



## **COMMPAK TS1 & TS1-FSK**

Terminal Servers for RS-232 / RS-485 and FSK

Experience the **ENCOM** difference!





## Ethernet Serial Terminal Servers Deliver

Encom's Terminal Server solutions allow customers to migrate and upgrade their current serial network infrastructures to Ethernet communication environments. This provides customers the opportunity to extend current technology platforms and gain further return on investment (ROI) from their existing infrastructures, while enhancing the flexibility and scalability required for future applications.

The CommPak TS1 and TS1-FSK seamlessly bridge the gap between virtually any serial or FSK device for remote access over Ethernet/IP networks and operate in point-to-point and point-to-multipoint configurations with built-in web servers. With full duplex capability, both models can transmit and receive data simultaneously.

Built around ENCOM's field proven communications technology, the CommPak TS1 meets TCP/IP and UDP protocols and connects directly to any 10/100 Ethernet network, providing a transparent serial port of up to 115 kbps with low end-to-end data latency. The TS1-FSK provides an FSK terminal block for direct connection to hard wired systems such as STE, DCE and Bell 202 1200 baud compatible devices. IP addresses are automatically assigned through DHCP support.

The CommPak TS1 provides an Ethernet gateway for communication to RS-232, RS-422, RS-455 devices including all ENCOM Serial radios. The TS1-FSK can be applied to last mile applications as well as bridge copper connections. This flexibility makes ENCOM Terminal Servers the perfect choice for the expansion of ethernet applications, while security is added through password protection.

Each unit is built and supported by over 25 years of industry experience, includes a one year warranty and comes with powerful, user-friendly ControlPAK software. This program incorporates highly visual, straightforward tools for remote maintenance and configuration while precise diagnostics minimize issues and downtime. Also included is a spectrum analyzer for determining accurate noise levels and optimal operating frequencies.

### Key Features:

- Point-to-Point, Point-to-Multipoint
- Integrated 10/100 Ethernet Serial Server, TCP/IP & UDP
- Up to 115kbps Serial Baud Rate
- 1200 Baud FSK (Bell 202) TS1-FSK
- Full Duplex Capability
- Password Protected
- DHCP Support
- Low End-to-End Serial Data Latency
- Built-in Web Server for Configuration
- ControlPAK Software Included
- One year warranty

### Key Benefits:

- Over 25 years of broad industry experience
- Proactive and adaptable solutions for a diverse range of applications
- Unmatched software management tools
- Scalable and future proof technology platforms
- Personalized customer support programs and corporate culture
- Unequaled warranty and support programs
- Defined and measurable ROI

### RS-232 / RS-485



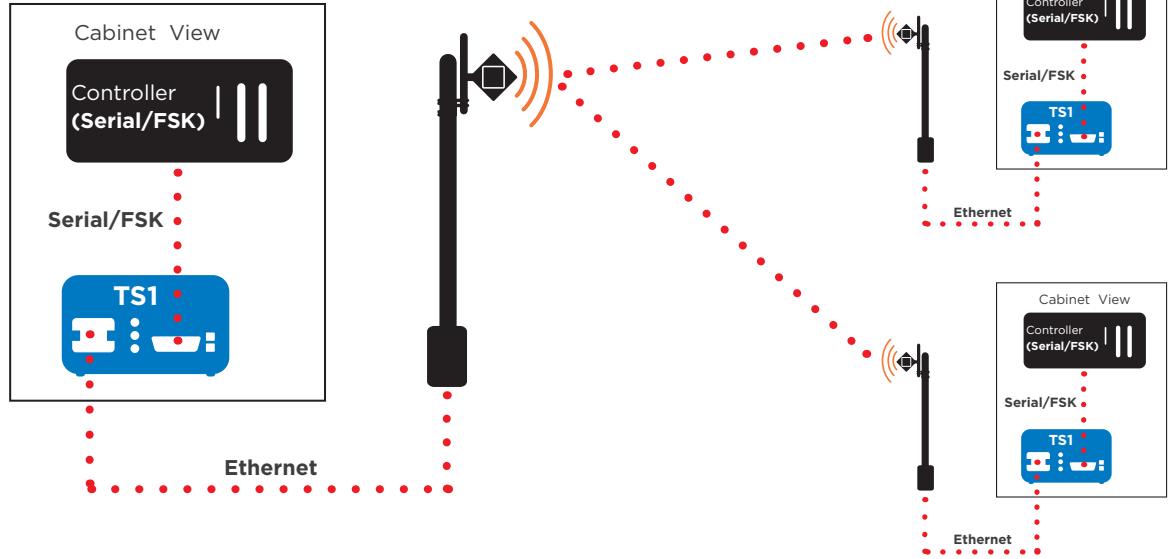
TS1

### 1200 Baud FSK



TS1-FSK

### Solution Example:



### Solution Portfolio:

#### Intelligent Transportation Systems

- Wireless Controller Interconnect
- Vehicle Detection Systems
- Variable Message Signs

#### Water/Waste Water Management

- Pump/Lift Stations
- Reservoir Monitoring
- Remote Valve Controls

#### Electrical Utilities

- Automated Meter Reading (AMR)
- Automatic Circuit Reclosures (ACR)
- Smart Grid Support
- Fault Monitoring

#### Industrial SCADA Networks

- Pipelines
- Oil and Gas
- Mining

#### Private Networks

- LAN & WAN Extensions
- Business Continuity Planning
- Disaster Recovery Planning
- Mobile Workforce
- Hotspot Enablement



### About ENCOM:

ENCOM, a Global Wireless Solutions Provider, creates field proven, cost-effective wireless data solutions for municipal and industrial clients, with applications involving:

- Intelligent Transportation Systems
- Public Safety Communications
- Municipal Corporate Security and IT Networks
- Water and Waste Water Management
- Electrical Utilities
- Oil and Gas

### Who relies on ENCOM?

- Municipal Governments
- Corporate IT Departments
- Departments of Homeland Security
- Departments of Transportation
- Emergency First Responders
- Mobile Workforces
- Private Networks

### Customer Testimonials:

- City of Aurora, Colorado
- City of Burnaby, British Columbia
- City of Calgary, Alberta
- City of Greely, Colorado
- Los Alamos County, New Mexico
- Macomb County, Michigan
- Missouri DOT
- North Carolina DOT
- City of San Jose, CA
- City of Tampa, Florida
- TxDOT



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MAIN SPECIFICATIONS	
<b>Product Description</b>	ENCOM Terminal Server
<b>Device Type</b>	Terminal Server
<b>Enclosure Type</b>	External, Milled Aluminum with Black Powder Coat
<b>Dimensions</b>	3.5" W x 1.5" H x 6.5" D
<b>Weight</b>	12 oz
<b>Data Link Protocol</b>	Ethernet, Fast Ethernet, RS-232, RS-422, RS-485, FSK
<b>Network / Transport Protocol</b>	TCP/IP, UDP
<b>Remote Management</b>	Embedded web server and ControlPAK™
<b>Features</b>	DHCP support
GENERAL SPECIFICATIONS	
<b>Input Power</b>	5-30 VDC
<b>Typical Current Draw</b>	< 90mA @ 13.8VDC
<b>Operating Temperature</b>	-40°C to +80°C
<b>Indicators</b>	LED for PWR, Serial port TXD & RXD, LAN port LNK & ACT
NETWORK PORT	
<b>Number of LAN Ports</b>	1
<b>Connector</b>	RJ-45
<b>Standard IEEE</b>	802.3
<b>Physical Layer</b>	10/100Base-T
<b>Data Rate</b>	10 / 100 Mbps (auto-sensing)
<b>Mode</b>	Full or half duplex (auto-sensing)

SOFTWARE FEATURES
<ul style="list-style-type: none"><li>• ControlPAK software (included) for device discovery &amp; programming.</li><li>• Flash upgradable firmware (via ControlPAK).</li><li>• Embedded Web server for programming.</li><li>• Static IP or DHCP client for auto IP assignment.</li><li>• Support TCP server, TCP client, TCP server &amp; client, fast point-to-multipoint COM port mapping (UDP).</li><li>• Support Virtual COM port software driver for Windows XP (optional).</li><li>• Programming TCP/UDP (Multicast) addresses and ports used for Remote Serial Ports.</li><li>• Fast Mapping.</li><li>• Programmable COM port timing and packet size for optimization.</li></ul>

TSI SERIAL PORT SPECIFICATIONS	
<b>Number of Serial Ports</b>	1
<b>Connector</b>	DB9F
<b>Software Selectable for</b>	RS-232, RS-422 or RS-485
<b>Support pins in RS232</b>	TXD, RXD, RTS, CTS and DCD
<b>Baud Rate</b>	1200, 2400, 4800, 9600, 19200, 28800, 38400, 57600 and 115200 bps
<b>Data Format</b>	8N1, 8N2, 8E1, 8O1, 7E1, 7O1, 7E2 and 7O2
<b>Handshaking</b>	None or hardware

TS1- FSK 1200 BAUD FSK PORT SPECIFICATIONS	
<b>Connector</b>	4-pins Quick Release (3.81mm) Terminal Block
<b>Modulation</b>	Phase coherent Frequency Shift Keying (FSK) - Bell 202 Compatible
<b>Line and Signal Requirements</b>	Type 3002 Voice-Grade, Unconditioned
<b>Tone Carrier Frequencies (Transmit and Receive)</b>	<ul style="list-style-type: none"><li>• 1200 Hz (Mark) +/- 1% Tolerance</li><li>• 2200 Hz (Space) +/- 1% Tolerance</li></ul>
<b>Transmit Output Signal Level</b>	Adjustable from 0 to +9 dBm (Factory default at +5 dBm)
<b>Input / Output Line Impedance</b>	600 ohm +/- 10%
<b>Software Adjustable Parameters</b>	<ul style="list-style-type: none"><li>• <b>Baud rate:</b> fixed at 1200 bps.</li><li>• <b>Data Format:</b> 8N1, 8N2, 8E1, 8O1, 7E1, 7O1, 7E2 and 7O2.</li><li>• <b>Software selectable for 4-wire Full Duplex:</b> Separate Transmit &amp; Receive Audio Pair or</li><li>• <b>2-wire Half Duplex:</b> Use Transmit Audio Pair for communication.</li><li>• <b>Carrier ON Control:</b> Continuous or By-Time.</li><li>• <b>Carrier Post Data ON Time:</b> T1 (0 to 999 ms).</li><li>• <b>Carrier Post Data OFF Time:</b> T2 (0 to 999 ms).</li><li>• <b>Maximum Packet Size:</b> 1-1024 Bytes.</li><li>• <b>Character Timeout Time:</b> 0 to 999 ms.</li></ul>

Please visit [www.encomwireless.com](http://www.encomwireless.com) for customer cases, testimonials and additional information on all ENCOM products and services.

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