

Product Line Card

Comprehensive portfolio of mixed-signal ICs for innovative applications

As a specialist for mixed-signal integrated circuits and system-on-chip solutions, iC-Haus has been designing and manufacturing application-specific standard products (ASSPs) and custom ASICs for more than 30 years.

We supply industrial, medical, and automotive applications with innovative, reliable, and FMEA-approved integrated circuits and microsystems.



Product Line Card

I/O iCs

I/O Circuits

for industrial sensors, control panels, PLC

Package

iC-GD	Universal IO-Interface	QFN38-5×7
iC-GF	IO-Link Transceiver for IO-Link Slaves	QFN24-4×4
iC-GFP	IO-Link Slave Transceiver	QFN24-4×4
iC-JRX	2x4 Bidirectional 24V High-Side Driver with μ C Interface	PLCC44
iC-JX	4x4 Bidirectional 24V High-Side Driver with Load Diagnosis and μ C Interface	MQFP52
iC-MD	48-Bit Quadrature Counter with RS422 Receiver and SPI and BiSS Interface	TSSOP20

Interface iCs · BiSS®

for position measurement, motor feedback and drive systems, safety relevant systems, multiple sensor systems

Package

iC-MB3	BiSS Interface Master (1 channel/3 slaves)	TSSOP24
iC-MB4	BiSS Interface Master (2 channel/8 slaves, RS422 transceiver, dual SPI)	TSSOP24, QFN28-5×5
iC-MCB	SPI-to-BiSS Slave Bridge with RS-422 Transceiver	QFN16-3×3
iC-MCW	BiSS Watchdog for RS422 with SPI	QFN24-4×4

Power Management iCs

Power Management iCs

for industrial sensors, rotary and linear encoders

Package

iC-DC	Programmable Dual 2.5/3.3/5V Buck/Boost SMPS	QFN24-4×
iC-WD	Switched-Mode Dual 5V Regulator for 8V to 36V	SO8, SO8-TP, (DFN10-4×4)
iC-WDA	Switched-Mode Dual 3.3V Regulator for 8V to 36V	DFN10-4×4
iC-WDB	Switched-Mode 3.3V (200mA) and 5V Regulators for 8V to 36V	DFN10-4×4
iC-WDC	Switched-Mode 3.3V and 5V (200mA) Regulators for 8V to 36V	DFN10-4×4

Sensor iCs

Optical

for photoelectric sensors, identification systems, scanners, spectroscopy, machine vision systems

Package

iC-LA	64×1 Linear Image Sensor with Bidir. Shift and Extendable Data I/O (12.8mm, 127 dpi)	bare die, COB
iC-LFH Series	1024/960/640/320×1 High Resolution CMOS Linear Image Sensors (2000 dpi)	optoBGA LFHxC
iC-LF1401	128×1 Linear Image Sensor with Electronic Shutter Function (8.1 mm, 400 dpi)	optoLGA LF2C, optoBGA LF3C
iC-LFL1402	256×1 Gap-Free Linear Image Sensor with Electronic Shutter Function (16.2mm, 400 dpi)	optoBGA LFL1C
iC-LFM	64×1 Linear Image Sensor with Electronic Shutter Function (4 mm, 400 dpi)	optoBGA LFM1C
iC-LFS	32×1 Linear Image Sensor with Electronic Shutter Function (2 mm, 400 dpi)	cDFN10-4×4
iC-LO	Smart Triangulation Sensor IC	oBGA LO1C
iC-LQNP	Pulse and AC Light Sensor with Complementary Outputs	TO18-4L/F, oBGA LQ1C, cDFN6
iC-OC	Dual Integrating Opto Sensor with Shift Register for Chain Connection	bare die, COB
iC-OD, iC-ODL	Optical Position-Sensitive Detector (2.6/8.4 mm PSD) with Ambient Light Suppression	oLGA OD4C/ODL2C, cDFN10-4×4

Magnetic

for linear position sensing, gear tooth sensing, length measurement

Package

iC-MJ	Low-Power Hall Sensor	DFN8-3×3
iC-MZ	Differential Hall Switch and Gear-Tooth Sensor with Line Driver	DFN10-4×4
iC-SM2L	AMR Linear Position Sensor (Pitch: 2 mm)	LGA SM2C
iC-SM5L	AMR Linear Position Sensor (Pitch: 5 mm)	LGA SM2C

Product Line Card

Linear Functions

Linear Functions Package

for signal conditioners, measurement amplifiers, receivers for 24 V control systems, test equipment, analog computation and modulators, demodulators, voltage-controlled amplifiers

iC-BM	Quad Four-Quadrant Analog Multiplier (MLT04 compatible)	SO18W
iC-HO	General Purpose Sensor Interface	QFN32 5×5

Safety Light Curtain iCs

Transmitters

for machine safeguarding systems (IEC 61496-1, ESPE), measuring light curtains

Package

iC-NL	Light-Grid Pulse Driver with Modulation Input	SO8
iC-NT	Light-Grid Pulse Driver for Light Curtains	SO8, MSOP8
iC-NX	8-Channel Light-Grid Pulse Driver	TSSOP16
iC-NXL	8-Channel Light-Grid Pulse Driver with Modulation Input	TSSOP16

Receivers

for machine safeguarding systems (IEC 61496-1, ESPE), measuring light curtains

Package

iC-LK	Light-Grid Pulse Receiver with Integrated Photodiode	cQFN16-4×4
iC-ME	2-Channel Light-Grid Pulse Receiver	DFN10-4×4
iC-NE	Light-Grid Pulse Receiver for Light Curtains	SO8, MSOP8
iC-NK	Light-Grid Pulse Receiver	SO8

Encoder iCs · Silicon for Motion®

Optical Encoder iCs

for motion control, drive systems, robotics, optical encoders (incremental, singleturn, multiturn)

Package

iC-LGC	21-Bit Optical Position Encoder with Serial/Parallel and Sin/Cos Output	BLCC LG5C, oBGA LG21C, COB
iC-LNB	18-Bit Optical Position Encoder with SPI, Serial/Parallel and FlexCount® Output	optoBGA LNB2C, optoQFN38-7×5
iC-LNG	16-Bit Optical Position Encoder with SPI and Serial/Parallel Output	optoBGA LNB2C, optoQFN38-7×5
iC-LSB	8-Channel Active Photosensor Array	optoBGA LS2C
iC-LSC	12-Channel Active Photosensor Array	optoBGA LS2C, optoQFN32-5×5
iC-LSHB	Incremental Photosensor Array	optoBGA LSH2C, optoQFN32-5×5
iC-LSHC	3-Channel Sin/Cos Photosensor Array	optoBGA LSH2C, optoQFN32-5×5
iC-LTA	6-Channel Incremental Opto Encoder	optoBGA LSH2C, optoQFN32-5×5
iC-LV	5-Bit Optical Encoder with Cascadable Serial Interface (SSI)	BLCC LV4C, COB
iC-OF	3-Bit Optical Encoder	BLCC OF3C, optoBGA OF4C
iC-OG	8-Bit Differential Scanning Optical Encoder with LED Control	BLCC OGC
iC-PD3948	5-Channel Phased Array Sine Encoder (Ø 39 mm, 2048 PPR)	optoBGA LSH2C, optoQFN32-5×5
iC-PG	Miniature Reflective Optical Absolute Encoder	oDFN8-3×3
iC-PN, iC-PNH Series	Phased Array Nonius Encoder IC Series (Ø 26, Ø 33, Ø 39 mm)	optoBGA LSH2C, optoQFN32-5×5
iC-PNH3348	EncoderBlue® Phased Array Nonius Encoder	optoQFN32-5×5
iC-PR Series	EncoderBlue® 3-Ch. Reflective Optical Encoder IC Series	optoQFN24-4×4
iC-PT H-Series	6-Ch. Phased Array Opto Encoder IC Series (Ø 26, Ø 33, Ø 39 mm); EncoderBlue®	optoQFN32-5×5
iC-PT Series	6-Ch. Phased Array Opto Encoder IC Series (Ø 33 mm)	optoQFN32-5×5
iC-PX Series	EncoderBlue® 2-Ch. Reflective Optical Encoder IC Series	optoDFN8-3×3
iC-PZ	High-Resolution Optical Reflective Absolute Encoder	oQFN32-5×5
iC-RZ Series	Optical Twin-Scan Encoder IC Series with Safety Channel (Ø 26, Ø 42 mm)	oQFN38-7×5
iC-WG	14-Bit Differential Scanning Optical Encoder iC	BLCC WGC

Product Line Card

Magnetic Encoder iCs

for linear and angular encoders, position measurement systems, robotics, motion and vehicle control

Package

iC-MA	8-Bit Angular Hall Encoder, Cascadable	DFN10-4×4
iC-MA3	Angular Hall Sensor with Sin/Cos Output, Cascadable	QFN16-4×4
iC-MH, iC-MH8	12-Bit Angular Hall Encoder	QFN28-5×5
iC-MH16	12-Bit Angular Hall Encoder, FlexCount®	QFN28-5×5
iC-MHA	Angular Hall Encoder with Sin/Cos Outputs	QFN28-5×5
iC-MHL Series	12-Bit Linear/Rotary Position Hall Encoder – pole width 1.00, 2.00 mm	TSSOP20 (QFN32-5×5)
iC-MHM	14-Bit Absolute Angle Hall Encoder	QFN28-5×5
iC-ML	8-Bit Linear Position Hall Encoder, Cascadable – pole width 2.56 mm	TSSOP20
iC-MP	8-Bit Hall Encoder iC with Ratiometric Output	DFN10-4×4
iC-MU Series	Magnetic Off-Axis Absolute Position Encoder – pole width 1.28, 1.50, 2.00 mm	DFN16-5×5, QFN48-7×7
iC-MV	8-Bit Hall Encoder with Cascadable Serial Interface	QFN16-3×3
iC-PV	Battery-Buffered Hall Multiturn Encoder	QFN16-3×3
iC-PVL	Linear/Off-Axis Battery-Buffered Hall Multiturn Encoder	QFN16-4×4
iC-TW11	10-Bit Ultra Low Power Magnetic Absolute Rotary Encoder	QFN16-4×4

Interpolators

for angle sensors, rotary encoders, linear scales, digital gauges, PLC/IPC interface boards, servo controls

Package

iC-MG	8-Bit Sin/Cos Interpolation iC with RS422 Driver	TSSOP20
iC-MN	3-Channel, Simultaneous Sampling 13-Bit Sin/Cos Interpolation IC with Nonius Calculation	QFN48-7×7
iC-MNF	26-Bit Nonius Encoder with 3-Ch. Sampling 14-bit Sin/D Interpolation	QFN48-7×7
iC-MQ	Programmable 9-Bit Sin/Cos Interpolation IC with Fail-Safe RS422 Driver	TSSOP20
iC-MR3	13-Bit S&H Sin/Cos Interpolator with 2.5V/5V Controller Interfaces	QFN48-7×7
iC-NG	8-Bit Sine-to-Digital Converter Processor with Waveform Adaptation	SO28, SSOP28
iC-NQC	13-Bit Signal Conditioning Interpolator with BiSS C Interface	TSSOP20
iC-NQI	13-Bit Signal Conditioning Interpolator with 2-Wire Interface	TSSOP20
iC-NV, iC-NVH	6-Bit Sin/Cos Flash Converter with Pin-Selectable Interpolation to ×16 (H: half-cycle index)	TSSOP20
iC-PI	Programmable 12-Bit Sin/Cos Interpolation IC with RS422 Driver	TSSOP20
iC-TW2	Programmable 8-Bit Sin/Cos Interpolation IC with EEPROM	QFN24-4×4
iC-TW8	16-Bit Sin/Cos Interpolator with Automatic Calibration	QFN48-7×7
iC-TW28	10-Bit Low Latency Sin/Cos Interpolator with Auto-Calib. and Line Driver	QFN32-5×5
iC-TW29	26-Bit Encoder Processor with Interpolator and BiSS Interface	QFN32-5×5

Signal Conditioning and Monitoring

for linear encoders, incremental encoders, optical position sensors, magnetic position sensors

Package

iC-MSA	Sin/Cos Sensor Signal Conditioner with AGC and 1 Vpp Line Driver	TSSOP20-TP
iC-MSB SAFETY	Sin/Cos Sensor Signal Conditioner with Fail-Safe 1 Vpp Line Driver	TSSOP20, TSSOP20-TP
iC-MSB2	Sin/Cos Sensor Signal Conditioner/Multiplexer with Fail-Safe 1 Vpp Line Driver	TSSOP20
iC-MSC	Sin/Cos Sensor Signal Conditioner with Fail-Safe 1 Vpp Line Driver	TSSOP20-TP, QFN32-5×5
iC-PE Series	XMR Sensor Multiplexer-Amplifier	QFN16-3×3
iC-RC1000	Sin/Cos Signal Safety Monitor IC	MSOP10-3×3
iC-TW3	Automatic Signal Conditioner w. LUT Temp. Comp. and 1 Vpp (100 Ohm)/2Vpp Outputs	QFN32-5×5
iC-WT	3-Channel Photodiode Amplifier-Comparator with LED Controller	SO16N

Product Line Card

Laser Diode and LED Drivers

Laser Diode and LED Drivers		Package
for industrial sensors, barcode scanners, laser leveling, laser printers, copiers, laser pointers		
iC-HB	Triple 155MHz Laser Switch with LVDS Inputs	QFN24-4×4
iC-HG	200MHz Laser Switch for up to 9A (pulsed)	QFN28-5×5
iC-HGP	200MHz High-Side Laser Switch for up to 9A (pulsed)	QFN32-5×5
iC-HK, iC-HKB	155MHz Dual Channel Spike-Free Laser Switch	SO8N-TP, MSOP8-TP
iC-HN Series	Short Pulse 1.4/2.8A Laser Driver	DFN8-3×3
iC-HS Series	Ultra-Short-Pulse Laser Driver for 100 ps up to 5 ns with 1 ps Resolution	QFN16-3×3, QFN24-4×4
iC-HT	Dual CW N/M-Type Laser Diode Driver with SPI/I2C Controller for up to 1.5A	QFN28-5×5
iC-HTG	Power CW Laser Diode Driver	QFN24-4×4
iC-HTP	Dual CW P-Type Laser Diode Driver with SPI/I2C Controller for up to 1.5A	QFN28-5×5
iC-NZ	Fail-Safe Laser Diode Driver for CW and Pulse Operation up to 155MHz	QFN28-5×5
iC-NZN, iC-NZP	N-Type/P-Type Laser Diode Driver with APC and ACC	QFN24-4×4
iC-WJ, iC-WJZ	Laser Diode Driver for CW and Pulse Operation up to 300 kHz	SO8, MSOP8
iC-WJB	Laser Diode Driver for Battery Supplies of 2.7 to 6V	SO8, MSOP8
iC-WK, iC-WKL	Universal Laser Saver® for CW Operation of 2.4 to 6V	SO8, MSOP8
iC-WKM	CW Laser Diode Driver, Optimized for (Blue) M-Type Laser Diodes	SO8N-TP, DFN10-4×4
iC-WKN	CW Laser Diode Driver, Optimized for N-Type Laser Diodes	SO8N-TP, DFN10-4×4
iC-WKP	CW Laser Diode Driver, Optimized for P-Type Laser Diodes	SO8N-TP, DFN10-4×4

Driver iCs

Relay/Solenoid Drivers		Package
for relays, magnetic valves, photovoltaic modules		
iC-GE	PWM Relay/Solenoid Driver for a Wide Operating Voltage Range (1A)	QFN16-4×4
iC-GE100	PWM Relay/Solenoid Driver (100mA)	DFN8-3×3
iC-JE	Power-Saving PWM Relay/Solenoid Driver	SO8

24V and 5V Line Drivers		Package
for factory automation, industrial controls, position sensors		
iC-DL	3-Channel Differential Line Driver with Integrated Impedance Adaptation	QFN28-5×5
iC-HD2	Quad Differential Line Driver, Pin-Compatible with xx2068	TSSOP20, TSSOP20-TP
iC-HD7	Quad Differential Line Driver, Pin-Compatible with xx7272 and 26xx31	SO16N
iC-HE	Triple Differential Line Driver	SO14N
iC-HF	6-Channel Encoder Link, RS422 Driver/Receiver	QFN32-5×5
iC-HX	3-Channel Differential Line Driver with Reduced Power Dissipation	QFN28-5×5
iC-VX	3-Channel Differential Line Driver with Complementary 24V Outputs	SO16W, TSSOP20
iC-WE	3-Channel 75Ohm Line Driver for RS422 and 24V Applications	SO16W, SO20W, TSSOP20-TP

Output Stages		Package
for proximity sensors, light barriers, relays, microcontroller applications		
iC-DN	200mA Low-Side Switch for 4V to 36V with Input/Output Decoupling	SOT23-6L, SC59-3L
iC-DP	200mA High-Side Switch and Level Shift for 4V to 36V with Input/Output Decoupling	SOT23-6L, SC59-3L
iC-DX, iC-DX3	Digital Sensor Output Driver (150mA)	DFN6-2×2
iC-DXC, iC-DXC3	Digital Sensor Output Driver (200mA) with IO-Link Feedback Channel	DFN8-3×3
iC-MF Series	8-Fold Fail-Safe N-FET/P-FET Drivers with Level Shift of 5V (MFL) up to 40V (MFN, MFP)	QFN24-4×4

LEDs

LEDs		Package
for optical encoders		
iC-TL46	Blue 460 nm LED with Lens for High-Resolution Optical Encoders	TO46-2L1, BLCC SD1C
iC-TL6	Masked Point Source 640 nm LED	BLCC2 1206
iC-TL85	Infrared 850 nm LED with Lens or Flat Window for High-Resolution Optical Encoders	TO46-2L1, TO46-2F1
iC-SD85	Infrared 850 nm LED with Lens or Flat Glass for High-Resolution Optical Encoders	BLCC SD1C, oLGA SD2C, BLCC SD3C
iC-SG85	Infrared 850 nm LED with Plastic Lens for High-Quality Large Area Illumination in High-Resolution Optical Encoders	BLCC SG1C, BLCC SG4C
iC-SN85	Infrared 850 nm LED with Plastic Lens for High-Quality Large Area Illumination	BLCC SN1C, BLCC SN2C

Tools

Adapters and Instruments

MB3U	BiSS (SSI)-to-PC Adapter (USB)
MB3U-I2C	BiSS (SSI) and I2C-to-PC Adapter (USB)
MB4U	High-Performance BiSS (SSI)-to-PC USB Adapter
MB5U	High Performance Galvanic Isolated BiSS (SSI)-to-PC USB Adapter
SinCosYzer 2	Sine Encoder Signal Acquisition with Graphical Analysis

Laser Tools

iC149	Programmable ns-Pulse Generator
iC212	High-Speed Photoreceiver with Si-PIN Photodiode
iC212NIR	High-Speed Photoreceiver for Near Infrared
iC213	Programmable Oscillator Module (40 kHz to 1.4 GHz)
iC227	Dual 11 GHz Sampling Oscilloscope
iC245	Programmable Pulse-Width Modifier (250 ps to 10 ns in steps of 40 ps)

Encoder Evaluation Boards

MU1C	Off-Axis Motor Feedback Module
MU3C	Off-Axis Battery-Buffered Hall Multiturn Encoder Evaluation Board
PV1M	On-Axis Battery-Buffered Hall Multiturn Encoder Evaluation Board

Let iC-Haus act as your ASIC design and production partner...

For more details on how iC-Haus can help you realize the full potential of your projects – on time, on budget, and with every assurance of maximum quality, reliability, and performance – feel free to contact us by phone under +49 6135 92920. You can also send us an Email request to info@ichaus.de or visit us online on www.ichaus.com.

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