

Product Range

E Series provides a complete range of fully compatible system elements including Remote Data Radio Modems, Base Stations, Repeaters, and associated ancillary products.



Remote data radio

- 370-518 MHz (various sub-frequency bands)
- 0.05 - 5 watt user adjustable transmitter output power
- Simplex, Half Duplex and Full Duplex (Full Duplex with ERFD450 option)
- Compact, rugged die cast alloy housing
- Multi-function LED Display



Standard Base / Repeater Station

- 370-518 MHz (various sub-frequency bands)
- 5 or 20 Watt transmitter output with 100% duty cycle
- Simplex, Half Duplex and Full Duplex Operation
- 19" 2RU rack mount
- Extensive front panel LED display
- Compact internal duplexer option



Hot Standby Base / Repeater Station

- 370-518 MHz (various sub-frequency bands)
- 5 or 20 Watt Transmitter Output Power with 100% duty cycle
- Half Duplex and Full Duplex operation
- Fully duplicated redundant configuration
- Automatic change-over
- Modular 19" 5RU rack mount
- Extensive front panel LED Display

E Series Common Features

- True 19,200 bps over-air data rates in 12.5kHz FCC Channels (also 9600 bps)
- Full specification operation from -30 to +60C
- Fully integrated digital radio, modem and data multiplexer
- 12.5 or 25 kHz channel operation
- Dual independent fully configurable data ports and separate system port
- 128bit AES encryption (export restrictions may apply)
- Compatible with legacy systems (Non Packet Digital and Bell 202 Modes)
- Integrated ChannelShare™ collision avoidance technology
- Field upgradable firmware
- VSWR protection

TVIEW+™ Network Management and Remote Diagnostics Software

- Remote fully transparent Network Management and Diagnostics
- System (multi-site) wide access from any one radio modem to any other
- Full graphical presentation (HMI)
- Full SCADA style features such as database, trending, networking
- Time/date stamped Status and Alarm logging
- Over-the-air modem reconfiguration
- ODBC compliant for user access to diagnostics database

Trio Datacom

Trio Datacom is at the forefront of the rapidly developing field of data radio communications. Using innovative and advanced technologies and processes, Trio Datacom designs and manufactures cost effective and reliable point-to-point and point-to-multipoint data radio solutions for its customers.

Thousands of data radio products, including complex systems with hundreds of elements, have been supplied for use around the world in such harsh and contrasting environments as the hot Australian desert and freezing Antarctica. With a highly motivated and dedicated team that has an extensive background in the design, manufacture and commissioning of digital radio communications products and systems, Trio Datacom has achieved an enviable reputation as a supplier of quality and high performance products and systems.

Local regulatory conditions may determine the performance and suitability of individual versions in different countries. It is the responsibility of the buyer to confirm these regulatory conditions. Performance data indicates typical values related to the described unit.

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• Export restrictions may apply

Note: Not all product features are available in every mode of operation.

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E-Series

Professional Digital Data Radio Solutions
E Series Product Overview



Introduction

The **E Series** professional range of data radio products are designed to provide complete system solutions for wireless data communications in a variety of industries and applications. Wireless technology is increasingly being adopted in the fields of Supervisory Control And Data Acquisition (SCADA), Telemetry and Distributed Information Systems (DIS). These applications require highly reliable data communications in often harsh and remote environments. **E Series** products have been developed specifically to satisfy the diverse requirements of these and many other demanding applications.

Trio Datacom E Series radio solutions can be rapidly deployed as a permanent or temporary alternative to cable based circuits. Cable based circuits can be costly to install and inflexible to alter. With the ever-increasing complexity of systems, radio offers the flexibility to adapt and grow.



Applications

Oil & Gas

- Production, Transmission (Pipeline) and Distribution

Industrial Plant Control

- Process Monitoring

Agriculture & Environment

- Weather, Pollution & Soil monitoring

Power Utilities

- Supply, distribution & network monitoring

Water Utilities

- Supply, distribution & management of fresh, irrigation & waste water

Public Information Displays

- Permanent and temporary variable signs for public transport, traffic control & special events

Transport and Traffic Management

- Public Transport (Railway signaling, Tracking)
- Parking (monitoring & ticket machines)
- Traffic Control (flow monitoring, lights & camera control)

Telecommunications

- Multi-user access fixed data networks
- System Monitoring & Control

Minerals Exploration & Mining

- Remote Sensing & Instrumentation

Security / Alarm Monitoring

- Emergency / Fire / Intrusion reporting
- Materials Handling & Storage

Features and Benefits

E Series data radios set a new standard for data radio, with a host of features that make them suitable for the most complex and demanding requirements. The E Series range of fully compatible equipment includes remote data radio modems together with base / repeater stations. The base / repeater stations are available in both standard and duplicated hot stand-by versions.

Superior performance is achieved by the fully integrated radio, modem and data multiplexer platform common to all of the E Series data radio products.

E Series products are suitable for use in Point-to-Multipoint systems and Point-to-Point links and are compatible with Trio Datacom's M Series data radio protocols.

Data Modem

The advanced technology DSP based GMSK digital data modem features error checked high data throughput speeds, giving true 19,200 bps over-the-air data rates. Two independent user configurable data ports offer maximum flexibility through:

- selectable 300 – 57.6k bps asynchronous RS-232 interfaces
- Multistream™ simultaneous data streams allows for multiple vendor devices to be present on the one radio network
- Compatible with most industry standard data protocols. E.g.: MODBUS, DNP-3, IEC 870, SEL Mirrored Bits, etc
- 128-bit AES encryption (export restrictions may apply)
- Internal repeater operation – single radio store and forward
- Channelshare™ unique integrated collision avoidance technology permits simultaneous polling and spontaneous alarm reporting operation in the same system

Radio

Rapid Tx-Rx turnaround times and greater system capacity with optimized data quality is achieved with dual independent high frequency stability digital synthesizers.

The highly flexible computer controlled radio is universally applicable with:

- user adjustable output power up to 5 Watts
- coverage of common international frequency bands
- wide ranges of user programmable operating frequencies
- designed to meet FCC and ETSI radio communication regulatory requirements

Configuration & Management

- Complete configuration of user parameters by both local connection and remotely over-the-air, provides maximum versatility and ease of adaptation to changing needs.
- A separate system port allows 'hot' configuration and diagnostics without the need to take the data radio 'off air'. This results in a constant 'in service' time.
- Flash memory resident firmware that can be field upgraded offers insurance against obsolescence (makes these units future proof).
- TVIEW+™ - transparent non intrusive Network Management and Remote Diagnostics option promotes reduced maintenance costs by allowing scheduled maintenance to prevent unexpected system down time. Exceptional network management tools including: error rate testing of any unit, channel occupancy statistics, data error statistics etc.

Environmental & Power Supply

- Compact rugged housings ensure maximum reliability together with ease of installation and serviceability.
- Full specification operation is guaranteed over the standard -30 to +60 C limit.
- Low power consumption with user controlled shutdown mode.

Ancillaries

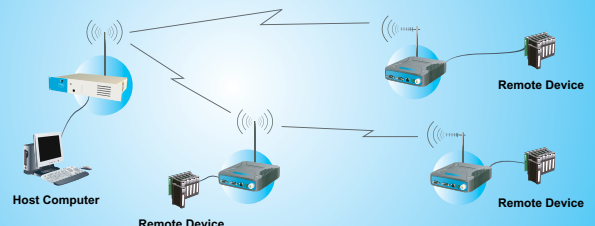
- The multi-port Stream Router / Multiplexer enhances Trio Datacom's Multistream™ feature and permits greatly increased functionality and flexibility in complex systems.

Basic System Configurations:

- Point-to-Point
- Point-to-Multipoint
- Single Radio Store and Forward
- Wide Area Networks

Typical System Diagram

Point-to-Multipoint with Store and Forward



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