# ISCC1 INTELLIGENT SERIAL COMMS CARD FOR PCI BUS SYSTEMS

The ISCC1 Intelligent Serial Communication card provides six isolated HDLC/SDLC channels and one UART channel. A timer output is provided to serve as a synchronization signal, while another timer is provided to generate timer-tick interrupts to the PC. The PCI bus interface provides for plug-and-play installation, while the Windows Driver and DLL provide interface functions for the application developer.
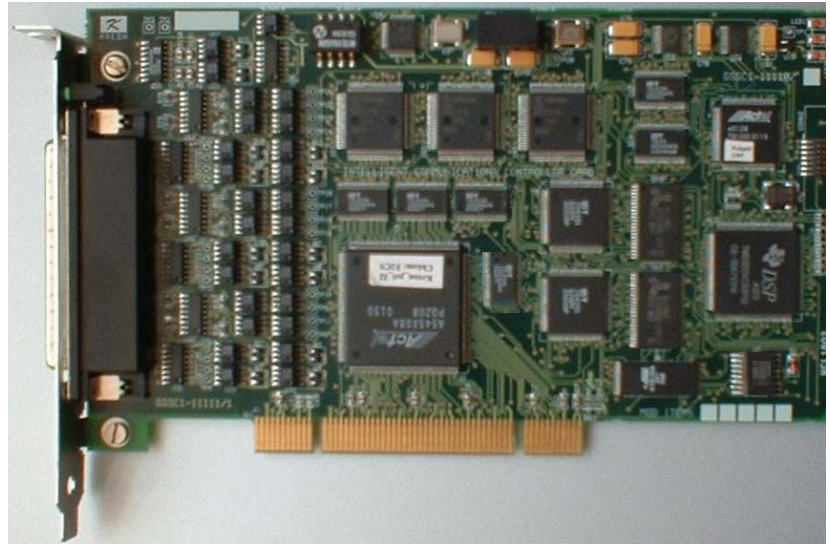
Technical Data

PC bus interface	PCI bus (specification 2.2), 32 bit, 5V or 3.3V
Memory range, interrupt	128KB memory area, INT A
Microprocessor with memory	TMS320VC33 with 256K x 32 off-chip memory
Microprocessor to PC interface	Dual Port RAM, 16K x 32, interrupts and semaphores
HDLC/SDLC controllers	3x Siemens SAB82592 providing 6 channels
UART	1x Texas Instruments TL16C550 providing 1 channel
Media interface	Isolated RS422 on all channels, also isolated RS232 on UART channel
External Synchronization input	RS422 interface from connector, to CPU interrupt
External Timer output	CPU internal timer 0, RS422 interface to connector
Internal Timer	CPU internal timer 1, generates timer tick via DPR interrupt to PC
Connector	62-pin high-density D-type female
Power supply	5V DC, 500mA typically, provided by PC
Size	167mm x 107mm

Message Transfer

DPR segmentation	-Data area of 1024 x 16 for receive and 1024 x 16 for transmit of each communication channel -Control area for setup of communication channels and timers -Status area for report back on communication channels -Semaphore area containing semaphores for each area -Interrupt mailboxes indicating messages received and to be sent
Embedded software	The embedded software is an interrupt-driven kernel that acts upon message-received, DPR and timer-tick interrupts to transfer messages to/from the PC via the DPR, and to/from the communication channels

Software

Windows Drivers	Windows NT, 2000, XP with standard WIN32 DeviceIoControl functions as interface
Source Code example*	VisualC++ code implementing bi-directional message transfer using a loop-back connector from one channel to another

*custom software development is available on request

Ordering Information

Description: ISCC1 card with embedded software	Part number: ISCC1-10000/2