



## iWARE® HDLC Module

*Robust Protocol Implementations for the Most Demanding Environments*

### FEATURES

Complete, fully-integrated HDLC stacks available from Interphase Professional Services

HDLC/transparent mode can be implemented on each individual DS0 channel of an Interphase controller

Up to 248 HDLC/Transparent channels can be activated simultaneously

Up to 62 HDLC/Transparent channels can be managed by the firmware at the same time

Enables fast and easy integration with a broad range of communications applications, including:

- Packet nodes
- Interworking functions
- Multiservice nodes

the High-level Data Link Control (HDLC) iWARE® module from Interphase provides robust tools for seamless portation of iSPAN® communications controllers into virtually any HDLC application. The HDLC protocol is an efficient, layer 2 (data link layer) protocol standardized by ISO for point-to-point and multipoint (multidrop) data links. HDLC provides for minimal overhead to ensure flow control, error detection, and recovery for serial communication.

Designed specifically for board-level integration with the Interphase line of iSPAN communications controllers, the Interphase HDLC software module can be easily ported and integrated to third party upper layers by the Interphase Professional Services team.

The HDLC iWARE module from Interphase provides the embedded firmware, base drivers, sample programs, and extensive documentation to enable easy integration into any HDLC application environment.

# iWARE HDLC Module

## HDLC Protocol Module

The PowerQUICC™ processor on the Interphase hardware modules has an internal HDLC controller to handle data insertion and extraction on the 24/31 channels of each T1/E1 line. Up to 248 (a full eight E1, T1, or J1 lines) HDLC/Transparent channels can be activated simultaneously. Up to 62 HDLC/Transparent channels can be managed by the firmware at the same time.

## HDLC Controllers

The PowerQUICC processor on the Interphase hardware modules has an internal HDLC controller that handles data insertion and extraction on the 24/31 channels of each T1/E1 line. This component performs layer 2 HDLC protocol formatting. The chip is also capable of operating in a transparent mode on up to 32 channels on each line, up a total of 64 channels. Any of the HDLC channels can be associated to any aggregation of DS0s, allowing channelized, unchannelized, or fractional T1/E1 data rates. On the memory interface side, the HDLC controllers are bus-mastered on the local processor memory, exchanging data autonomously from the on-board processor. Each of the 64 HDLC channels has its own dual linked-list DMA controllers.

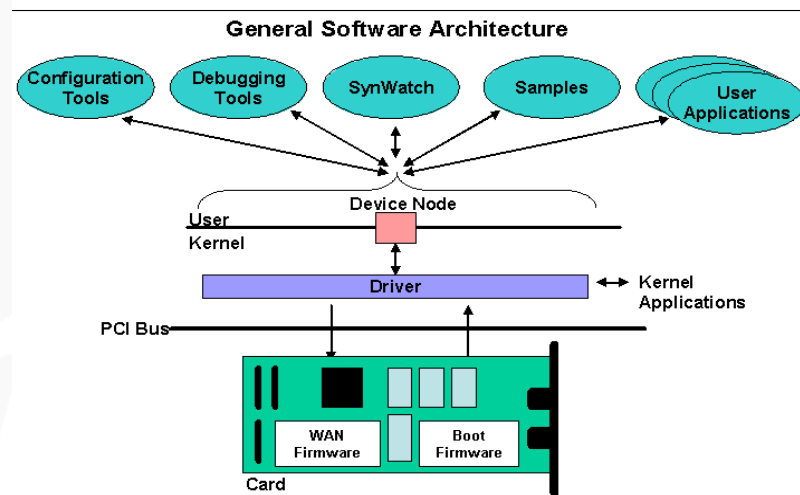
## iWARE Software Development Suite

The HDLC protocol module runs with the iWARE Software Development Suite, which includes:

- Embedded Firmware (Executed by the on-board PowerQUICC processor)
- Base Drivers for each supported operating system (Executed by the host processor)
- Configuration and diagnostic utilities
- Sample programs
- Extensive documentation for each component of the suite

For a detailed description of the kit contents, refer to the iWARE Software Development Suite data sheet.

Interphase also offers complete upper layers of the HDLC protocol from third party stack vendors, which are fully integrated with Interphase lower layers. For details, please refer to documentation on Interphase Professional Services.





## iWARE HDLC Module

### Configuration Options

		4538	4539	4539F	5539F
Solaris	HDLC-LF		■ (902)	■ (904)	■ (902)
Linux Intel	HDLC-LF	■ (908)	■ (906)	■ (903)	■ (907)
Linux PowerPC	HDLC-LF	■ (909)	■ (907)	■ (902)	■ (906)

**Notes:**

Solaris = Solaris OS (XXX = *part 1* of order number\*)

Linux Intel = Linux OS on an Intel processor (XXX = *part 1* of order number\*)

Linux PowerPC = Linux OS on a PowerPC processor (XXX = *part 1* of order number\*)

HDLC-LF = HDLC Protocol Package (HDLC-LF = *part 2* of order number\*)

\*Order Number = Card Number-*part 1*-*part 2*.

For example, the order number for Solaris software for AAL2 Protocol Package on a 4539 card = 4539-902-HDLC-LF

Additional packages may be under development. Please contact your Interphase representative if you do not see the package you need.

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