



Product Information

CMI-ISDN P PC•MIP Module ISDN S/T Terminal Adapter

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For connecting industrial computer systems to the ISDN digital telephone network, EKF offers the CMI-ISDN, a Passive Terminal Adapter with ISDN basic rate S/T interface. The PC•MIP mezzanine-module achieves a data rate of 128kbps uncompressed (both B channels aggregated).

The CMI-ISDN complies with international and european ISDN standards as ITU-T I.430, and is bundled with the essential software stack and drivers (available by download).

The software addresses the requirements of ISDN CAPI 2.0 and NDIS WAN. Drivers for a variety of Windows environments and different D channel protocols care for meeting specific customer needs.

Due to its cost-effectiveness the CMI-ISDN is a perfect replacement for external ISDN communications equipment, as modems or routers. Simply install a RJ45 cable between the CMI-ISDN and the ISDN telephone system, and your system is ready for high speed Internet access.



The CMI-ISDN is equipped with a single-chip PCI ISDN S/T transceiver. It is bundled with full featured software (download), e.g.

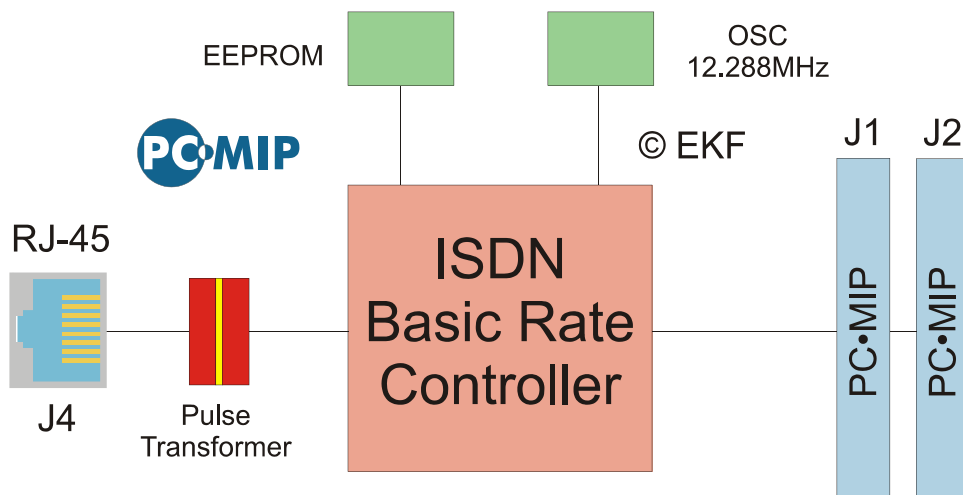
- Support for Windows 95/98 VxD driver with power management
- Windows NT 4.0 driver
- Windows 98 WDM driver
- Multi-language support
- B channel protocol transparent and HDLC supported
- Supports D channel protocols
- CAPI 2.0
- NDIS WAN Miniport (PPP/MLPPP)
- Multi-link PPP aggregates both B channels to provide full 128kbps

Recent Linux distributions, e.g. SuSE V.7.x, enclose driver support for the CMI-ISDN as well. EKF itself uses its ISDN hardware successfully as an ISDN gateway in its Linux based proxy/firewall servers.

The CMI-ISDN is housed on a PC•MIP mezzanine module. While the PC•MIP electrical characteristics are derived from the popular PCI specification, PC•MIP modules represent a miniaturized successor to the proven PMC- and M-Module technology.

Up to 3 PC•MIP modules e.g. can be mounted on a single 3U *CompactPCI*[®] carrier board for a maximum in functionality at low cost, thus making system integration easier.

Available for *CompactPCI*[®] systems, EKF offers suitable PC•MIP carrier boards. The CM5-TRIO is a 3U board, provided with three PC•MIP slots, while the 6U carrier CM6-SEXTET can hold up to 6 individual PC•MIP modules.

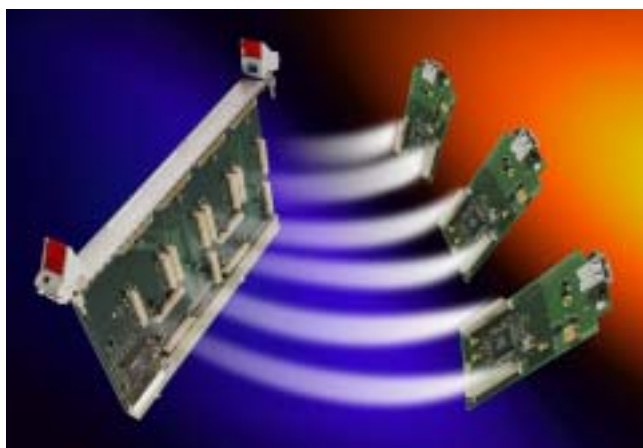


Block Diagram
CMI-ISDN

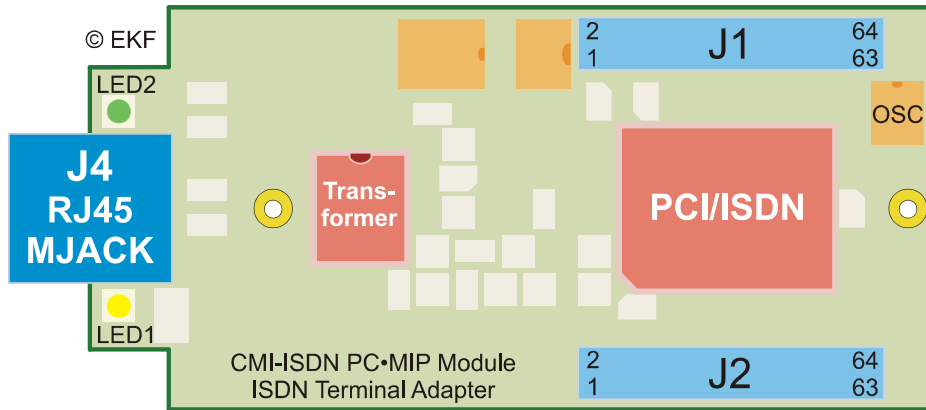
Technical Specifications

Printed Circuit Board	Dimensions	PC•MIP module type II (single-size 47x99.25mm ²), height 10mm (10H envelope)
ISDN Port	Interface Type	ISDN basic rate TA S/T (2B+D), B channel data transfer rate 2x64kbps (56kbps restricted mode for US ISDN lines selectable), protocol D channel transfer rate 16kbps
	Controller Chip	HFC-S PCI A single-chip PCI ISDN S/T transceiver, independent read and write HDLC channels for two ISDN B channels and one ISDN D channel, independently selectable B1 and B2 channel transparent mode, FIFO memory window 4x7.5kByte (B channel) and 2x512Byte (D channel), maximum 31 HDLC frames (B channel) and 15 HDLC frames (D channel) per channel and direction in FIFO, I ² C serial EEPROM interface for configuration data storage
	Physical Interface Connector J4	S/T interface, RJ45 ISDN standard connector, front panel mounted, complies with ITU-T I.430 specification, dual transformer / choke module, isolation voltage 1500Vrms
	LED Indicators	on-board LEDs signaling power (green) and ISDN link (yellow)
PCI Bus (PC•MIP)	Connector J1/J2	32bit, 33MHz, DMA Bus Master, 133MBps
Power Consumption	Connector J1/J2	+5V ±5% 0.1A max. +3.3V ±0.3V 0.1A max.
Temperature Humidity	Commercial Grade Version	Operating temperature 0-70°C Relative humidity 5-90% non condensing

specifications are subject to change without further notification

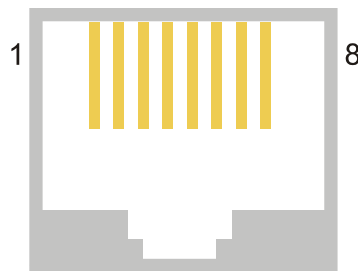


CM6-SEXTET PC•MIP Module Carrier/Bridge



Component Assembly Drawing CMI-ISDN

RJ45 Jack Front View



1	NC
2	NC
3	TX+
4	RX+
5	RX-
6	TX-
7	NC
8	NC

Connector J4 (RJ-45) ISDN

J1				J2			
RSVD	1	2	RSVD	RSVD	1	2	RSVD
RSVD	3	4	RSVD	RSVD	3	4	RSVD
-12V	5	6	TRTS#	+5V	5	6	+5V
TCK	7	8	+12V	+5V	7	8	+5V
GND	9	10	TMS	REQ64#	9	10	ACK64#
TDO ¹	11	12	TDI ¹	+3.3V	11	12	+3.3V
+5V	13	14	+5V	AD00	13	14	AD01
+5V	15	16	INTA#	AD02	15	16	GND
INTB#	17	18	INTC#	GND	17	18	AD03
INTD#	19	20	+5V	AD04	19	20	AD05
PRSNT1#	21	22	RSVD	AD06	21	22	+3.3V
RSVD	23	24	+3.3V	+3.3V	23	24	AD07
PRSNT2#	25	26	RSVD	C/BE0#	25	26	AD08
GND	27	28	GND	GND	27	28	GND
RSVD	29	30	3.3V aux	AD09	29	30	M66EN
GND	31	32	RST#	GND	31	32	AD10
CLK	33	34	+3.3V	AD11	33	34	AD12
GND	35	36	GNT#	AD13	35	36	GND
REQ#	37	38	GND	+3.3V	37	38	AD14
+3.3V	39	40	PME#	AD15	39	40	C/BE1#
AD31	41	42	AD30	PAR	41	42	+3.3V
AD29	43	44	+3.3V	GND	43	44	SERR#
GND	45	46	AD28	RSVD	45	46	+3.3V
AD27	47	48	AD26	RSVD	47	48	PERR#
AD25	49	50	GND	+3.3V	49	50	LOCK#
+3.3V	51	52	AD24	STOP#	51	52	GND
C/BE3#	53	54	IDSEL	GND	53	54	DEVSEL#
AD23	55	56	+3.3V	TRDY#	55	56	+3.3V
GND	57	58	AD22	GND	57	58	IRDY#
AD21	59	60	AD20	FRAME#	59	60	GND
AD19	61	62	GND	+3.3V	61	62	C/BE2#
+3.3V	63	64	AD18	AD16	63	64	AD17

Connectors J1/J2 PC•MIP Interface

Ordering Information		
Alias	Ordering Number	Short Description
	CMI-1-ISDN	PC•MIP module, ISDN basic rate terminal adapter
TRIO	CM5-1-TRIO	3U <i>CompactPCI</i> board, passive PC•MIP modules carrier/bridge with 3 PC•MIP slots
SEXTET	CM6-1-SEXTET	6U <i>CompactPCI</i> board, passive PC•MIP modules carrier/bridge with 6 PC•MIP slots
HARP	CI1-1-HARP	3U <i>CompactPCI</i> board, ISDN basic rate terminal adapter



CMI-ISDN



CM5-TRIO



CI1-HARP CPCI ISDN TA

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