General Electric IS200VAICH1DBC

Complete Product Information

Product role

This VME processor converts Mark VI analog signals and serves two TBAI terminations. The H1D generation requires the later H1C-or-later terminal pairing, with a higher documented 20 mA load capability than the earlier VAIC generation.

Published product summary

Summary field	Published information
Product type	Analog Input/Output Processor Board
Manufacturer part number	IS200VAICH1DBC
Shipping	Swift global dispatch
Condition	New, original product
Shipping size (est.)	2cm x 18.6cm x 26.1cm
Country of Origin	USA

Native product information

Product field	Published information
Manufacturer	General Electric
Product Category	Gas Turbine Control
Spare Part Number	IS200VAICH1DBC

Native product information - continued

Product field	Published information
Weight	0.34 kg
Tariff Code	8537101190

Overview

General Electric IS200VAICH1DBC performs analog conversion, channel validation and output regulation; its diagnostics distinguish an out-of-range field signal from a failed rack path.

Conversion role	Two terminal groups feed the rack processor.
Channel health	Hardware limits and configured system limits are separate tests.
Output supervision	Current feedback and range relays participate in diagnostic checking.

Selection and adjacent choices

The H1D processing generation of IS200VAICH1DBC requires TBAIH1C-or-later or STAI, rather than the early TBAI/DTAI combination. Its increased output drive belongs to that matched pair. Retaining a compatible field termination is therefore part of selecting the processor, not a detail to be deferred until commissioning.

Operating relationship

The normal acquisition path and the faster first-four-input provision serve different dynamics. Input range is selected at the terminal board, while engineering scaling and software filtering determine the controller value. Preserve the signal-source assignment before changing a filter; a slower configured response must not be diagnosed as loss of ADC resolution.

Integration implications

Fixed hardware checks remove an input from scanning when its electrical limits are exceeded. Configurable system limits instead provide application alarm behavior. The composite L3DIAG_VAIC identifies a board-level diagnostic condition; channel detail and the appropriate reset class are needed to decide whether the problem is wiring, configuration or conversion hardware.

Technical parameters

Parameter	Value / condition
Analog input capacity	20
Analog output capacity	4
TBAI terminations per processor	2
Normal input acquisition	100 Hz
Inputs 1-4 acquisition provision	200 Hz
ADC conversion	16 bit
Effective input resolution	14 bit
DAC resolution	12 bit
Input accuracy	Better than 0.1% full scale
Output accuracy	0.5%
20 mA output load, matched generation	800 ohm
200 mA output load	50 ohm
Healthy-current threshold setting	0-21 mA
Hardware diagnostic reset	RESET_DIA
System-limit reset	RESET_SYS

Parameter applicability

H1D analog processing and TBAIH1C-or-later/STAI pairing describe the applicable family interface for the offered BC revision. Acquisition and conversion values retain their channel, configuration and load conditions.

System and supply context

This Mark VI VME processor converts analog field signals and drives current outputs through its paired terminations.

Integration boundary

The conversion board also supervises feedback and redundant-channel disagreement; field and software tests must be separated when diagnosing it.

Applications / Compatibility

Process-variable acquisition

Scale the measured signal into the controller variable while preserving the physical terminal range and transmitter calibration.

Fast pressure measurement

Allocate time-sensitive pressure inputs within the first four channels only when the documented faster acquisition and application are configured.

Redundant output regulation

Use rack-specific diagnostics with total field current to distinguish a rejected drive leg from loss of the common output circuit.

Alarm discrimination

Separate electrical hardware limits from configured operating limits before deciding whether a process excursion requires board replacement.

Precautions scope

Keep conversion configuration and the cause of each hardware/system limit with the rack replacement record.

Installation precautions

Engineering field	Interpretation / condition
Remove rack power	Follow the VME power-down procedure before inserting or removing the processor; the terminal isolation plan must also cover externally powered loops.
Restore both cable groups	Latch J3 and J4 to the recorded terminations and verify channel numbering across the group boundary.

Installation precautions - continued

Engineering field	Interpretation / condition
Preserve range and units together	Load the approved electrical-range/scaling relationship before using displayed engineering values as a calibration result.
Use the correct reset class	Clear the cause first, then distinguish RESET_DIA for latched diagnostics from RESET_SYS for configured limit signals.
Check output feedback	Compare commanded current, measured load current and the reported drive status before changing current-range relay settings.
Assess redundant deviation	Investigate a rack that departs from the voted median even when the plant variable remains stable on the other paths.

Lifecycle and replacement

Engineering field	Interpretation / condition
Processing generation	The present lifecycle phase of IS200VAICH1DBC is unconfirmed; H1D identifies the later analog-output-drive generation.
Support task	Retain the channel configuration and rack/termination pairing when replacing the conversion board; restoring the rack slot alone does not restore the analog application.
Migration impact	Moving to a different I/O platform changes configuration and termination interfaces and requires engineering review beyond a VAIC exchange.

Available Unit Details

Engineering field	Interpretation / condition
Processor reference	The offered IS200VAICH1DBC is the H1D VAIC rack assembly with its BC revision identity.

Available Unit Details - continued

Engineering field	Interpretation / condition
Separate field hardware	The connected TBAI/STAI terminations are separate components; their installed type controls the usable analog interface.
Shipping data	The user-supplied estimate is 2cm x 18.6cm x 26.1cm, 0.34 kg; the loaded channel configuration is not established by those dimensions.

Alternative Names

Variant	Complete-model spelling
1	GE IS200VAICH1DBC
2	General Electric IS200VAICH1DBC

Technical notes

Engineering field	Interpretation / condition
Limit recovery	An input removed from scanning by a hardware check must regain valid electrical conditions before a reset is interpreted as successful recovery.
Healthy-current thresholds	Min_MA_Input and Max_MA_Input allow a configured healthy 4-20 mA band within the documented 0-21 mA setting range; these are diagnostic thresholds, not a transmitter calibration span.
Front-panel interpretation	Flashing green RUN, solid red FAIL and normally-off STATUS describe processor/diagnostic state. STATUS orange calls for channel-level investigation even if a process value remains available.

Technical questions

Full-model question	Engineering answer
Why does IS200VAICH1DBC remain in RUN while an analog input stops updating?	A hardware-limit violation can remove one input from scanning without stopping the board. Read its individual diagnostic and actual electrical signal; clearing a process alarm alone will not restore an invalid input.
How can IS200VAICH1DBC distinguish a process alarm from an electrical-range fault?	Compare the fixed hardware-limit result with the enabled high/low system limits and their latch settings. Record the input signal at the terminal so the alarm source is identified before either reset is issued.
What makes a TMR deviation diagnostic on IS200VAICH1DBC useful before total channel failure?	A single signal can depart from the voted median while the remaining measurements sustain the controller value. Trend the individual rack against the vote and trace its input path instead of accepting the stable overall indication.
Why should IS200VAICH1DBC current-loop acceptance include more than the commanded value?	The processor monitors converter/output feedback, total current, shutdown relays and range relays. Compare those states with a load-connected current measurement; a correct software command does not demonstrate drive continuity.
Can a filter change on IS200VAICH1DBC be used to repair a wrong transmitter range?	Filtering changes dynamic response, while electrical selection and scaling establish amplitude. First inject a steady known signal and establish correct end points; only then evaluate the required filter response.
What should be checked if IS200VAICH1DBC reports a terminal-ID fault only on J4?	Trace the second cable group and its termination identity independently of J3. Check connector seating and the expected terminal generation before disturbing the first ten inputs or replacing both terminations.
How are latched diagnostic and system-limit signals on IS200VAICH1DBC cleared differently?	RESET_DIA addresses latched diagnostic signals and RESET_SYS addresses configured out-of-limit signals. Verify the originating condition has cleared and observe the corresponding signal, rather than repeatedly applying a general reset.
Why can IS200VAICH1DBC pass a static input test but differ during a pressure transient?	The selected channel, acquisition provision, software filter and controller processing jointly determine response. Compare the time record with the saved pressure-channel configuration using a controlled dynamic stimulus; a static span check cannot establish bandwidth.

Downloads

Document	Content and format
Technical reference	Original GEH-6421H system-architecture pages for the analog processing and termination path. PDF, 3 pages.
Engineering guide	Apter Power field guide: conversion settings, diagnostic reset classes and redundant drift. PDF, 2 pages.

What happens after you enquire

Engineering field	Interpretation / condition
1 Review your reference	Send the full marking, quantity and label photos. We review the item and any version details that need clarification.
2 Confirm the offer	Check the quoted reference, condition, included items and expected dispatch date before approving your order.
3 Arrange dispatch	Confirm delivery details and receive the tracking number when it becomes available.

Ordering checks

Engineering field	Interpretation / condition
Match the complete marking	Include IS200VAICH1DBC and every hardware or assembly-revision marking visible on the item. Keep the exact reference on your enquiry and quotation.
Check the offered item before ordering	Request available label and interface photos. Have your maintenance team compare the offered IS200VAICH1DBC reference with the installed equipment and applicable General Electric documentation.

Sourcing and service information

Engineering field	Interpretation / condition
Title-area support	Sourcing Support; 12-Month Warranty

Sourcing and service information - continued

Engineering field	Interpretation / condition
Dispatch Confirmation	Quantity and dispatch date confirmed in quotation.
Dedicated Manager	Personalized one-to-one VIP service
ISO 9001:2015 Certified	Trusted quality management
Warranty Policy	Review the applicable warranty coverage and claim process.
Return Notice	Obtain return approval before sending an item back.
Shipping Method	Worldwide shipping; freight and timing confirmed in quotation.
Parts Availability	Quantity, dispatch date and lead-time start confirmed in quotation.

Technical basis

GE Mark VI System Guide GEH-6421H, Volume I; GEH-6421M, Volume II

Related platform references - separate selection review

General Electric IS200TRTDH1CC	Resistance Temperature Detector Terminal Board
General Electric IS200VRTDH1DAC	RTD Input Processor Board

Engineering contact

Discuss the complete unit and installed application with Apter Power.
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