

# CS-3030 ELINT/ESM Subsystem



The CS-3030 ELINT/ESM subsystem includes omni and spinning DF antennas, microwave receivers, a radar pulse analyzer and an operator workstation.

The CS-3030 ELINT/ESM subsystem consists of omni and high gain direction finding (DF) antennas, receivers, signal processors and operator workstations designed for use in demanding environments. CS-3030 subsystems may be used for ELINT or ESM applications and consist of mature, field proven equipment and software. Typical CS-3030 subsystem frequency coverage supports from 0.5 to 18 GHz, and options for higher and lower frequency coverage are available. Rockwell Collins EW-SIGINT has a wide range of COTS antenna, receiver and signal processing building blocks available to meet a wide range of surveillance, ELINT and ESM applications. The basic ELINT subsystem building blocks

are connected using industry standard Ethernet LAN interfaces for maximum system flexibility and ease of growth. The CS-3030 subsystem comes with powerful Java™ based GUI software that has been designed to provide complete control of simple or complex ELINT and ESM subsystems over an Ethernet LAN. The analysis software tools provide excellent visualization and statistical displays of collected emitter intercept data.

The CS-3030 subsystem consists of standard product equipment that has been fielded and is in production as stand alone equipment or as part of

larger systems. To meet the widest range of customer requirements, numerous models are available for antennas, RF distribution networks, microwave receivers, radar pulse analyzers and operator workstations. With the ability to connect all equipment over an Ethernet LAN, the CS-3030 subsystem equipment may be easily configured to build simple or very complex ELINT subsystems. The existing software is easily set up to work with a wide range of different equipment type system configurations. Different interfaces are available to provide flexibility to interconnect the CS-3030 subsystem to the host system.

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## SYSTEM ARCHITECTURE

- Antenna subsystem
- ELINT subsystem
- Optional receivers, demodulators, recording equipment and software

## ANTENNA SUBSYSTEM

The CS-3030 subsystem shares the omni and DF antennas by means of a flexible RF distribution. A 0.5 to 18 GHz RF Distribution Unit (RFD) is used to receive signals from the omni and the DF antennas and distribute the received signals to up to six output paths. The DF antenna frequency coverage is from 0.5 to 18+ GHz. The DF antenna is a spinning DF antenna array covering the 0.5 to 18+ GHz spectrum in three bands, using high gain, directional antennas. A millimeter-wave block downconverter is used to convert signals in the 18+ GHz band down to signals within the 1 to 18 GHz band.

## ELINT SUBSYSTEM

The ELINT subsystem consists of one or more microwave receivers, a radar pulse analyzer and an operator workstation. The ELINT subsystem uses signals received from the omni and DF antennas to manually and automatically search for, identify and locate radar emitters. The ELINT operator controls the subsystem to provide high accuracy analog and digital recording, analysis and displays. The ELINT subsystem can process signals received from the omni antenna, DF antenna or both simultaneously. One receiver is controlled to operate in a continuous sweep to produce RF spectrum displays or can be fix-tuned to produce IF Pan displays. The second receiver has a 2000 MHz instantaneous IF bandwidth for rapid signal detection and wideband processing.

## SUBSYSTEM OPTIONS

The CS-3030 ELINT/ESM subsystem can be enhanced using a wide range of signal collection, analysis and recording equipment designed for specialized surveillance requirements.

A list of typical system options includes:

- Microwave tuners and receivers in 1/2 rack, VME and VXI form factors
- IF and digital demodulators in 1/2 rack, VME and VXI form factors
- IF to baseband converters, IF and video switches, IF digitizers

## PRODUCT ATTRIBUTES

- High precision radar signal analysis
- Used in ELINT and ESM systems
- Precision direction finding
- Emitter identification using database
- Multiple operating modes
- 500, 75, 25 and 10 MHz IF bandwidths
- External LOG and FREQ video inputs
- Locally stores up to 1,000,000 PDWs
- Powerful signal analysis tools
- Processes 2.5+ million PDWs/second
- Industry standard data interfaces
- Java™ based/network friendly GUI
- Optimal gigabyte Ethernet

## SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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