

Aprisa SE and the Customer Interface Card (CIC) plug-in module are designed to enable network operators to configure a wireless link with the interface option best suited to their specific application.

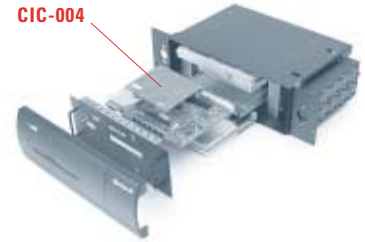
CIC-004 is used at the exchange end of a link to provide telephone and Internet service to rural, remote and SOHO subscribers. CIC-004 is matched with CIC-005, one interface card being used at the exchange side, and the other at the subscriber side of a link. CIC-004 provides the exchange end functions for the 2 x 2-Wire interfaces, and provides a high-speed Internet port to connect to a router or Ethernet device, as well as an asynchronous data port for low-speed data.

**PRODUCT OVERVIEW**

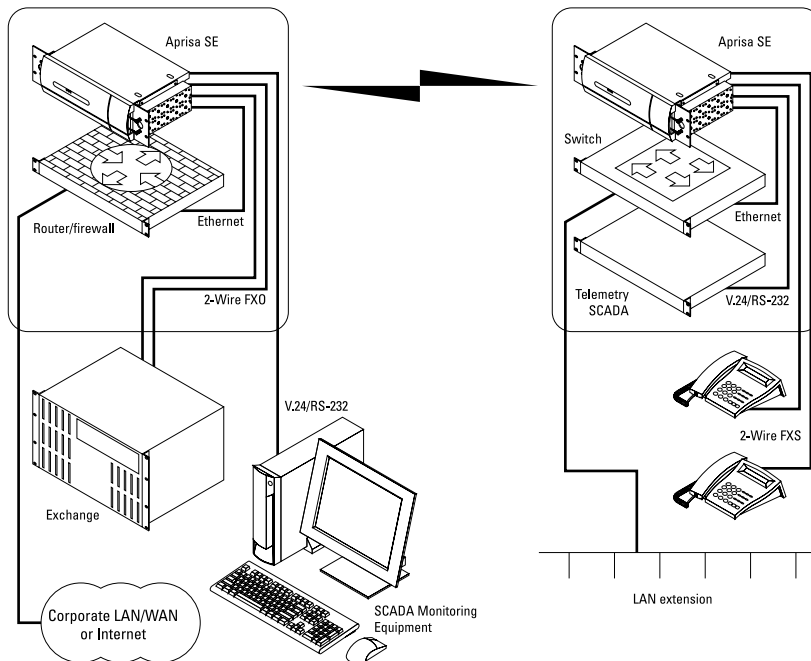
CIC-004 provides two 2-Wire FXO circuit interfaces, an Ethernet port and an asynchronous V.24/RS-232 data port. The exchange interface connects each of the 2-Wire circuits to the telephone network and digitizes the analog signals at 64 kbps G.711 compliant PCM, or 32, 24, 16 kbps with G.726 compliant ADPCM. Line impedances are factory configured as per the customer specification. Software settings allow the user to adjust transmit and receive gain, loop current limit and billing tone frequency for each 2-Wire circuit. CIC-004 has built-in echo cancellers that can be configured by the software to either on, off or auto.

The asynchronous V.24/RS-232 port supports data rates from 300 bps to 115.2 kbps selected via software. Two control lines are used for handshaking. The CTS signal is transported across the link and will appear as RTS at the remote terminal. DSR will appear as DTR at the remote terminal.

The IEEE 802.3 compatible 10Base-T interface acts as a LAN/WAN Ethernet learning bridge allowing users to connect two sections of a LAN/WAN together over the radio link. Bandwidth can be allocated to the Ethernet interface in 8 kbps steps up to the maximum available on the link. Filtering and forwarding traffic from its 10,000 MAC address LAN table ensures that only packets destined for devices at the remote end will be passed across the link thereby conserving radio bandwidth. It can be operated in half or full duplex transparent mode with filtering and Tinygram compression enabled.



- 2 x 2-WIRE FXO PORTS SUPPORTING 64 KBPS PCM AND 32, 24 AND 16 KBPS ADPCM AUDIO
- 1 x V.24/RS-232 ASYNCHRONOUS DATA PORT SUPPORTS RATES FROM 300 BPS UP TO 115.2 KBPS
- 1 x IEEE 802.3 10BASE-T ETHERNET BRIDGE PORT.
- CONFIGURED USING WINDOWS® BASED APRISA SETUP™ SOFTWARE
- COMPLIANT WITH INTERNATIONALLY RECOGNIZED STANDARDS



**APRISA SE DIGITAL ACCESS RADIO**

Aprisa SE is the simple, cost-effective solution to a wide range of low capacity point-to-point digital radio applications.

Compact and simple to install at any site, Aprisa SE is also easy to use, reducing user expertise requirements, and minimizing the need for additional equipment.

Aprisa SE incorporates a single customer interface card (CIC), with a specific mix of interfaces optimized for the application needs, such as simple fractional E1 and Ethernet, or a complex combination of analog voice and digital data circuits.

# CIC-004 SPECIFICATIONS

# ABOUT 4RF

## PORT 1 & 2: 2-WIRE FXO

Bandwidth	Audio (Both ports use the same coding)	64 kbps (PCM as per ITU-T G.711) 32, 24 or 16 kbps (ADPCM as per ITU-T G.721 and ANSI T1.303) 8 kbps per port A-Law 600 m (2000') on 0.4 mm (26 AWG) Support provided EN 300 659-1 Supports Group III fax at PCM 64 kbps and ADPCM 32 kbps
Signalling allocation		
Compression coding		
Maximum line length		
Calling line ID (CLI)		
Fax		
Analog parameters	Payphone support Pulse dialing Resistance to earth Loop resistance on hook Nominal level Maximum level Input gain adjustment Output gain adjustment Physical interface Line impedance options (factory set)	12/16 kHz tones, line reversals Transparent, pulse distortion ≤ 1 ms 10 MΩ 1 MΩ 0 dBm +3 dBm 0 to +12 dB in 1.5 dB steps -12 to 0 dB in 2 dB steps RJ-45 600 Ω (General), 600 Ω + 2.16 μF (FCC part 68), 900 Ω (General), 900 Ω + 2.16 μF (AT&T), 220 Ω + 820 Ω // 120 nF, 220 Ω + 820 Ω // 115 nF, 270 Ω + 750 Ω // 150 nF (TBR-021), 370 Ω + 620 Ω // 310 nF (NZ – BT3)
Diagnostics	Software  Hardware interface port	Local and remote alarm logging Local and remote software set loopbacks Green LED: Ringing Yellow LED: Off-hook detect

## PORT 3: V.24/RS-232

General	Interface Bandwidth allocation Control line allocation Maximum line length Data clamp Control line clamp Clock	ITU-T V.24/EIA RS-232E 8 to 120 kbps in 8 kbps steps (dependant on rate selected) 8 kbps 10 m Mark hold when out of sync Off when loss of sync Internally generated
Asynchronous parameters	Transparent mode Standard mode data bits Standard mode parity Standard mode stop bits Data rates	Operation is completely transparent up to 600 bps (select 300 bps) 5, 6, 7, 8 Transparent (enable/disable) 1, 2 300 bps, 1.2, 2.4, 4.8, 9.6, 14.4, 19.2, 28.8, 38.4, 57.6, 115.2 kbps
Control signals	End-to-end	CTS-RTS, DSR-DTS
Diagnostics	Software  Hardware interface port	Local and remote alarm logging Local and remote software set loopbacks Green LED: Receive data Yellow LED: Transmit data

## PORT 4: 10Base-T

General	Standard Interface Cabling Maximum line length Bandwidth allocation Data buffer size Address table size Protocol	IEEE 802.3 UTP (10Base-T) Crossover and straight through 100 m (on standard CAT 5 Ethernet cabling) N x 8 kbps up to maximum available 256 frames 10,000 IP addresses HDLC
Configuration options	Ethernet mode Tinygram compression	Half duplex & transparent (default) or full duplex & filtered Enabled (default) or disabled
Diagnostics	Software Hardware interface port	Local and remote alarm logging Green LED: Link OK Yellow LED: Link data traffic

## SOLUTION LEADERSHIP

To ensure 4RF systems remain at the forefront of point-to-point wireless solutions, we're committed to substantial ongoing investment in engineering expertise and R&D.

## QUALITY ASSURANCE

To ensure our products' performance is second to none, we invest in high-quality manufacturing and testing resources, leveraging New Zealand's engineering expertise and low cost-base.

## COMPREHENSIVE SUPPORT

To assure your success, our internationally recognized engineering and technical expertise is available to support you via consultancy, business case advice, network design and path planning. Our worldwide distributor and support infrastructure provides prompt communication, technical support and training.

## BUSINESS INTEGRITY

New Zealand, our home base, has a safe political and financial environment from where we manage our company based on international best practice.

## JUST CALL US

We invite you to tell us about your network and what you would like to achieve. We'd be pleased to visit and present our credentials, table our reference sites and testimonials, help you prepare a network design plan, and demonstrate our solutions.



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VERSION 3-0

