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Data Sheet

August 15, 2026

GE FANUC / ICS

GE Fanuc / ICS ICS-554B-4-MN 4-Channel, 14-Bit, 105 MHz PMC ADC Board with Down-Converters and Xilinx FPGA

GE Fanuc / ICS Data Acquisition Systems (DAQ). Bandwidth: 10 MHz at $F_s=100$ MHz (four-channel), Bandwidth: 4.9 kHz at $F_s=100$ MHz.



MODEL

**GE Fanuc / ICS
ICS-554B-4-MN**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

ICS-554B-4-MN

LISTING

<https://aumictechlabs.com/products/ics-554b-4-mn-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The GE Fanuc/ICS ICS-554B-4-MN is a 4-channel, 14-bit PMC ADC board delivering 105 MHz simultaneous sampling per channel with integrated digital down-converters and user-programmable Xilinx FPGA. The board combines high-resolution analog capture, flexible multichannel signal processing, and onboard computing resources for demanding radar, communications, and test applications requiring both wideband and narrowband signal analysis. Technical Specifications Analog-to-Digital Conversion Four 14-bit ADCs at 105 MHz maximum sampling rate per channel Signal-to-noise ratio (SNR) >72 dB Spurious-free dynamic range (SFDR) >85 dB Full-scale input: +5.5 dBm (≈ 1.2 Vpp) into 50 Ω Transformer or DC input coupling options Digital Down-Conversion (DDC) Four optional Graychip GC4016 quad DDCs Simultaneous down-conversion of up to 16 arbitrary signal bands Maximum output bandwidth: 10 MHz at

Fs=100 MHz (four-channel); 5 MHz (eight-channel); 2.5 MHz (16-channel) Minimum output bandwidth: 4.9 kHz at Fs=100 MHz, 16-channel configuration Signal Processing 1 million gate Xilinx FPGA (XC2V1000) 1 MByte onboard memory: two independent 0.5 MByte FIFOs for simultaneous wideband and narrowband operation All 64 Pn4 user I/O signals routed to FPGA with LVTTTL support Clocking & Synchronization Internal 100 MHz crystal (ICS-554B) External clock and trigger support Coherent sampling across single channels, multiple channels, and multiple boards Interfaces PCI 2.2 compatible with 64-bit, 66 MHz DMA Little-endian data format; big-endian conversion supported via QL5064 chip Uncommitted Pn4 user I/O PMC interface Power 1.0–2.5 A @ +5 V Up to 1.5 A @ +3.3 V 0.3 A @ ±12 V (ICS-554D only) Key Features Four simultaneous 14-bit ADC channels at 105 MHz Multiband DDC processing: up to 16 independent FDM signals User-programmable FPGA for custom signal conditioning and real-time processing Dual-FIFO architecture for concurrent wideband capture and narrowband analysis PMC form factor for embedded and legacy PCI systems Typical Applications Radar signal intercept and analysis Multichannel communications monitoring Software-defined radio development Simultaneous multiband signal acquisition and processing Compatibility & Integration PCI 2.2 interface ensures compatibility with standard PCI backplanes. Fast 64-bit DMA enables high-throughput data transfer. FPGA resources are largely available for user logic implementation, accommodating custom algorithms and signal processing workflows.

ICS554B4MN Characteristics / Specifications

PARAMETER	VALUE
Model	ICS-554B-4-MN
Base Model	ICS-554B
Instrument Type	4 channel PMC ADC with DDC and FPGA
Channel Count	4
Adc Resolution	14 bits
Maximum Sample Rate Per Channel	105 MHz
Simultaneous Sampling	yes all channels
Signal To Noise Ratio	greater than 72 dB
Spurious Free Dynamic Range	greater than 85 dB
Ddc Devices	4 x Graychip GC4016
Maximum Downconverted Bands	16
Fpga Size	1 million gate Xilinx XC2V1000
Onboard Memory	1 MByte
Fifo Organization	two independent 0.5 MByte FIFOs
Pci Interface	PCI 2.2 64 bit 66 MHz DMA
Pn4 User Io Signals	64 routed to FPGA
Pn4 Signaling	LVTTL (LVTTL only on B)
Clocking	internal or external clock and trigger
Coherent Sampling	single channel, multi channel, multi board
Form Factor	PMC
Carrier Compatibility	VME PCI CompactPCI PMC carriers
Ddc Option Code	MN includes DDCs
Available Channel Builds	1, 2, or 4 channel versions
Fpga Part	XC2V1000
Manufacturer	ICS / GE Fanuc / Abaco

ICS554B4MN Specifications

PARAMETER	VALUE
Applications	Software radio, radar beamforming, and coherent multi-board acquisition with simultaneous narrowband DDC and wideband paths.
Key Features	MN build includes four GC4016 DDCs
User FPGA left largely free for custom DSP	64 Pn4 user I/O signals to the FPGA
Technical Specifications	Model: ICS-554B-4-MN
Notes	From Abaco/GE ICS-554 family product literature for ICS-554B. The -4-MN suffix is the 4-channel build with GC4016 down-converters.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.