



Digital Communications Technical Report – Receiver-to- Computer Interface Protocol (Type 1) – for Central Station Equipment Communications

SIA DC-01-1988 (R2001.04)

Sponsor
Security Industry Association

Copyright © 1988-2001 SIA

Publication Order Number: 14081

FOREWORD

This technical report is published by the Security Industry Association (SIA) and was developed and adopted by a consensus of industry volunteers in accordance with SIA's standards development policies and procedures. It is intended to facilitate product compatibility and interchangeability, to reduce misunderstandings between manufacturers and purchasers, and to assist purchasers in obtaining the proper products to fulfill their particular needs.

The existence of this or any SIA standards document shall not prevent any SIA member or non-member from manufacturing, selling, or using products not conforming to this or any SIA standard. SIA standards are voluntary. SIA encourages the use of this document but will not take any action to ensure compliance with this or any other SIA Standard.

SIA assumes no responsibility for the use, application or misapplication of this document. Industry members using this document, particularly those having participated in its development and adoption, are considered by SIA to have waived any right they might otherwise have had to assert claims against SIA regarding the development process of this standard.

Although some SIA standards establish minimum performance requirements, they are intended neither to preclude additional product features or functions nor to act as a maximum performance limit. Any product the specifications of which meet the minimum requirements of a SIA standard shall be considered in compliance with that standard. Any product the specifications of which exceed the minimum requirements of a SIA standard shall also be considered in compliance with the standard, provided that such product specifications do not exceed any maximum requirements set by the standard. SIA standards are not intended to supersede any recommended procedures set by a manufacturer for its products.

SIA reserves the right to revise this document at any time. Because SIA policy requires that every standard be reviewed periodically and be either revised, reaffirmed, or withdrawn, users of this document are cautioned to obtain and use the most recent edition of this standard. Current information regarding the revision level or status of this or any other SIA standard may be obtained by contacting SIA.

Requests to modify this document are welcome at any time from any party, regardless of membership affiliation with SIA. Such requests, which must be in writing and sent to the address set forth below, must clearly identify the document and text subject to the proposed modification and should include a draft of proposed changes with supporting comments. Such requests will be considered in accordance with SIA's standards development policies and procedures.

Written requests for interpretations of a SIA standard will be considered in accordance with SIA's standards development policies and procedures. While it is the practice of SIA staff to process an interpretation request quickly, immediate responses may not be possible since it is often necessary for the appropriate standards subcommittee to review the request and develop an appropriate interpretation.

Requests to modify a standard, requests for interpretations of a standard, or any other comments are welcome and may be sent to:

Standards
Security Industry Association
635 Slaters Lane, Suite 110
Alexandria, VA, 22314
E-mail:
Standards@SIAOnline.org

This document is owned by the Security Industry Association and may not be reproduced, in whole or part, without the prior written permission from SIA.

Digital Communications Technical Report – Computer-to-Receiver Interface Protocol (V-1)

REVISION HISTORY

1988 BASELINE

Original Publication

AUGUST 1993 REVISION

Section 5.1.7 Changed number of characters required for the fields in a message.

OCTOBER 2000 REVISION

Reformatted Standard to current style conventions

APRIL 2001 REVISION

Downgraded Standard to Technical Report

This page intentionally blank.



Digital Communications Technical Report – Computer-to-Receiver Interface Protocol (V-1)

Copyright © 1988-2001 Security Industry Association

1. SCOPE

1.1 General Description

This specification describes a standard for the interface between signal processing computers and signal receivers. This technical report is intended for use in the alarm industry, with possible uses in the areas of energy control and facilities monitoring and management.

1.2 Purpose

Manufactures of computers and receivers can adopt this standard to establish a common interface format. The common interface format provides an across-the-board compatibility of equipment designed to the specification, regardless of manufacturer. This Computer Interface Technical Report provides for all the known communication needs between the computer and receiver and or transmitter. Basic “codes” for commonly used functions are defined. Extensions to these basic codes are provided for (and will likely vary from one manufacturer to the next). Responsibility for documentation and implementation specifics of the extensions will rest solely with the manufacturers. These extensions can be integrated into the report later through the procedure outlined in Section 9, Standard Enforcement and Revision.

1.3 Establishment of Need

Manufacturers of receivers developed the existing interface formats with the products. These formats were not always compatible with each other and the published documentation of these formats was not accomplished in a consistent manner. These formats performed adequately in the service for which they were designed, however, the large growth in the field of signal processing and alarm monitoring has created a critical need for higher data rates, more information capacity, improved assurance and expansion potential. Also, new applications in alarm monitoring, process control, facilities management, and energy management require bi-directional communications between the computer, receiver, and transmitter.

Table 1: Existing Computer Interface Formats

Acor CDR/P-250	Ademco 685
Applied Spectrum DWV-200	FBI CP220
ITI CS-4000	Morse SPC 5000
Morse V300	Osborne/Hoffman
Radionics D6000/D6500	Sescoa 3000
Silent Knight 9000	VerSuS 90

1.4 Current Capabilities

There are currently several major computer-to-receiver interface formats on the market. The principal interfaces are listed alphabetically above. Copies of existing interface formats are available from the various manufacturers.

1.5 Alternatives

The committee considered the alternatives, including variations on the currently available formats. Several of the formats reviewed had components of the structure required in a new format. However, none were applicable to the needs of the variety of systems currently in place. A requirement is compatibility with the SIA Digital Communication and SIA Derived Channel standards. The proposals submitted by the working committees have provided the foundation for this standard.

1.6 Objectives

- Accommodate the SIA Digital Communication and SIA Derived Channel Standards as well as other Digital, McCulloh, Direct Wire and Radio formats.
- Spend the minimum practical time in communication per transaction.
- Minimize the amount of processing time required by the computer and the receiver (and allow the receivers to handle data from many transmitters).