

NBD80N16RA-KLY Module Specification



Introduction

The NBD80N16RA-KLY is a 16-channel 4K face recognition NVR motherboard. It integrates IPC access, storage, control, and intelligent analysis into a single platform, delivering precise facial analysis including face comparison and retrieval. The board supports real-time facial attribute extraction, face import via USB drive/camera/recording, storage for up to 2000 facial photos, and configurable allow/block lists. It is compatible with various intelligent front-end devices such as human shape detection and face detection cameras, supports H.265 AI encoding, and is primarily designed for use in face recognition network video recorders (NVRs).

Main Features



face recognition



face database



H.265AI



Check Video by Face



APP



Support Multi-Lens
Devices



Check Video by Vehicle



ONVIF



Cloud Storage

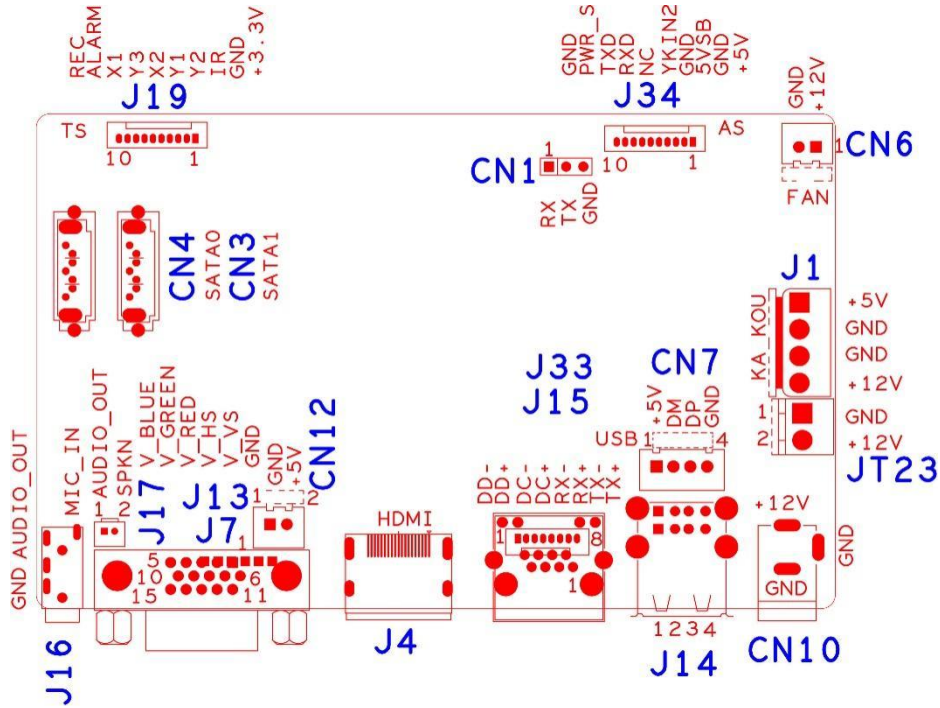
Content

1.Product Parameters.....	3
2. Interface Description.....	4
3. Electrical Parameters	5
3.1 Absolute Electrical Parameters	5
3.2 Working Conditions	5
3.3 Port Protection Level.....	5

1.Product Parameters

	Model	NBD80N16RA-KLY
System	Main processor	NT98332
	Operating System	Embedded Linux
	System resources	Simultaneous multi-channel real-time recording, playback, network operation, USB backup
Interface	Operator interface	16-bit true color graphic menu operation interface, support mouse operation
	Preview	1/2/4/9/16
Video	Video input (IP)	16*4K(Maximum Supported Resolution up to 12MP)
	Video compression	H.265AI/H.265+(compatible with H.265/H.264)
	Display quality	Max: 4K
	Playback quality	12M/4K/5M/4M/3M/1080P
	Decode	12M(1)/4K(1+1)/5M(3+1)/4M(4+1)/3M(5+1)1080P(8+2)
	Face recognition	Support facial recognition, support storing 2000 facial photos, support importing faces from USB flash drives/cameras/videos, support setting up blacklists and whitelists
Audio	Audio compression	G.711A
	Intercom	support
Record & playback	Recording mode	Alarm>Dynamic Detection>Timing
	Local playback	12M(1)/4K(1+1)/5M(3+1)/4M(4+1)/3M(5+1)1080P(8+2)
	Search mode	Search by Time/Calendar/Event/Channel/Face/Human/vehicle
	Record storage	HDD/Network/Cloud
	Backup mode	Network backup, USB hard disk, USB burner, SATA burner
External interface	Video output	1ch VGA, 1ch HDMI HD output
	Audio I/O	1/1(3.5mm Audio output)
	Alarm I/O	0/0
	Network interface	1*RJ45 10M/100M/1000M Adaptive Ethernet port
	USB interface	2*USB2.0 ports
	HDD	2* SATA(Up to 14TB for each disk)
Other	ONVIF	Support
	Power supply	12V/4A
	Power Consumption	<10W(Without HDD)
	Work environment	Temperature:0℃- + 55℃, Humidity:10% – 90%RH, Atm:86kpa – 106kp
	Dimension	118mm*73mm
	Weight	63g

2. Interface Description



Sign	Function	Interface Description			
J19	Expansion socket without MCU front panel (1.25*10P)	1:+3.3	2:GND	3:IR	4:COL2
		5:COL1	6:ROW2	7:COL3	8:ROW1
		9:ALARM	10:REC		
J34	Expansion base with MCU front panel (1.25*10P)	1:+5	2:GND	3:+5_STB	4:GND
		5:NC	6:NC	7:RXD_FRONT	8:TX_FRONT
		9:PWR_S	10:GND		
CN4	SATA				
CN3	SATA				
J16	Audio 3.5mm input and output interface				
J7	VGA				
J4	HDMI				
J15	RJ45				
J33	Reserved POE Extension interface				
J14	2*USB				
CN7	USB Extension interface				
CN10	12V input				
J1	Hard disk power socket	1:+5	2:GND	3:GND	4:+12
CN6	Fan power holder	1:+12	2:GND		

3. Electrical Parameters

3.1 Absolute Electrical Parameters

Parameter	Description	Min	Max	Unit
Ts	Storage temperature	-40	150	℃
VCC	Power supply voltage	47	51	V
Static electricity discharge voltage (Air)	TAMB-25℃	-8	8	KV
Static electricity discharge voltage (Contact)	TAMB-25℃	-4	4	KV

3.2 Working Conditions

Parameter	Description	Min	Max	Unit
Ta	Working temperature	-20	65	℃
VCC	Power supply voltage	47	51	V

3.3 Port Protection Level

Port	Test Type	test condition	level	note
Power connector	Surge	1.2/50uS Combined Wave, 2 Ohm	±0.5KV	
RJ45	Surge (common mode)	10/700uS Combined Wave, 40 Ohm	±6KV	
	Surge (differential mode)	10/700uS Combined Wave, 40 Ohm	±2KV	
	Surge (differential mode)	10/700uS Combined Wave, 40 Ohm	±2KV	
HDMI	electrostatic	Contact discharge	±8KV	
		Air discharge	±15KV	
All other ports	electrostatic	contact discharger	±4KV	
		Air discharges	±8KV	