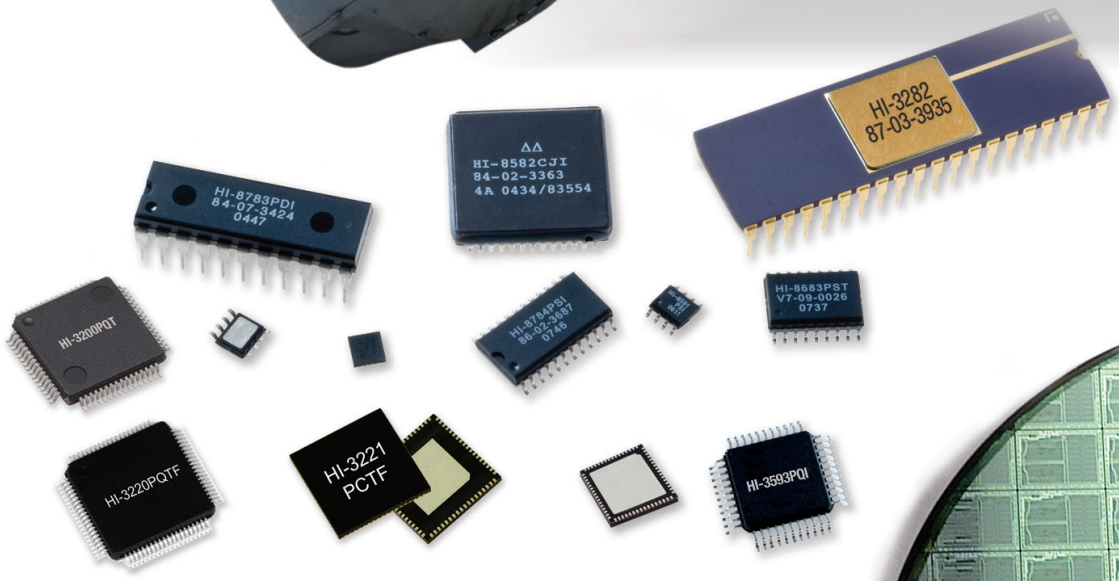
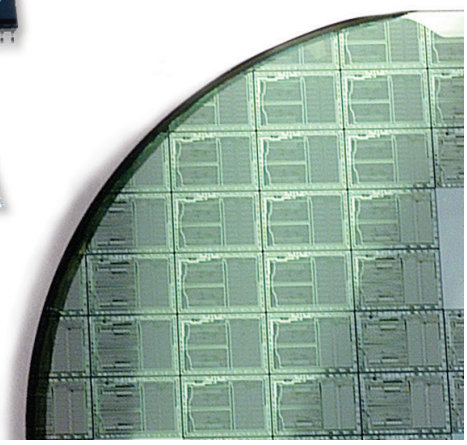
ARINC 429 PRODUCT SELECTOR GUIDE





HOLT INC.
INTEGRATED CIRCUITS

ARINC 429 ICs

HOLT INTEGRATED CIRCUITS INC.

Part Number[1]	Tx/Rx Channels	Tx FIFO (Words)	Rx FIFO (Words)	Label Filter Depth	Host Interface	Data Sheet	Integrated Line Driver	Integrated Line Receiver(s)	Test Mode[2]	Tri State Output	Internal Lightning Protection[7]	Supply Voltages		Packages[3, 4]
												Digital	Line Driver	
SPI Interface Protocol ICs														
HI-35930	1/2	32	32	256	SPI Serial	HI-35930	1	2	Y	N	Y	3.3V	3.3V	1, 2
HI-3593	1/2	32	32	256	SPI Serial	HI-3593	1	2	Y	N	N	3.3V	3.3V	1, 2
HI-3220	8/16	32K Bytes RAM		256	40MHz SPI Serial	HI-3220	-	16	Y	Y	N	3.3V	-	24
HI-3221	8/16	32K Bytes RAM		256	40MHz SPI Serial		-	16	Y	Y	N	3.3V	-	25
HI-3222	4/8	32K Bytes RAM		256	40MHz SPI Serial		-	8	Y	Y	N	3.3V	-	2
HI-3210	4/8	32K Bytes RAM		256	SPI Serial	HI-3210	-	-	Y	N	N	3.3V	-	3, 19
HI-3585	1/1	32	32	256	SPI Serial	HI-3585	1	1	Y	N	N	3.3V OR 5V	± 5V	1, 2
HI-3587	1/0	32	-	-	SPI Serial	HI-3587	1	-	N	N	N	3.3V OR 5V	± 5V	1, 2
HI-3588	0/1	-	32	256	SPI Serial	HI-3588	-	1	N	N	N	3.3V OR 5V	-	1, 2
HI-3596-40	1/8	-	4	16	SPI Serial	HI-3598	-	8	Y	N	N	3.3V OR 5V	-	2
HI-3597-40	1/7	-	4	16	SPI Serial	HI-3598	-	7	Y	N	N	3.3V OR 5V	-	5
HI-3598	1/8	-	4	16	SPI Serial	HI-3598	-	8	Y	N	N	3.3V OR 5V	-	3, 4
HI-3599-40	0/8	-	4	16	SPI Serial	HI-3598	-	8	Y	N	N	3.3V OR 5V	-	2, 5
Parallel Interface Protocol ICs														
HI-3583A-15	1/2	32	32	16	16-bit-Parallel	HI-3583A	1	2	Y	N	N	3.3V	± 10V	3, 4, 6
HI-3584A-15	1/2	32	32	16	16-bit-Parallel	HI-3584A	-	2	Y	N	N	3.3V	-	3, 4, 6
HI-8583-10	1/2	32	32	16	16-bit-Parallel	HI-8583	1	2	Y	N	N	5V	± 10V	4, 6
HI-8584-10	1/2	32	32	16	16-bit-Parallel	HI-8584	-	2	Y	N	N	5V	-	4, 6
ARINC 429 / ARINC 717 Transceiver														
HI-3718	1/1	-	-	-	-	HI-3718	1	1	N	Y	N	3.3V	-	8
Line Drivers														
HI-8597	1/0	-	-	-	-	HI-8597	1	-	N	Y	Y	-	+3.3V	23
HI-8596	1/0	-	-	-	-	HI-8596	1	-	N	Y	N	-	+3.3V	14, 15
HI-8592	1/0	-	-	-	-	HI-8592	1	-	N	Y	N	-	+5V	12, 13
HI-8594	1/0	-	-	-	-		1	-	N	Y	N	-	± 5V	9, 11
HI-8571	1/0	-	-	-	-	HI-8570	1	-	N	N	N	-	± 5V	9, 10, 11
HI-8586	1/0	-	-	-	-	HI-8585	1	-	N	N	N	-	± 12V or ± 15V	9, 10, 11, 18
HI-8500/1/2	1/0	-	-	-	-	HI-8500	1	-	N	N	N	-	± 9.5V or ± 16.5V	9, 11
HI-8503/4/5	1/0	-	-	-	-		1	-	N	Y[8]	N	-	± 9.5V or ± 16.5V	9, 11
HI-8506/7	1/0	-	-	-	-		1	-	N	Y[8]	N	-	± 9.5V or ± 16.5V	26
Line Receivers														
HI-8450	0/1	-	-	-	-	HI-8450	-	1	Y	Y	Y	3.3V or 5V	-	18
HI-8451	0/1	-	-	-	-		-	1	Y	N	Y	3.3V or 5V	-	18
HI-8454	0/4	-	-	-	-		-	4	Y	N	Y	3.3V or 5V	-	7, 16
HI-8455	0/4	-	-	-	-		-	4	N	N	Y	3.3V or 5V	-	16
HI-8460	0/1	-	-	-	-	HI-8460[9]	-	1	Y	N	Y	3.3V or 5V	-	15, 18
HI-8448-10	0/8	-	-	-	-	HI-8444	-	8	Y	N	N	3.3V or 5V	-	1, 2, 17
HI-8458	0/8	-	-	-	-	HI-8458	-	8	Y	N	Y	3.3V or 5V	-	1, 2, 17
HI-8588-10	0/1	-	-	-	-	HI-8588	-	1	Y	N	N	5V	-	10, 11, 18
HI-8591-40	0/1	-	-	-	-	HI-8591	-	1	Y	N	N	3.3V or 5V	-	10, 11, 18

IC PACKAGES

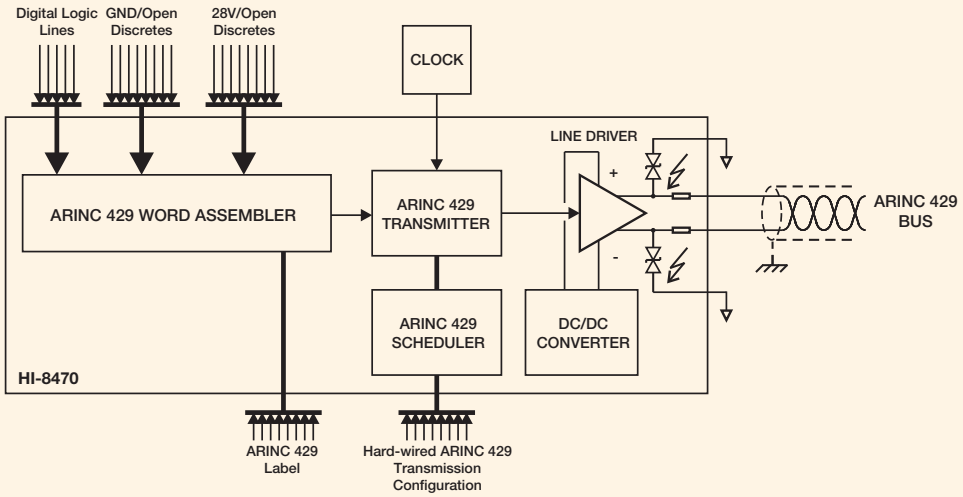
HOLT INC. INTEGRATED CIRCUITS

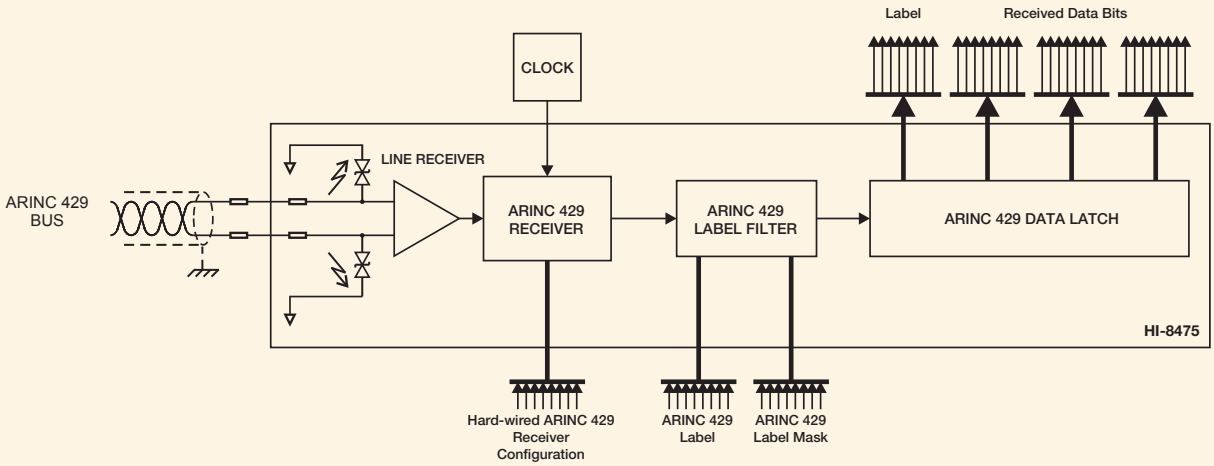
		Package	Material	SMD	Operating Temperature Range[5]	Dimensions in Packages[6] (mm)
1		QFP-44	Plastic	Y	I, T, M	0.52 x 0.52 x 0.106 (13.2 x 13.2 x 2.7)
2		QFN-44	Plastic	Y	I, T, M	0.276x 0.276x 0.039 (7.0 x 7.0 x 1.0)
3		QFN-64	Plastic	Y	I, T, M	0.354 x 0.354 x 0.039 (9.0 x 9.0 x 1.0
4		QFP-52	Plastic	Y	I, T, M	0.52 x 0.52 x 0.106 (13.2 x 13.2 x 2.7)
5		SOIC-24 (Wide Body)	Plastic	Y	I, T, M	0.607 x 0.407 x 0.10 (15.392 x 10.325 x 2.6)
6		CerQuad-52 (J-Lead)	Ceramic	Y	I, T, M	0.788 x 0.788 x 0.19 (20.0 x 20.0 x 4.826)
7		QFN-32	Plastic	Y	I, T, M	0.197 x 0.197 x 0.039 (5.0 x 5.0 x 1.0)
8		QFP-32	Plastic	Y	I, T, M	0.354 x 0.354 x 0.047 (9.0 x 9.0 x 1.2)
9		ESOIC-8	Plastic	Y	I, T, M	0.193 x 0.236 x 0.052 (4.9 x 6.0 x 1.325)
10		PDIP-8	Plastic	N	I, T, M	0.385 x 0.300 x 0.160 (9.799 x 7.620 x 4.064)
11		CERDIP-8	Plastic	N	I, T, M	.380 x 0.314 x 0.2 (9.652 x 7.976 x 5.08)
12		ESOIC-14 (Narrow Body)	Plastic	Y	I,T.M	0.341 x 0.236 x 0.069 (8.65 x 6.0 x 1.75)
13		QFN-24	Plastic	Y	I, T	0.197 x 0.197 x 0.038 (5.0 x 5.0 x 0.96)

		Package	Material	SMD	Operating Temperature Range[5]	Dimensions in Packages[6] (mm)
14		SOIC-16 (Narrow Body)	Plastic	Y	I, T, M	0.390 x 0.236 x 0.056 (9.9 x 5.99 x 1.425)
15		QFN-16	Plastic	Y	I, T, M	0.157 x 0.157 x 0.039 (4.0 x 4.0 x 1.0)
16		TSSOP-20	Plastic	Y	I, T, M	0.256 x 0.252 x 0.04 (6.5 x 6.4 x 1.025)
17		TSSOP-38	Plastic	Y	I, T, M	0.382 x 0.252 x 0.04 (9.70 x 6.40 x 1.025)
18		SOIC-8	Plastic	Y	I, T, M	0.193 x 0.236 x 0.056 (4.9 x 6.0 x 1.425)
19		LQFP-64	Plastic	Y	I, T, M	0.472 x 0.472 x 0.063 (12.0 x 12.0 x 1.6)
20		LQFP-100	Plastic	Y	I, T, M	0.63 x 0.63 x 0.063 (16.0 x 16.0 x 1.6)
21		TQFP-64	Plastic	Y	I, T, M	0.354 x 0.354 x 0.047 (9.0 x 9.0 x 1.2)
22		LQFP-128	Plastic	Y	I, T, M	0.63 x 0.63 x 0.063 (16.0 x 16.0 x 1.6)
23		ESOIC-16 (Wide Body)	Plastic	Y	I, T, M	0.406 x 0.406 x 0.089 (10.3 x 10.3 x 2.25)
24		QFP-80	Plastic	Y	I, T, M	0.472 x 0.472 x 0.063 (12.0 x 12.0 x 1.6)
25		QFN-72	Plastic	Y	I, T, M	0.394 x 0.394 x 0.039 (10.0 x 10.0 x 1.0)
26		QFN-20	Plastic	Y	I, T, M	0.197 x 0.197 x 0.039 (5.0 x 5.0 x 1.0)

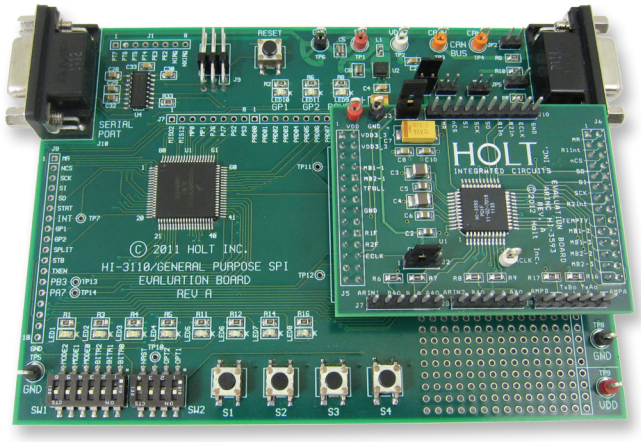
AUTONOMOUS (No MCU Required)

Part Number[1]	Tx/Rx Channels	Integrated Line Driver	Integrated Line Receiver(s)	Internal Lightning Protection[7]	Supply Voltages		Packages[3, 4]
					Digital	Line Driver	
HI-8470	1/0	Y	-	Y	3.3V	3.3V	20
HI-8475	0/1	-	Y	Y	3.3V OR 5V	-	21
HI-8476	0/1	-	Y	Y	3.3V OR 5V	-	22
HI-8477	0/1	-	Y	Y	3.3V or 5V	-	21
HI-8478	0/1	-	Y	Y	3.3V or 5V	-	21



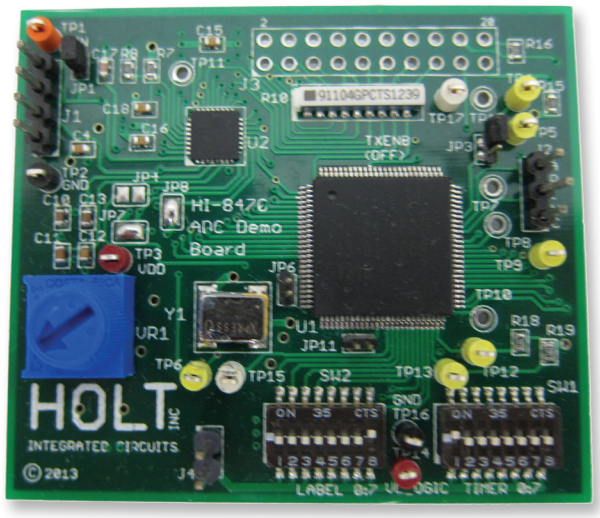


3.3V Dual Receiver, Single Transmitter Evaluation Board: ADK-35930



- Transmission and Reception of ARINC low speed and high speed messages
- Selectable ODD or EVEN parity
- Self Test mode (Internal digital loop back)
- 256 Receiver labels
- Receiver label reverse bit order
- Transmitter label reverse bit order
- Receiver Priority Label Mailboxes
- Receiver filter on SD9 or SD10
- ARINC ACLK programmable divider

ADC Evaluation Board using HI-8470: ADK-8470 ADC



The HI-8470 ADC Evaluation Board demonstrates a novel way to interface a free-running A/D converter IC to an ARINC 429 bus. A Holt HI-8470 16-channel discrete-to-digital sensor IC periodically transmits the converter's digital voltage measurement onto the ARINC 429 bus without FPGA, microcontroller or software support.

1) “-10”, “-15” or “-40” designates the use of external resistors for lightning protection of ARINC inputs. See datasheet and AN-300 & AN-301 for details of lightning protection on ARINC inputs and outputs.

2) Test Mode functions are part specific. See datasheet for details.

3) See IC Packages.

4) Contact your local sales representative for RoHS compliant (lead free) options.

5) **I**: -40˚C to +85˚C. **T**: -55˚C to +125˚C w/o burn in. **M**: -55˚C to +125˚C with burn in.

6) Dimensions refer to approximate footprint and height when mounted, “L x W x H”. Guideline only. Data sheet dimensions should be used for design purposes.

7) Parts with internal lightning protection allow compliance with RTCA/DO-160G, Section 22 Level 3 Pin Injection Test Waveform Set A (3 & 4), Set B (3 & 5A) and Set Z (3 & 5B). See Holt Application Notes AN-300 and AN-301 for further details on lightning protection of Holt ARINC 429 parts.

8) When powered down.

9) Galvanically isolated.

HOLT INC. INTEGRATED CIRCUITS

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