

WAYSIDE COMMUNICATIONS CONTROLLER/ FIELD PROTOCOL DEVICE (WCC/FPD)



A53401 – 9 PORT

Safetran's Wayside Communications Controller/Field Protocol Devices, (A53401) is a general purpose communications controller and protocol converter for use in communications systems. Outstanding features of the WCC/FPD devices include:

A53401 – 9 Port

- Four 16-bit 16 MHz microprocessors
- 4 Mbytes of flash program memory, can be upgraded in the field via local and remote connections
- 4 Mbytes of RAM
- Nine high-speed data lines, each with baud rates up to 256k baud
- Standard RS232 interfacing, configurable for DTE/DCE clocking.
- Ethernet® port for direct connection to LAN (10-baseT and 10-base2)
- 16-line parallel I/O port to support D.C. Code Lines as well as miscellaneous control and indication functions
- Echelon® LonTalk™ port for maintenance and diagnostic functions
- 10 - 30 VDC operation
- Rated for industrial temperature operating range
- No moving parts ensures high reliability
- Frame Relay/TCP/IP support

Configuration

The basic Wayside Communications Controller/Field Protocol Device is configured for use through the local diagnostic port and/or remotely via dial-up or LAN/WAN connections. The unit is fully compatible with Safetran's ASERVER & WCC MAINT. Utilities, and can be diagnosed and monitored remotely. Multiple units can be clustered together to perform front end processing and Cluster Controller functionally.

ATCS/ARES

When configured in the ATCS/ARES mode, the Wayside Communications Controller/Field Protocol Device functions as a fully compatible FEP/CC unit capable of tracking locomotive traffic and handing off units to adjacent systems. Interface options include HDLC LAPB, HDLC LAPD, and/or TCP/IP via the Ethernet® connection. Multiple units can be clustered to form a distributed FEP/CC of arbitrary size.

Code Line Protocol Converter

In the Code Line Protocol Converter configuration, the WCC/FPD converts proprietary code line protocols to ATCS protocol. The WCC/FPD can manage up to three separate code lines with a total of 96 base stations and 384 field locations. Connections to the CTC system are via serial data lines and/or the Ethernet® port. The A53401 emulates most major serial and D. C. code line and code emulator protocols. Additional protocols can be added on request.

Base Station Communications Controller

In larger installations with a central FEP/CC, the WCC/FPD is configured as a serial controller, off-loading data traffic from the main FEP/CC. Each unit can accommodate a maximum of 9 circuits, with up to 16 base stations per circuit for a total of 144 base stations. Interfacing with the FEP/CC is accomplished via the Ethernet® port. Additional units can be clustered to accommodate any size installation. In many installations, CTC traffic can be offloaded from the main FEP/CC units providing additional reliability.

SPECIFICATIONS

Input Power:	10-30 VDC (12 VDC nominal) (optional 30-80 VDC operation)
Communications Processors:	
9 Port Model:	3 x Motorola 68302 @ 16 MHz
Main Processor:	1 x Motorola 68332 @ 16 MHz
RS-232 Lines:	
9 Port Model:	9 high-speed serial (synchronous or asynchronous)
Protocols Supported:	ATCS Specification 200 X.25 HDLC-LAPB/LAPD/UI US&S Genisys/PRCCI US&S Flexicode US&S 504/506/514 GRS Datatrain GRS J&K, E2 Harmon MCS1/MCS2/HDP-3 Safetran SCS-128 CN 2000 A&B Plus other protocols (contact Safetran application engineering)
LAN:	Ethernet - TCP/IP
Echelon LonTalk™:	1.25 Mbits/second, twisted pair
I/O Ports:	
9 Port Model:	8 fully isolated, parallel inputs 8 fully isolated, high-current parallel output
Internal RAM:	
9 Port Model:	4 Mbytes
Internal Flash ROM:	
9 Port Model:	4 Mbytes
Baud Rate:	Up to 256k baud
Environmental:	
Temperature	-40° F to +160° F (-40° C to +71° C)
Humidity	95%, noncondensing
Dimensions:	
9 Port Model:	1.75 inches (4.45 centimeters) high 17.25 inches (43.85 centimeters) wide 8.00 inches (20.32 centimeters) deep
Weight:	5 pounds (2.27 kilograms) (approximate)

ORDERING INFORMATION

To order, specify assembly and part number from the chart below.

Description	Part Number
Basic Wayside Communications Controller/Field Protocol Device Hardware (WCC/FPD), 9 Port	9000-53401-0001
Wayside Communications Controller/Field Protocol Device with ATCS/ARES Compatible FEP/CC Software	Contact Safetran California Division Customer Service 1-800-793-7233

OPTIONAL ACCESSORY ITEMS

To order, specify assembly and part number from the chart below:

Assembly Description	Part Number
A-B Switch Unit	A53434
Multiplexer and Port	A47714
AC Power Supply Adapter	9000-26555-0001
Serial Port Adapter	9000-26557-0001

OPTIONAL MAINTENANCE SOFTWARE

Assembly Description	Part Number
A SERVER, Data-base Management Tool	Z224-9V344-A010
WCC-MAINT, Maintainer Data Access Tool	Z224-9V345-A010

Contact Safetran California Division for application questions and assistance: 1-800-793-7233