Leased Line Modems

RayTel DSP9612 Telenetics Industrial Flash-Poll Analog Modem DSP9612FP, DSP9612-LV and DSP9612RM

RayTel

This Analog Leased Line Modem delivers super-fast training times and low throughput delay, making it ideal for long-range and multi-point industrial communication.

Overview

PERFORMANCE & APPLICATION

The Raymar-Telenetics FlashPoll DSP9612FP is a dual mode, full-featured 9600 Fast Poll and Bell 202T leased line modem with the fastest training time in the industry: 23 msec RTS/CTS delay. Ideal for utility and industrial automation multi-dropping applications, including SCADA systems, traffic automation, and oil & gas automation projects where an unlimited number of drops is desirable.

The DSP9612FP is a standalone modem designed for 4-wire, full-duplex, or 2-wire, half-duplex operation over a voice-band leased line or private wires. The modem design utilizes the latest digital-signal processing (DSP) technology to achieve high performance.

COMPATIBILITY

In FlashPoll Mode (9600/4800 bps), the DSP9612FP employs Raymar-Telenetics' proprietary modulation and encoding scheme to achieve fast modem training time. In Bell 202T Mode, the modem is end-to-end backward compatible with Bell 202T (0 - 1800 bps) modems.

OPTIMIZATION & CAPABILITY

Ideal for systems where fast response, short training time, and low throughput delay is required, FlashPoll is optimized for fast receiver equalizer training and extremely low throughput delay.

RACK MOUNT CARDS AND CHASSIS

Features

- **Ideal for Leased Lines** - Designed for Leased Line, Private Line or Private Wire Industrial applications.
- **Optimized for Multi-Drop** - Special Flash-Poll" features enable fast data transmission in multi-point operation where multiple devices quickly transport data with minimal delay. Supports a large number of drops.
- **SCADA Perfect** - Ideal for industrial automation applications such as utility monitoring where real-time or near real-time communication is crucial.
- **Dual Mode** - Supports 9600/4800 bps, and Bell202T FSK modulation 0-1800 bps.
- **State of the Art Legacy** - Fast train modem equalizer with 23 msec RTS/CTS delay. DSP design with automatic adaptive equalizer.
- **Surge Protection** - Leased-line interface protected with heavy-duty surge protection.
- **Flexible Mounting Options** - Rack Mount DIN Mount or Wall Mount options available. Rack Card versions are installed in the Raymar-Telenetics RM16M Rack, RMX Shelf and Motorola/UDS RM16M Universal Data Shelf.
- **AC or DC Power** - Powered by 85-265VAC, 85-400VDC.

The universal Rack Card unit (DSP9612RM) installs in the Raymar-Telenetics RM16M Rack, RMX Shelf and/or the Motorola/UDS RM16M Universal Data Shelf.

The DSP9612RM can also be installed in the Raymar-Telenetics RMX-2xx, which supports up to 2 cards installed side-by-side in a 1U rack mount enclosure.

The DSP9612FP offers a DB-25 Serial Port, Terminal Block for 2/4 wire line connectors and an internal wide range switching power supply from 85 to 265V, 50/60 Hz, or 85 to 400VDC. The DSP9612-LV offers a low voltage DC power from 10 to 53 volts DC.

Specifications

Data Rate:	9600 or 4800 bps asynchronous, +1% - 2.5%
Data Format:	8 or 9 data bits with 1 or more stop bits
Line Requirement:	TELCO Voice band 4 or 2 wire leased line / private metallic circuits 26 to 19 AWG
Operating Modes:	2-wire half-duplex or 4-wire full-duplex
Modulation:	Raymar-Telenetics proprietary FlashPoll Mode/FSK Bell202T Mode
Equalizer:	Automatic, adaptive
Training Time:	RTS to CTS delay, 23 msec
Cable Equalizer:	Fixed transmitter and receiver cable equalizer, selectable
Carrier Control:	Constant or switched, DIP switch selectable
Carrier Loss Recovery:	Built-in train on Data (typically less than 10 sec)
Carrier Loss Recovery:	Built-in train on Data (typically less than 10 sec) Receiver Dynamic Range: +3 to -30 dbm or -10 to -43 dbm (DIP switch selectable)
Connector:	4-position screw terminal, 2- or 4-wire leased line or metallic circuit
Data Terminal Equipment:	DB-25F power connector

RS-232 (DTE) Interface

Signal Name	Modem Input/Output	DB25	Pin Description
Earth	GND	1	Earth Ground
TXD	Input	2	Transmit Data
RXD	Output	3	Receive Data
RTS	Input	4	Request to Send
CTS	Output	5	Clear to Send
DSR	Output	6	Data Set Ready (Modem Ready)
SG	GND	7	Signal Ground
DCD	Output	8	Data Carrier Detected
DTR	Input	20	Data Terminal Ready (Host Ready)

Note: DCD active indicates that carrier is present and data RxD is valid. DCD is not an energy detector.

Front panel LED diagnostics/monitoring:	Power (PWR), Request to send (RTS), Clear to send (CTS), Transmit data (TXD), Receive data (RXD), Data carrier detect (DCD), Data set ready (DSR), Analog loopback (ALB) and Digital loopback (DLB)
Front panel loopback control:	Local Analog Loopback (ALB), Local Digital Loopback (DLB), and Remote Digital Loopback (RDL)
Power Supply:	Wide range switching power supply, 85 to 265V, 50/60 Hz, or 85 to 400VDC. Optional LVDC, DSP9612-LV 10 to 53 volts DC
Surge Protection:	Provided at power line and leased line. Up to 15K (Standalone version)
Standalone Enclosure:	Aluminum with removable front and rear panel
Operating Temperature:	-40°C to +85°C
Standalone Dimensions:	5.70"W x 8.305"L x 1.50"H
Standalone Weight:	1.9 lb
Rack Card Dimensions:	9" deep x 6.25" high x 0.87" thick

Rack Card Weight:	8 oz