ncore is on the verge of appointing distributors in the United States, Taisei Engineering Company, a subsidiary of a leading heavy engineering conglomerate, will market Yantra in Japan.



Vinay Deshpande

If Deshpande's projects come true, Ncore should rake in anywhere between Rs. 60 crore and Rs. 100 crore in the next twelve months, representing a revenue growth of a whopping 3000 percent.

At a \$3,000 end-user price tag and a weight of 2.1 kgs, Yantra undercuts almost every known brand in the market with a similar configuration. A Compaq notebook is heavier at 2.8 kgs; Digital's \$4800 Hinote Ultra, the lightest notebook in the market today, weighs 1.6 kgs without a CD-ROM drive. IBM's Thinkpad 701 costs more at \$4000 and does not have a CD-ROM drive.

Yantra, based on either a 486 DX4/75 or DX4/100, has a 2.5 inch IDE drive (540 MB or 816 MB, both upgradable to 1.2 GB); standard 8 MB RAM upgradable up to 32 MB; and a local bus VGA controller (512 KB RAM).

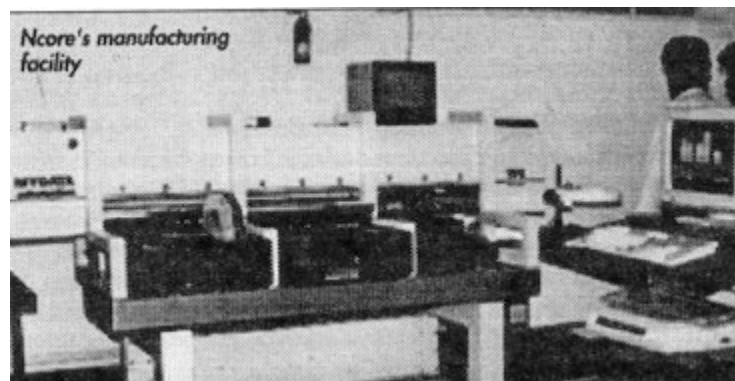
Its PCMCIA card support includes PCMCIA Release 2.1-compliant sockets; two Type-II sockets or one Type III socket. There are two serial ports (16550 compatible) and one parallel port (ECP/EPP compatible); an external FDD option is also available.

Yantra is loaded with Ncore's system BIOS with advanced power management software; Ncore's PCMCIA Card & Socket Service Manager, including a card identity utility, ATA driver and generic card enablers; and a choice of Windows 3.1 or Windows 95.

It operates on a 10.8 V, 1700 mA NiMH battery with a battery life of 1.5 hours to 3 hours, continuous usage, with all functions operational at the same time. Housed in a compact cabinet with dimensions of 278mm x 176mm x 56mm, the machine has a full-featured keyboard with an integrated pointing device.

Yantra's only visible disadvantage is its screen size. While most leading notebook brands come with 10.4-inch or 9.5-inch screens, Ncore offers only a 8.5-inch DSTN colour screen.

Deshpande said that while most components for Yantra were sourced from Japan, Korea and the US, the basic design and conceptualisation was done in India. The local content that went into the notebook, therefore, constituted no more than sheets of plastic, PCBs and a few capacitors. Although sourcing certain components from Japan, Korea and the US was inevitable, Ncore has incorporated its own PCMCIA technology, BIOS and motherboard design. Ncore, in fact, is the only company in India to design and manufacture PCMCIA cards, again for exports. Yantra came as a spin-off from the company's experience in executing related development work for clients abroad. "We had worked on every technology needed for the design of a notebook; we had the BIOS, PCMCIA technology; we have done notebook and motherboard design and DSP-based work. So we put all these together to make a notebook of our own," said Deshpande.



For the Yantra project, even development of aesthetic features were sub-contracted to Bangalore-based companies which did the plastic moulding and the tool design. Deshpande said the project called in a 47-strong engineering team that worked for three years, and an investment of Rs 3 crore. "Ncore was able to make the notebook cost-effective by maintaining a tight leash on expenses and leveraging on the low design and assembly costs available here," Deshpande said.

Marketing And Support Strategy

Ncore is ready with marketing and support strategy for Yantra. In the US, Deshpande plans to set up a wholly-owned subsidiary to look after support and sales. This is awaiting approval from the US government.

"We prefer to be sole distributor in the US," said Deshpande adding that Ncore might settle for another distributor later. In Japan there are no plans for a direct presence, but service and support will be taken care of by Taisei Engineering.

In the next phase of its business, Ncore hopes to enter other markets in Europe and Asia. India is also on the business map; Deshpande believes that he will be able to sell Yantra in India at least 20-30 percent cheaper than competing brands. However, being a EOU, Ncore will require permission to do so. For support, Ncore will train distributors and provide them spares from India.

Ncore also plans to sell through OEMs. For instance in the US, the company is currently processing an order for an OEM which will involve a sale of around 10,000 units.

Deshpande said Ncore's notebooks will bear the Ncore logo in all the markets they are sold in. A brand building exercise for Yantra is already in progress in Japan where the company has commenced extensive advertising. In the US, plans for brand promotion will be built in conjunction with the distributors.

Ncore is now working on a Pentium version that will bring along the most advanced features available in the market. The Pentium notebook is expected to hit the market mid-1996: Among the company's other activities, in addition to manufacturing PCMCIA cards and sockets for clients in Japan and the US, Ncore is also working on Cardbus--the latest bus standard for PCMCIA.

The company foresees significant revenues from PCMCIA manufacture. It recently firmed an agreement with a Korean company in which the latter will source PCMCIA cards from Ncore and supply it to notebook manufacturers the world over. "This activity will fetch an upfront fee and royalty for each sale made. Even a few cents per notebook will bring us a huge revenue," Deshpande said.