



Narrow Pixel Pitch Direct View LED

15NP180

Product Specifications

Mitsubishi Electric Corporation
Kyoto Works

Rev. 1.2
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15NP180 Specifications

1. Components

Model	LED unit	Control unit	Adapter (for power line)	Servicing
15NP180F	VS-15NP180F	VC-NP1000	S-NP18ACS	Front ^{*1} maintenance
15NP180R	VS-15NP180R			Rear ^{*2} maintenance

2. Imaging device

Type	Direct LED (SMD 3 in 1)		
Pixel pitch	1.5 mm		
LED unit resolution	320 x 360 pixels		
LED unit size	480 x 540 mm		
Dimensions for a full HD resolution	130" (2880 mm x 1620 mm / 113.4" x 63.8")		
Average lifetime	100,000 hours in all brightness modes		
Calibrated brightness (typ.)	Bright	800 cd/m ²	
	Normal	500 cd/m ²	
	Eco	190 cd/m ²	
Viewing angle (half gain)	Horizontal	170°	
	Vertical	170°	
Contrast ratio	16,000:1		
Refresh rate	3,840 Hz		
Color depth	14-bit color per each RGB (internal processing: 16-bit)		

3. Electric specifications

Power consumption (typ.), Operating current (100/240 V)		Watts	kcal/h	BTU/h	Amp.
An LED unit	Bright	185	159	631	1.9/1.0
	Normal	135	116	461	1.4/0.8
	Eco	85	73	290	0.9/0.6
Reference for a full HD resolution with 6x3 LED units	Bright	3,330	2,863	11,362	34.2/18
	Normal	2,430	2,089	8,291	25.2/14.4
	Eco	1,530	1,316	5,221	16.2/10.8
Control unit	without OPS	30	25.8	102	0.3/0.2
	with an OPS ^{*3}	80	68.8	273	0.8/0.4
Voltage range	AC 100 – 120 V, 220 – 240 V ±10 %, 50/60 Hz ±1 Hz				
Inrush current (100/240 V)	LED unit	Control unit		Adapter	
	20/40 Amp	16/32 Amp		--	
Input signal terminals	DVI-D (with HDCP) x2 Up to 50-meter long DVI cable supported ^{*4}				
Output signal terminals to LED units	RJ45: Mitsubishi original image transmission x10				
Input frequencies	Resolution	VGA (640 x 480) – WUXGA (1920 x 1200)			
	Horizontal	31.5 – 92 kHz			
	Vertical	49 – 85 Hz			
	Pixel clock	25 – 165 MHz			
External control signal	RJ45: 10BASE-T/100BASE-TX x1				
Optional input board slot	Intel® OPS slot x 1				

4. Mechanical specifications

	LED unit	Control unit	Adapter
	VS-15NP180F VS-15NP180R	VC-NP1000	S-NP18ACS
Dimensions	Width	480 mm / 18.9"	415 mm / 16.3"
	Height	540 mm / 21.3"	108 mm / 4.3"
	Depth	99 mm / 3.9"	194 mm / 7.6"
Weight	13.0 kg / 28.7 lbs 12.4 kg / 27.3 lbs	3.2 kg / 7.1 lbs	0.6 kg / 1.3 lbs
Packing dimensions	Width	640 mm / 25.2"	530 mm / 20.9"
	Height	685 mm / 27.0"	220 mm / 8.7"
	Depth	390 mm / 15.4"	320 mm / 12.6"
Packing weight	2 units in a box:	31.0 kg / 68.3 lbs 30.0 kg / 66.1 lbs	5 kg / 11 lbs
	1 unit	18.0 kg / 39.7 lbs	
	in a box:	17.5 kg / 38.6 lbs	
Audio noise (typ.): at 1 m distance	Fan-less operation	32 dBA	Fan-less operation
Accessories	AC power cord (0.8 m) x1: between the LED units Fixing screws x8 Adjustment screws x3	Control cable (5 m): for multiple control units Rack brackets x2	--
Required components for a full HD resolution (1920 x 1080 pixels)	x18 6 wide x 3 high	x1 One unit drives up to a full HD resolution.	x3 One unit supplies the power to max. 6 LED units.
Max installation height	12 LED units		
In-curve installation	Available: to be designed by project		
Ceiling hanging	Available: to be designed by project		

5. Major functions

Major functions	Anti-burn-in Image signal redundancy Active power peak saving Natural color matrix Dynamic gamma 2D noise reduction
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6. Environmental condition

For operation	5 °C – 40 °C (41 °F – 104 °F), 20 % – 80 % RH non-condensing
For storage	-20 °C – 60 °C (-4 °F – 140 °F), 20 % – 80 % RH non-condensing

7. Safety approval

Safety approval	UL60950-1, CSA C22.2 No.60950-1, EN-62368-1, EN60950-1, EN62311, GOST IEC60950-1, K60950-1, AS/NZS 60950-1
EMC	FCC Part15 Subpart B Class A, ICES-003 Issue No.6 Class A, EN55032 Class A, EN55024, EN61000-3-2, EN61000-3-3, GOST 30805.22 Class A, GOST CISPR 24, GOST 30804.3.2, GOST 30804.3.3, KN32 Class A, KN35, AS/NZS CISPR 32 Class A, VCCI Class A, JIS C 61000-3-2
Environment	European Union RoHS, Turkish RoHS

8. Options

Spare LED module	S-NP1518FS: for front maintenance model S-NP1518RS: for rear maintenance model	
AC power cord: Adapter to LED unit	2 m	JC-PC3AC2
	5 m	JC-PC3AC5
	8 m	JC-PC3AC8
SDI input board	DP-1SDI-3G	
HDBaseT™ input board	VC-LM1HD	
AC power cord: electrical outlet to equipment (3 meters)	North America	JC-PC3MUS (16 AWG)
	Europe	JC-PC3ME
	Russia	JC-PC3MR
	Japan	JC-PC3MJ
Recommended Intel® OPS board	Advantech DS280 (i7-6822EQ, 4+4 GB DDR4, SSD or HDD)	
Adjustment software	Wallaby for NP	
LED detachment tool	S-160DT: for front maintenance model	
Spacers	S-160SP: for edge protection at LED unit mounting	

9. Country of origin

Country of origin	Made in Japan
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*1: The front maintenance model can be installed in front of a back wall with 20 cm gap.

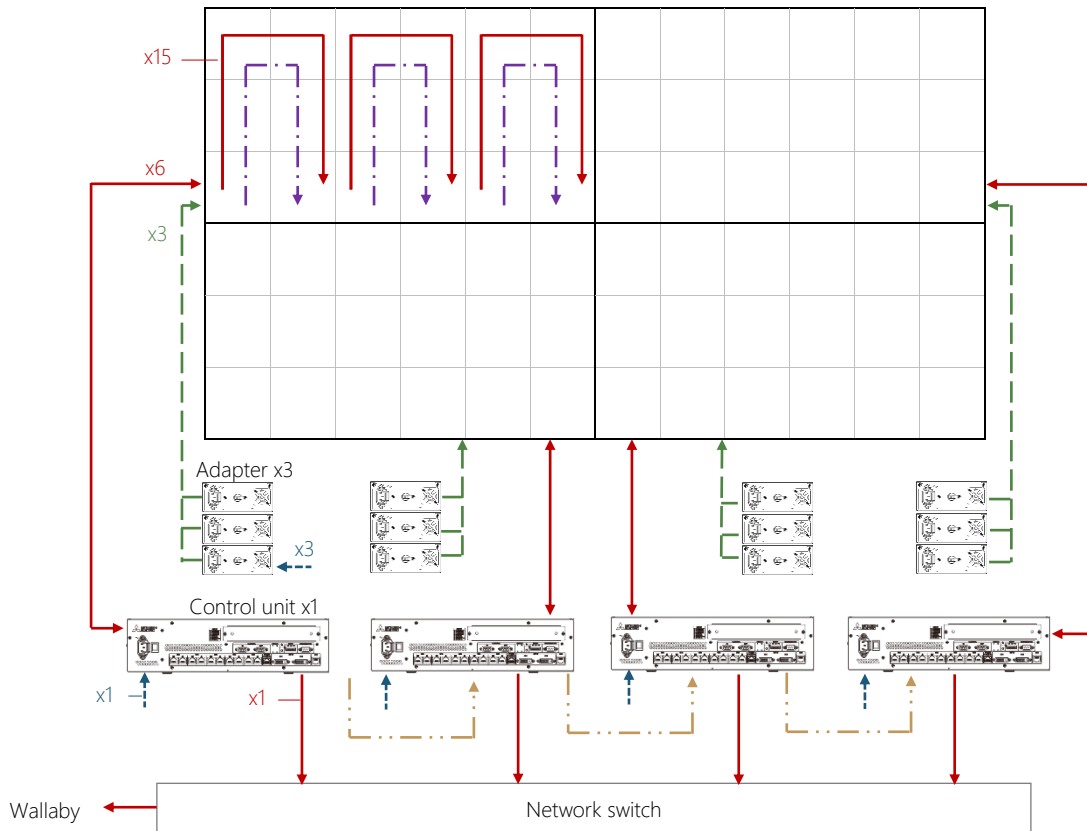
*2: The rear maintenance model requires at least 60 cm back space so that a person can reach the back panels from rear.

*3: With Advantech DS280 OPS board.

*4: The length varies depending on the quality of the source signals and the cables.

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Connection diagram (an example for 4K resolution)



Numbers mentioned in this diagram are for a full HD resolution.

- Store-bought network cables (detailed below)
- - - Optional AC power cords from outlet
- - - Optional AC power cords
- - - Supplied AC power cords
- - - Supplied control cables

Prepare the following commercially-available network cables. The length and quantity vary depending on the system configurations.

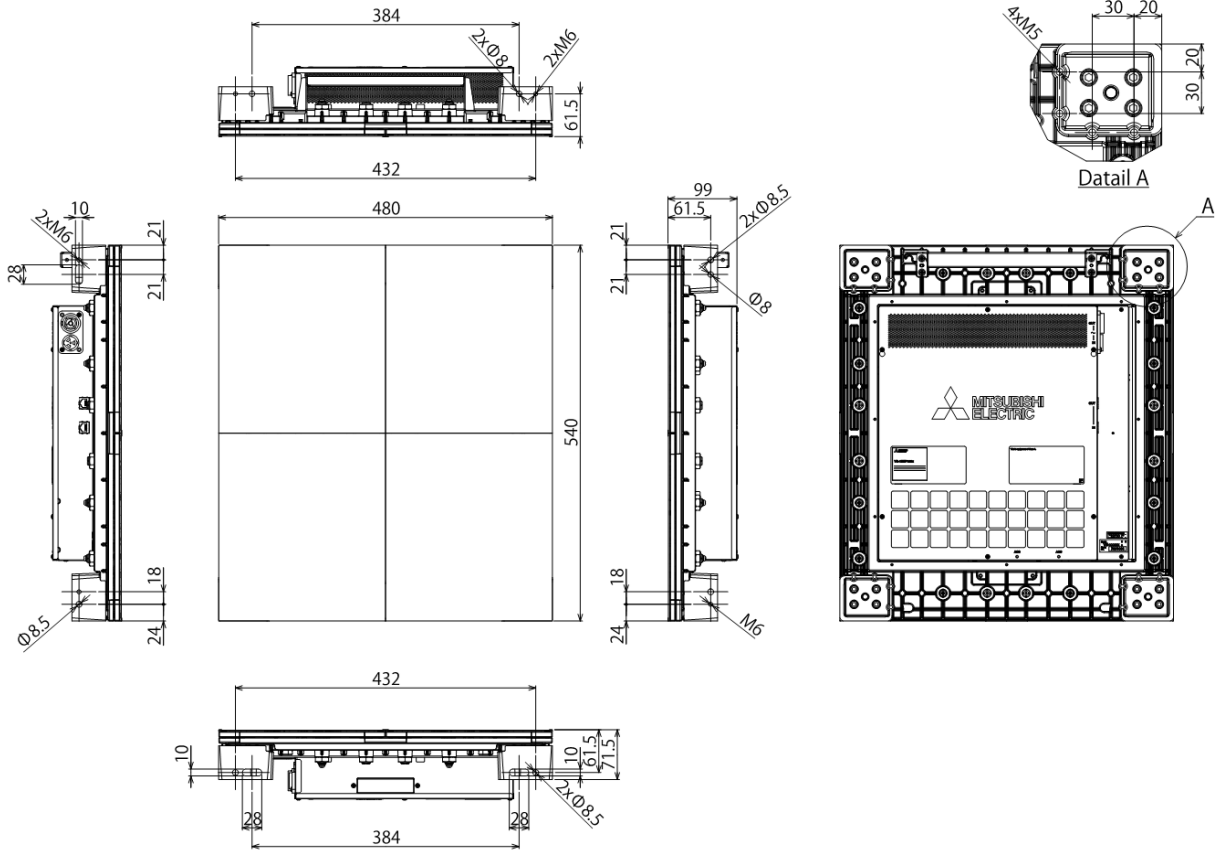
For video transmission	control unit to LED units	Up to 10 m: CAT 7 network cables Up to 15 m: CAT 7 solid conductor or CAT 7A network cables Up to 20 m: Mitsubishi confirmed network cables
	between LED units	recommended: CAT 7 network cables 0.7 m or longer

External dimensions

LED unit

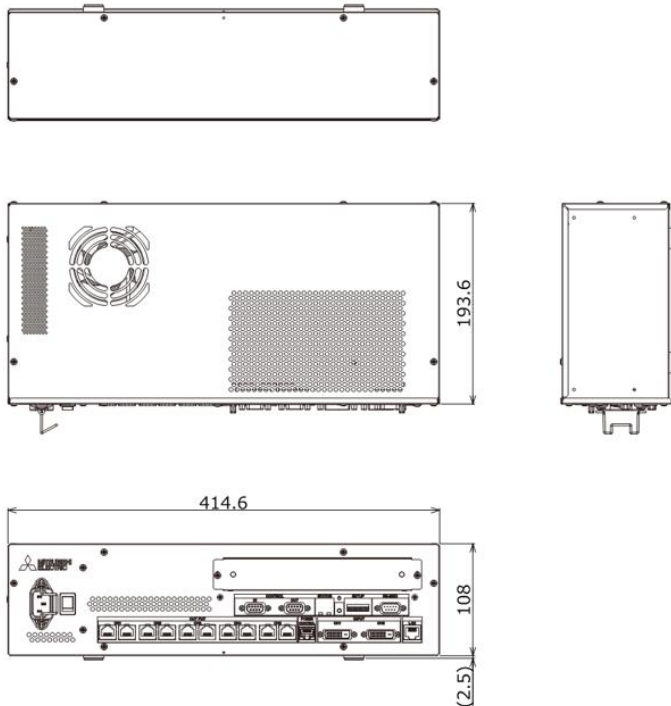
VS-15NP180F, VS-15NP180R

[Unit: mm]



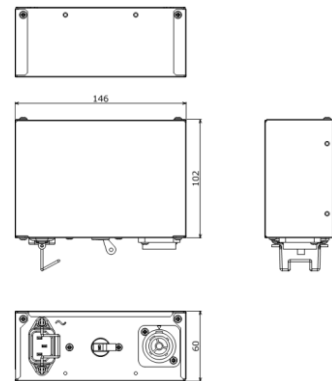
Control unit

VC-NP1000



Adapter

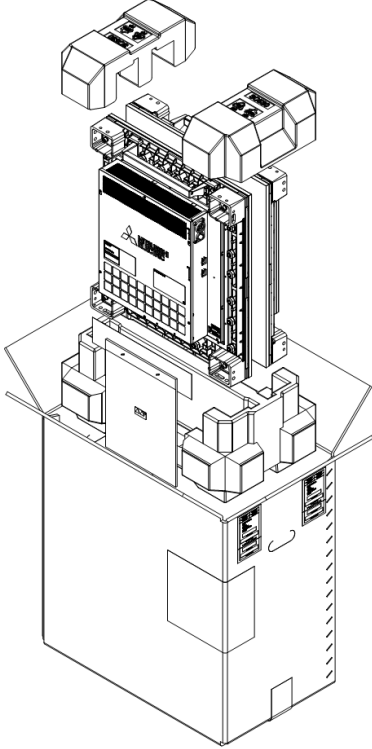
S-NP18ACS



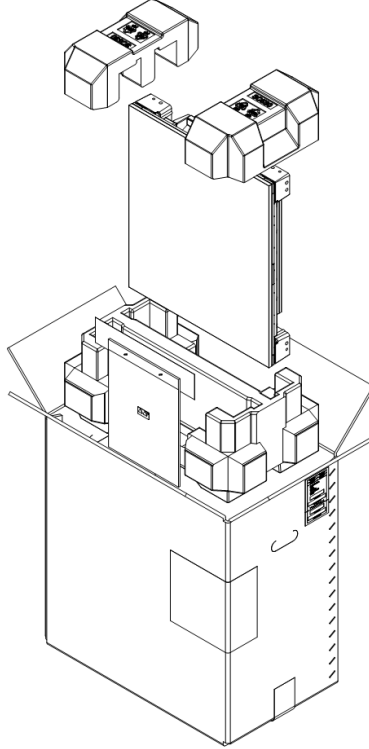
Packing specifications

LED unit

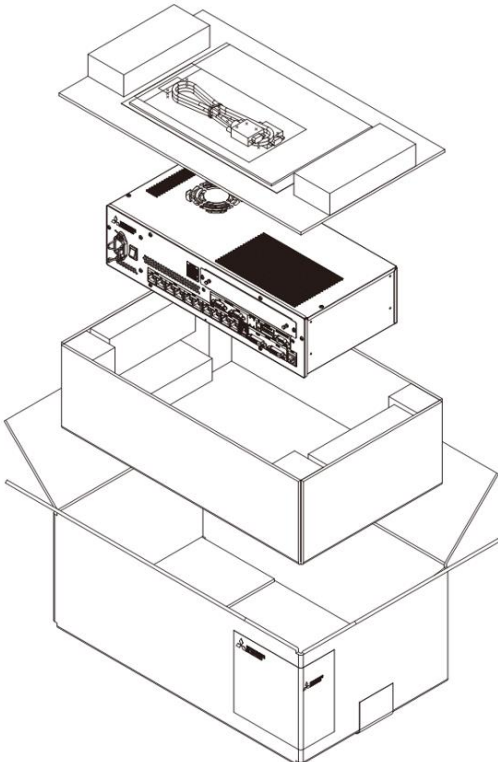
Two units in a box
VS-15NP180F, VS-15NP180R



One unit in a box
VS-15NP180F1, VS-15NP180R1



Control unit
VC-NP1000



Adapter
S-NP18ACS

