

CS-6080 Wideband Digital Receiver



Rockwell Collins, streamlining your decision-making process.

Today's battlespace calls for quick, confident decisions. This requires high levels of awareness and information delivered by Rockwell Collins' proven CS-6080 Wideband Digital Receiver. By gathering signals of interest and enabling early detection of possible threats, the CS-6080 streamlines your decision-making and provides efficient intelligence gathering capabilities.

Designed with demanding Electronic Support (ES)/Electronic Support Measures (ESM)/Tactical Electronic Intelligence (ELINT) missions in mind, the CS-6080 combines a commanding combination of versatility and power, enabling optimization of signal activity capture and reporting. No waiting is required with Rockwell Collins' CS-6080 as it instantaneously reports and displays emitter signal activity across the entire 500 MHz IF bandwidth.

KEY FEATURES

- › 500 MHz instantaneous bandwidth
- › ES/ESM/Tactical ELINT applications
- › VME 64X standard backplane
- › Gigabit ethernet LAN data interface
- › Digital detection and PDW generation
- › 1 GHz IF input frequency
- › 1.5 nS PW and TOA resolution
- › Occupies 1 6U VME card slot
- › -55 to over 0 dBm measurement range
- › Flexible, powerful operator interface

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VERSATILE

The high performance CS-6080 integrates into a single 6U VME slot. It may be installed into pulse analyzers or packaged into a separate chassis to form a precise, rapid response RADAR signal detection and analysis system in a single VME chassis. The CS-6080 Wideband Digital Receiver boards can be installed into a CS-3001 or CS-3002 Pulse Analyzer for a tightly integrated ELINT/ESM system.

HOW IT WORKS

The CS-6080 reports the measured Pulse Descriptor Words (PDW), FFT spectral data and digitized intrapulse data over a dedicated Gigabit Ethernet (GigE) port. The PDW data contains digitally parameterized emitter frequency, pulse width, time of arrival (TOA) and signal amplitude for all signal activity within the 500 MHz instantaneous frequency range. Pulse detection is accomplished internally using sophisticated digital detection algorithms or can be triggered via external receivers for coordination with existing pulse analyzers.

ON THE INSIDE

Rockwell Collins' CS-6080 contains an IF input port for interfacing to standard 1 GHz tuners. The IF input is digitized by a high speed 1.333 Gbps 10-bit Analog to Digital Converter and then sent to the FPGA processing engine for digital downconversion and emitter processing. The FPGA processor also performs FFT snapshots for use in IF PAN displays giving the operator a view of the activity across the entire 500 MHz instantaneous BW. In addition, the raw digitized data is sent to the pulse detection and parameter measurement blocks resulting in a PDW packet for each detected emitter. Upon detection, the intrapulse snapshot buffer is triggered, capturing either raw IF data or magnitude and digitally discriminated frequency data.

OPERATOR INTERFACE

The CS-6080 is fully compatible with the popular SAT GUI software for system control and emitter data visualization. It sends data over an industry standard Gigabit Ethernet LAN to an external workstation for processing and situational awareness displays. The SAT software is written in Java™ so that it can operate on Windows®, Solaris™, and Linux® systems.

MECHANICAL DESCRIPTION

Rockwell Collins' CS-6080 Wideband Digital Receiver is housed in a compact single slot 6U VME 64X module that allows for operation in standard VME 64X enclosures. The power is provided over the VME bus. The IF input connector and the Gigabit Ethernet LAN port are provided on the front panel. The CS-6080 is designed for VME chassis forced air cooling and operates from 0 to over 55 degrees C.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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