CesCom

N400
ACA approved

CE1419D
Scanning RS485 PTZ Multiplexer

Configurable Communications Controller

Features

- 5 channels (6 max) of configurable RS485
- Failsafe RS485 includes polyfuse and transient protection
- Simultaneous scanning and buffering of all channels
- 8MB serial flash or optional micro-SD
- 80MHz multicore 32-bit processor
- Serial console programming port
- +9 to +28V switch-mode operation
- 11 programmable bicolor LED indicators + power
- Compact vertical DIN rail mounting 80x80x25mm
- Pluggable **Combicon** terminal connections
- Field upgradeable Quad I/O modules

Overview

The CE1491D is a configurable datacommunications controller that's designed for reliable operation in rugged environments. In this configuration it has tailored for multichannel RS485 applications especially PTZ cameras. Multiple PTZ controller commands can operate error free and without collision to the one camera as the CE1419D buffers all input command packets so that they are queued for delivery to the camera in round-robin priority as intact packets without risk of being garbled in times of high demand.

Simultaneous multi-port serial operation is possible due to the 8-core processor which dedicates a 32-bit core for each serial port as well as to the application and supervisory software.

Firmware updates and reporting etc is also possible via a serial programming port for connection to a PC via a USB program cable or the unit may be fitted with an optional serial BlueTooth module for wireless operation.

APPLICATIONS

- PTZ camera control multiplexing

ADDITIONAL OPTIONS:

- Additional 6th RS485 channel (DC power from side jack)
- Datalogging to removal microSD (includes RTC for timestamping)
- Bluetooth serial or microUSB serial

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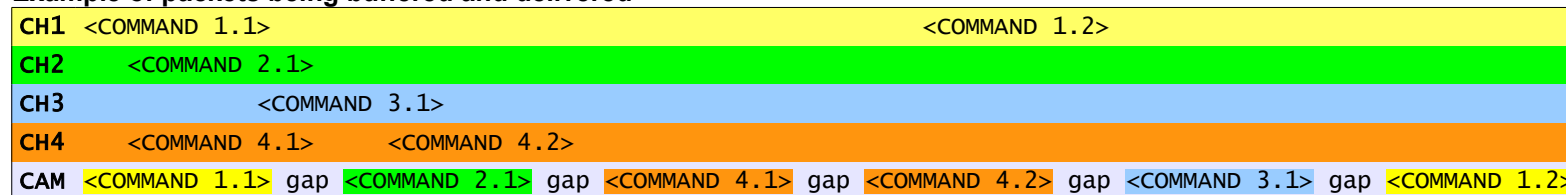
PTZ Operation

Regardless of the protocol selected for PTZ cameras control the commands are send as packets with synch header an checksum trailer which need to be received by the camera in whole to be accepted. With multiple sources requesting operation of a single camera it is always likely that more than one or even all sources can be requesting at the instant of same time that would result in a garbled message if the sources were only passively multiplexed.

The scanning multiplexer ensures that packets from each source are buffered fully independently and delivered in orderly fashion as complete packets the same as the original, to the camera.

All channels can also be logged to the internal 4MB Flash which can be retrieved for diagnostic purposes in text format via a serial program cable or the optional Bluetooth module. The unit can also be factory fitted with built-in USB serial to facilate easy connection to PCs using any standard microUSB cable.

Since each RS485 channel has it's own 32-bit processor core that defines the "hardware" totally in realtime software, the firmware can be upgraded to handle almost any kind of protocol or word format.

Example of packets being buffered and delivered

CH1	<COMMAND 1.1>			<COMMAND 1.2>		
CH2	<COMMAND 2.1>					
CH3		<COMMAND 3.1>				
CH4	<COMMAND 4.1>	<COMMAND 4.2>				
CAM	<COMMAND 1.1> gap	<COMMAND 2.1> gap	<COMMAND 4.1> gap	<COMMAND 4.2> gap	<COMMAND 3.1> gap	<COMMAND 1.2>

SIGNAL CONNECTIONS (L-R)

1	GND	Common
2	+Vin	+9 to 32V power
3	OUT+	Camera RS485 A
4	OUT-	Camera RS485 B
5	IN1+	Source 1 RS485 A
6	IN1-	Source 1 RS485 B
7	IN2+	Source 2 RS485 A
8	IN2-	Source 2 RS485 B
9	IN3+	Source 3 RS485 A
10	IN3-	Source 3 RS485 B
11	IN4+	Source 4 RS485 A
12	IN4-	Source 4 RS485 B

Supply Voltage	+9 to +28V
Supply Current	Approx 50ma @ +24V
Weight	200g approx
Case	Polyamide (PA 6.6)
Environment	-55'C to +125'C operating
Standards	IEC 1010; AS/NZS 3548 EMI/EMC; C Tick

RS-232	3.5mm jack Programming port
RS-485	300 – 250k baud 8N1 (fully configurable)
PROTOCOL	Auto packet sensing
IO MODULES	optional
CPU	P8X32A 8-core 32-bit CPU
MEMORY	64KB EEPROM, 48K RAM, 32K ROM, 4MB Flash