CIC Series Interface Converters

INTRODUCTION

The Comtech EF Data CIC Series Interface Converters include the CIC-20, CIC-30, CIC-35, and CIC-50. They provide the following interface:

Unit	Data Type	Modem
CIC-20	HSSI to LVDS	CDM-600
CIC-30	DVB-ASI to RS-422	CDM-550
CIC-35	DVB-ASI to LVDS	CDM-600/600L
CIC-50	T1 or E1 (G.703) to EIA-422	CDM-550

FEATURES

For convenience, the CIC Interface Converter attaches directly to the modem using the 25-pin D subminiature data connector or short data cable (except for the CIC-35) to the modem. Additional features of the CIC converters include:

Unit	Features
CIC-20	Full-duplex capability Ext. Tx IF Mute Control Up to 50 feet cable length
CIC-30	Full-duplex capability 188 Byte data frame 270 Mbps transport rate for all data rates Up to 200 feet cable length
CIC-35	Full-duplex capability Typical cable length to 150 meters (Belden 8281) Additional IBS/IDR overhead available (requires modem option)
CIC-50	Clock recovery from user G.703 data Line build out to a maximum of 655 feet (typical) E1 G.703 data, AMI or HDB3 T1 G.703 data, AMI or B8ZS Balanced connection to 15-pin D female connector Unbalanced connection to BNC connectors LED indication of signal loss and bipolar violations

OPERATION

The CIC series converters attach to the rear of the modem. No external power is required. The modems may be set for the following data rates:

CIC-20

64 kbps to 20 Mbps with an interface type of LVDS.

CIC-30

100 kbps to 2048 kbps with an interface type of EIA-422.

Transmit clocking set to EXT allows the interface converter to recover the byte clock and data on the transmit ASI signal and reformats this to serial data and clock using RS-422 format.

The CIC-30 may be used with the CRS-200 switch by attaching the converter through a short data cable to the user port of the traffic modem interface.

It has an operating level of 800 mV ± 10%.

CIC-35

1 Mbps to 20 Mbps with an interface type of LVDS.

CIC-50

The modem may be set for either 1544 or 2048 Mbps data rate with an interface type of EIA-422. All settings are made on the CIC-50 using three switches.

Transmit clocking set to INT drives the modem's internal transmit data rate clock to the converter on the ST lines to provide a high stability reference for the G.703 clock recovery circuitry.

The CIC-50 may be used with the CRS-200 switch by attaching the converter through a short data cable to the user port of the traffic modem interface.

Jitter and wander are per ITU Recommendations G.823 and G.824.

The CIC-50 comes complete with an 8-inch cable (Part Number: CA/WR0056). The following longer length cables are available:

- 2 foot (CA/WR0063)
- 4 foot (CA/WR0064)
- 5 foot (CA/WR0066)

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SPECIFICATIONS

CIC-20

Type	HSSI interface converter
Operating Mode	Full duplex
Data Rate	64 kbps to 20 Mbps
User Interface	50-pin mini D female per EIA-613
Modem Data Interface	EIA-422, 25-pin D
Signals Supported	RT, RD, ST, TT, SD, TA, CA, and CD
Differential Voltage Level	≥ 590 mV, 110Ω load, and the input voltage range is -0.5 to –2.0V
Cable Length (typical)	50 feet maximum
Power Supply	2.4W maximum, power from modem +12 VDC -12 VDC
Dimensions	1.25H x 2.5W x 3.74L inches (3.81H x 6.35W x 9.5L centimeters)
Weight	1 lb (0.4535 Kg)

CIC-30

Type	ASI interface converter
Operating Modes	Full duplex
Data Rate	100 kbps to 2048 kbps
User Interface	BNC female, 75Ω
Modem Data Interface	EIA-422, 25-pin D
Cable Length (typical)	200 feet maximum
Frame Type	188 byte MPEG-2 transport per DVB-ASI, continuous stream
Voltage Levels	Unbalanced 800 mVp-p typical
Power Supply	2.4W maximum, power from modem +12 VDC -12 VDC
Dimensions	1.125H x 2.5W x 4.0L inches (2.858H x 10.16W x 6.35L centimeters)
Weight	CIC-20 and CIC-30: 1 lb (0.4535 Kg) CIC-35 and CIC-50: 0.4 lb (0.2 Kg)

CIC-35

Type	DVB-ASI interface per EN 50083-9 plus 25-pin D connector for optional IBS/IDR overhead (modem option)
Operating Modes	Full duplex
Data Rate	1 to 20 Mbps, symmetric only
User Interfaces	BNC female and 25-pin D male
Modem Data Interface	EIA-422, 25-pin D
Cable Length (typical)	150 meters, typical (Belden 8281)
Tx/Rx Impedance	75Ω 15 dB return loss, 5 to 270 MHz
Frame Type	188 byte MPEG-2 transport per DVB-ASI, continuous stream
Voltage Levels	Unbalanced 800 mVp-p typical
Power Supply	2.8W maximum, power from modem +12 VDC at 230 mA maximum (fused)
Dimensions	1.6H x 2.5W x 4.7L inches (4.1H x 6.4W x 11.9L centimeters)
Approvals (Planned)	EN 55022 Class B Emissions EN 55082-1 (Immunity) EN 60950 (Safety) FCC Part 15 Class B
Weight	0.4 lb (0.2 Kg)

CIC-50

Type	T1/E1 G.703 interface converter
Operating Modes	E1 (2048 kbps) balanced (120Ω) and unbalanced (75Ω) T1 (1544 kbps) unbalanced (100Ω) Per ITU Recommendations G.703
Data Rate	1544 Mbps or 2048 Mbps
User Interface	25-pin D male (overhead connector)
Modem Data Interface	EIA-422, 25-pin D
Cable Length (typical)	655 feet maximum
Power Supply	2.0W maximum, power from modem +12 VDC -12 VDC
Dimensions	1.125H x 2.5W x 4.0L inches (2.858H x 10.16W x 6.35L centimeters)
Weight	0.4 lb (0.2 Kg)