GCP (Generic Communications Protocol) Specification

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1 Overview

GCP is intended to send messages of an arbitrary number of octets over a network in a simple, open manner. While it can be used on may different types of networks, it was specifically designed for serial networks, such as RS232, RS485, or other networks designed to send a stream of octets. The protocol provides its own error detection, making such a service unnecessary at a lower layer.

This protocol does not implicitly provide addressing, message acknowledgement, or streaming services, although, such services can be implemented on top of it. The protocol also places no restrictions on the content or format of its messages' payloads.

1.1 Important Notes

- All offsets and sizes listed are in octets, unless otherwise specified.
- Values consisting of more than one octet are sent most significant octet first, unless otherwise specified.

2 Packet Format

All data sent over GCP is encoded using the packet format specified in table 1. There is no restriction on the format of the *Payload* field.

Offset	Size	Name	Value
0	2	*Preamble*	`0x17`, `0x01`
2	2	*Size*	The size of the *Payload* field (n)
4	n	*Payload*	the payload data
$n+4$	2	*CRC*	CRC of *Payload* (CRC-16-IBM)

Table 1: GCP Packet Format