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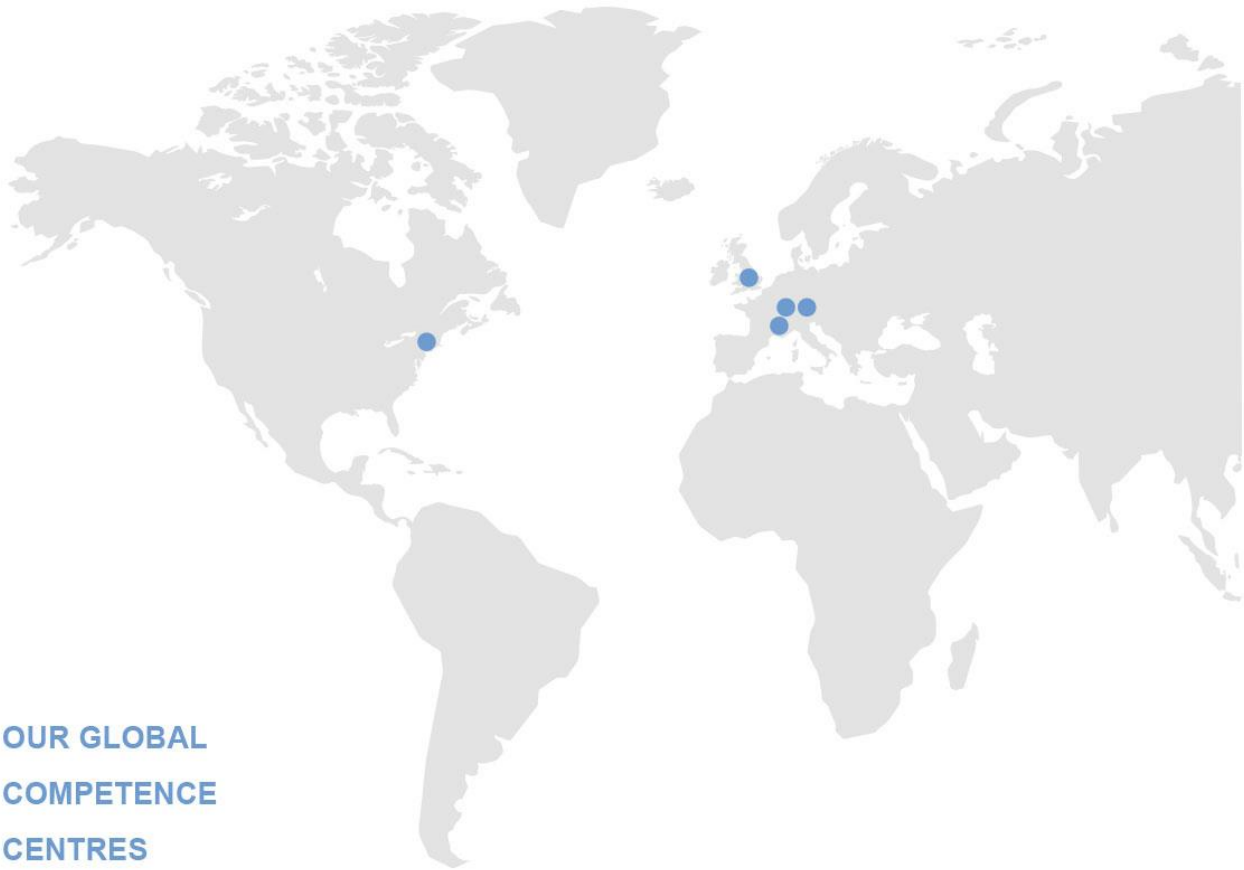

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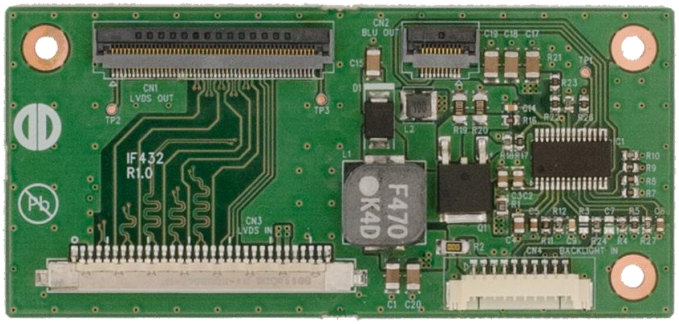
Datasheet

Distec

IF432-00

IF432-00 INX G104ACJ-L01 A+ LED

ZU-02-432



Version 1.0

10.12.2019

Table of Contents

1 Revision History

Date	Rev.No.	Description	Page
10.12.2019	1.0	Initial version	All

2 Overview

The IF432-00 is an interface board with an FFC to PCB cable adapter and an integrated LED driver for the Innolux G104ACJ-L01 display.
Note: requires an LVDS source with at least 960x1280 resolution.

3 General Features

Integrated LED driver
Backlight control via PMW
Standby/Enable control
Compatible with 24V Power Networks combined with Prisma 24V series

4 Absolut Maximum Ratings

Item	Symbol	Min.	Max	Unit	Note
LED FW Current per Input Pin	I_F		100mA	mA	
LED Supply Voltage	V_R		50	VDC	1, 2
LVDS Supply Voltage	V_{CC}	-0.3	4	VDC	1, 2
Control Voltages	V_{IN}	-0.3	4	V	2
Storage Temperature	T_{st}	-40	+90	°C	2
Operating Temperature	T_{op}	-40	+85	°C	2, 3

Note (1) Within operating temperature range.
Note (2) Permanent damage to the device may occur if maximum values are exceeded.
Note (3) In the upper range of T_{OP} total output power as well as the heat dissipation/cooling has to be checked. Forced airflow might be required.

5 Electrical Specification

Item	Symbol	Min.	Typ.	Max	Unit	Note
LVDS Supply Voltage	V_{CC}	3	3.3V	3.6	VDC	
LVDS Input Power	P_{VCC}		0.50	0.66	W	
LVDS Current	I_{VCC}		150	200	mA	White pattern, I_{RUSH} = 2A
LED Supply Voltage	V_{LEDI}	tbd	12	24	VDC	
LED Input Power	P_{LEDI}		(10.0)	(11.0)	W	Est.
LED Current	I_{LEDI}		95		mA	BLL
Efficiency			88-95		%	
Min. On Level voltage	V_{INH}	0.7		V_{CC}	V	
Max. Off Level voltage	V_{INL}	GND		$0.3V_{CC}$	V	
PWM Frequency	F_{PWM}	100	240	1000	Hz	
PWM Duty	D_{PWM}	1		100	%	
PWM Voltage	V_{PWM}		3.3		V	

6 Mechanical Specification

Item	Description	Note
Length	82.0 mm	± 0.2mm
Width	38.0 mm	± 0.2 mm
Height (top side)	4.5 mm	± 0.2 mm
Height (PCB)	1.6 mm	± 0.1 mm
Height (Bottom)	0.0 mm	No parts on bottom side, only label

7 Connectors

CON	Description	Type	Manufacturer
CN1	Panel Connector	FH52-50S-0.5SH	Hirose
CN2	Backlight driver	FH52-10S-0.5SH	Hirose
CN3	Input LVDS	FI-X30SSLA-HF	JAE
CN4	Input BLK	53261-1071	Molex

7.1 Input Connectors

7.1.1 CN3 Input LVDS Connector

Pin	Signal	Description		Pin	Signal	Description
1	NC	No connection		16	R0-	LVDS DATA0(-)
2	GND	Ground		17	GND	Ground
3	R3+	LVDS DATA3(+)		18	STBYB	Standby signal
4	R3-	LVDS DATA3(-)		19	RL	Left/right scan control
5	GND	Ground		20	TB	Up/down scan control
6	R2+	LVDS DATA2(+)		21	NC	No connection
7	R2-	LVDS DATA2(-)		22	NC	No connection
8	GND	Ground		23	NC	No connection
9	CLK+	LVDS Clock(+)		24	NC	No connection
10	CLK-	LVDS Clock(-)		25	V_{CC}	Panel Power
11	GND	Ground		26	V_{CC}	Panel Power
12	R1+	LVDS DATA1(+)		27	GND	Ground
13	R1-	LVDS DATA1(-)		28	NC	No connection
14	GND	Ground		29	NC	No connection
15	R0+	LVDS DATA0(+)		30	NC	No connection

7.1.2 CN4 Input Backlight Connector

Pin	Signal	Description		Pin	Signal	Description
1	V_{LEDI}	LED Supply Voltage		6	PWM	PWM Control
2	V_{LEDI}	LED Supply Voltage		7	NC	No Connection
3	GND	Ground		8	NTC+	NTC Thermistor +
4	GND	Ground		9	NTC-	NTC Thermistor -
5	V_{IN}	EN Enable/ STBYB Standby		10	NC	No Connection

Display integrated NTC Thermistor type: Murata NCU15XH103F6SRC
To prevent self-heating of the NTC and improve the measurement accuracy, recommend operating current of the NTC is less than 0.031mA.

7.2 Output Connectors

7.2.1 CN1 Panel Connector

Pin	Signal	Description		Pin	Signal	Description
1	NC	For test, please keep it floating.		26	GND	Analog ground
2	TP_SYNC	Output V_sync signal for touch		27	NIND2	LVDS signal data line 2 negative
3	GND	Analog ground		28	PIND2	LVDS signal data line 2 positive
4	GND	Analog ground		29	GND	Analog ground
5	NC	For test, please keep it floating.		30	NINC	LVDS signal clock line negative
6	NC	Not Connect		31	PINC	LVDS signal clock line positive
7	NC	Not Connect		32	GND	Analog ground
8	NC	Not Connect		33	NIND3	LVDS signal data line 3 negative
9	NC	For test, please keep it floating.		34	PIND3	LVDS signal data line 3 positive
10	NC	Not Connect		35	GND	Analog ground
11	NC	Not Connect		36	GRB	Reset pin, low active
12	NC	Not Connect		37	STBYB	Standby pin, low active
13	NC	For test, please keep it floating.		38	RL	Left/right scan control, internal pull high
14	VCC	Digital power (typ. 3.3V)		39	VCC	Digital power (typ. 3.3V)
15	VCC	Digital power (typ. 3.3V)		40	TB	Up/down scan control, internal pull high
16	NC	Not Connect		41	NC	For test, please keep it floating.
17	GND	Analog ground		42	NC	For test, please keep it floating.
18	GND	Analog ground		43	NC	For test, please keep it floating.
19	GND	Analog ground		44	GND	Analog ground
20	GND	Analog ground		45	NC	For test, please keep it floating.
21	NIND0	LVDS signal data line 0 negative		46	NC	Not Connect
22	PIND0	LVDS signal data line 0 positive		47	NC	For test, please keep it floating.
23	GND	Analog ground		48	NC	Not Connect
24	NIND1	LVDS signal data line 1 negative		49	NC	Not Connect
25	PIND1	LVDS signal data line 1 positive		50	GND	Analog ground

7.2.2 CN2 Backlight Connector

Pin	Signal	Description		Pin	Signal	Description
1	VLED	LED Voltage (anode)		6	NTC-	NTC Thermistor -
2	VLED	LED Voltage (anode)		7	NC	No Connection
3	VLED	LED Voltage (anode)		8	C1	Cathode of LED string
4	NC	No connection		9	C2	Cathode of LED string
5	NTC+	NTC Thermistor +		10	C3	Cathode of LED string

Display integrated NTC Thermistor type: Murata NCU15XH103F6SRC
To prevent self-heating of the NTC and improve the measurement accuracy, recommend operating current of the NTC is less than 0.031mA.

8 Ordering Information

Part Number	Description	Note
ZU-02-432	IF432-00 INX G104ACJ-L01 A+ LED	
CH-01-065	G104ACJ-L01 10,4/AAS//960x1280/900cd	

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