



BBG-RADDs

"SMART" Converter Card

Description

The BBG-RADDs is an ISAbus compatible card which operates on the ISAbus of any PC or in a stand alone mode using an external power supply. The BBG-RADDs interfaces between the RADDs data stream and an OJ194 Radar console. The onboard processor receives the radar antenna azimuth and own ship course information from the RADDs data stream. This information is used to generate the DELTA-X, DELTA-Y, SIGN of COSINE, SIGN of SINE, RANGE MARKS, and END OF SWEEP signals needed to run the radar sweep of the OJ-194 console. The BBG-RADDs is a "SMART" interface due to its onboard processor.

During power up, the processor reads the configuration switch and fully configures and controls all functions required for operation. No ISAbus signals or cpu processing time is required. DC power is supplied by the ISAbus requiring no external power supplies.

In situations not requiring a PC interface, the BBG-RADDs operates in a "STAND-ALONE" mode. With the addition of an external +5 volt power supply, the onboard processor parses the 10M bps inputs and generates the OJ194 outputs without the requirement of a PCbus.

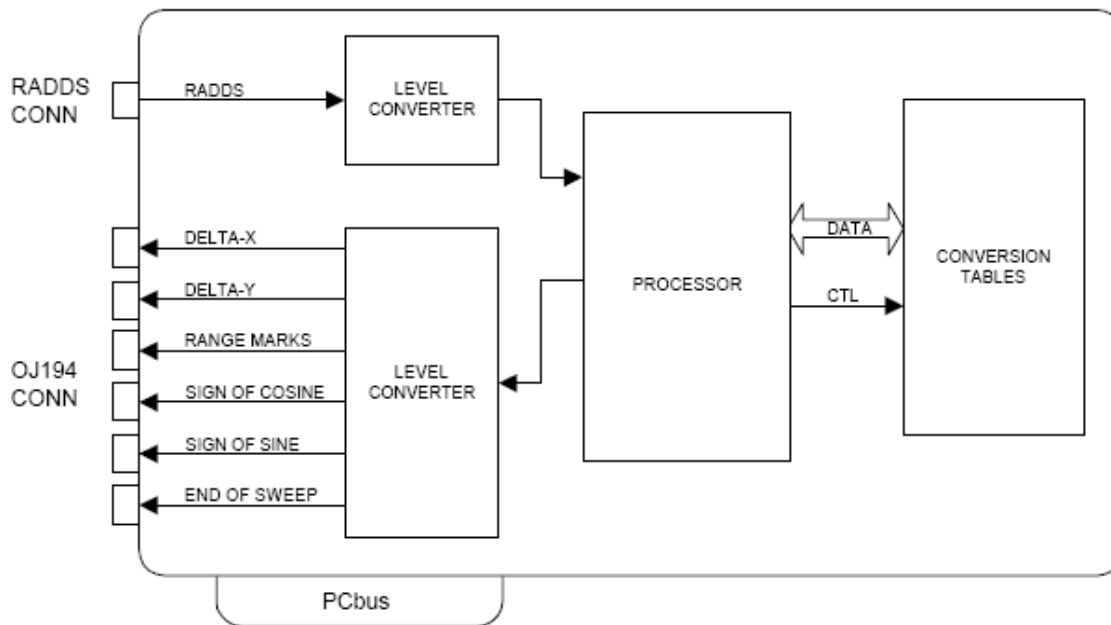
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Features

- IBM PC COMPATIBLE
- RADDs INPUT INFORMATION:
 - RADAR AZIMUTH
 - OWN SHIP HEADING
- OUTPUT SIGNALS:
 - DELTA-X
 - DELTA-Y
 - SIGN OF COSINE
 - SIGN OF SINE
 - RANGE MARKS
 - END OF SWEEP
- STAND-ALONE MODE WITH ADDITIONAL +5 POWER SUPPLY
- CUSTOM IMPLEMENTATION AVAILABLE UPON REQUEST



Chart



Overview

The BBG-RADDS is a full-size IBM PC card which interfaces between the Radar and Data Distribution System (RADDS) and an OJ194 Radar console. The BBG-RADDS operates on the ISAbus of any PC or in a stand alone mode using an external power supply. The RADDS data stream is a serial radar data network used onboard US Navy ships. Radar Antenna Azimuth and ownship heading information is formatted into structured data messages and transmitted over the RADDS data stream at 10 million bits per second.

The processor, onboard the BBG-RADDS interface, parses the serial data stream to determine the radar antenna azimuth. This information is used in a lookup memory table to generate the DELTA-X, DELTA-Y, SIGN of COSINE, SIGN of SINE, RANGE MARKS, and END OF SWEEP signals needed to run the radar sweep of the OJ-194 console.

The BBG-RADDS can, also, be used without a computer in a stand alone mode. During power up or reset, an onboard processor reads the configuration switch, configures the interface card, and provides all signals and control necessary to receive the RADDS data and generate the OJ194 signals.



Technical Specifications

BBG-RADDS SPECIFICATIONS		
PARAMETER	UNITS	VALUE
POWER SUPPLY	Volts	5
	Milliamps	250
TEMPERATURE RANGE OPERATING STORAGE	C°	0 to +50
	C°	-65 to +150
PHYSICAL CHARACTERISTICS FULL SIZE IBM PC CARD	in.	4.5 x 13.5 x 0.6
	cm.	11.4 x 34.3 x 1.5

Table 1. BBG-RADDS Specifications



CONNECTOR LIST FOR BBG-RADDS

CONNECTOR NAME: J1

I/O CONNECTOR TYPE: BNC Female

CONNECTOR MATE: BNC Male

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	RADDS IN (INPUT)	Shield	GND

CONNECTOR NAME: J2

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	DELTA-X (OUTPUT)	Shield	GND

CONNECTOR NAME: J3

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	DELTA-Y (OUTPUT)	Shield	GND



CONNECTOR NAME: J4

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	RANGE MARKS (OUTPUT)	Shield	GND

CONNECTOR NAME: J5

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	SIGN OF COSINE (OUTPUT)	Shield	GND

CONNECTOR NAME: J6

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN NO	SIGNAL
CENTER	SIGN OF SINE (OUTPUT)	Shield	GND

CONNECTOR NAME: J7

I/O CONNECTOR TYPE: 94375-RF-02759A

PIN NO	SIGNAL	PIN	SIGNAL
CENTER	END OF SWEEP (OUTPUT)	Shield	GND

