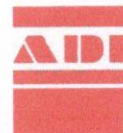


JASA RAHARJA

**SPEKIFIKASI MATERIAL
MEKANIKAL ELEKTRIKAL & PLUMBING**


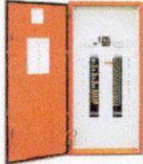
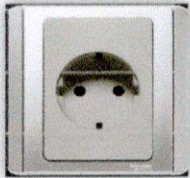


**PEMBANGUNAN AULA JASA RAHARJA
TAHAP 2**

PT. ASRI DESINDO INTIWIDYA







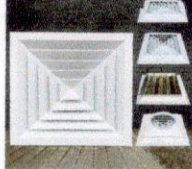
MATERIAL REFERENCE

PROJECT : PERENCANAAN PEMBANGUNAN AULA JASA RAHARJA-TAHAP 2

KODE	DESCRIPTION	SOURCE	SWATCH
	<p>PANEL ELEKTRIKAL Area : R. Panel</p> <p>SPECIFICATION: Material : plat besi type : non typetest Dimensi : Variable Voltase : 220-380 V</p> <p>Warna Body : grey/custom tebal plate : 2mm Finishing : Powder coating Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	Price Trandos	 
	<p>Stop kontak Neo gray Area : Dinding</p> <p>SPECIFICATION: Material : Plastic ABS Ampere : 16 A Voltase : 220 v</p> <p>Berat (kg) : Warna Body : Silver / Grey / menyesuaikan dengan warna interior</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	Schneider Panasonic	
	<p>Kabel Instalasi Area : Area Kerja ditentukan di dalam gambar kerja</p> <p>SPECIFICATION: - NYM Multi Core - 300/500 V -</p> <p>Dipergunakan : Instalasi ElektriKa</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample material untuk disetujui</p>	Supreme Kabelmetal Kabelindo	
	<p>Kabel Instalasi Area : Area Kerja ditentukan di dalam gambar kerja</p> <p>SPECIFICATION: - NYA - 450/750Volt - CU/PVC</p> <p>Dipergunakan : Instalasi Elektronik (fire alarm)</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample material untuk disetujui</p>	Supreme Kabelmetal Kabelindo	





MATERIAL REFERENCE

PROJECT : PERENCANAAN PEMBANGUNAN AULA JASA RAHARJA-TAHAP 2

<p>Smoke Detector</p> <p>Area : General</p> <p>SPECIFICATION: Automation Grade : Automatic</p> <p>Brand : Power Source : Voltage : 12 - 24 Vdc Operating Temp. :</p> <p>Loop Length : 2 Km</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	<p>Notifier</p>	
<p>Manual call point</p> <p>Area : General (indoor)</p> <p>SPECIFICATION: Brand : spek eksisting Voltage : 12 - 24 Vdc Operating Temp. : 32 °F to 120 °F (0 °C to 49 °C)</p> <p>Loop voltage : 28 VDC Relative humidity : 10% to 93% (noncondensing) Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	<p>Notifier</p>	
<p>Indicator lamp</p> <p>Area : General (indoor)</p> <p>SPECIFICATION: Brand : spek eksisting Voltage : 12 - 24 Vdc Material : Polycarbonate</p> <p>Relative humidity : 10% to 93% (noncondensing) Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	<p>Notifier</p>	
<p>Indicator lamp</p> <p>Area : General (indoor)</p> <p>SPECIFICATION: Brand : spek eksisting Voltage : 12 - 24 Vdc Operating temp. : -31 °F to 150 °F (-35 °C to 66 °C)</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	<p>Notifier</p>	
<p>Supply Diffuser 14"x14"</p> <p>Area : General</p> <p>SPECIFICATION : Sesuai produk Type : Square Dimensi : 12"x12" Berat : Sesuai produk</p>	<p>Jaya Sukses Mandiri Aroma</p>	


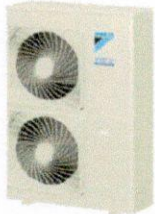

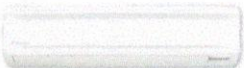
MATERIAL REFERENCE

PROJECT : PERENCANAAN PEMBANGUNAN AULA JASA RAHARJA-TAHAP 2

<p>Supply Diffuser 14"x14"</p> <p>Area : General</p> <p>SPECIFICATION : Sesuai produk</p> <p>Type : Square</p> <p>Dimensi : 12"x12"</p> <p>Berat : Sesuai produk</p>	<p>Jaya Sukses Mandiri Aroma</p>	
<p>Return grille</p> <p>Area : General</p> <p>SPECIFICATION : Sesuai produk</p> <p>Type : Square</p> <p>Dimensi : 120 x 600 mm</p> <p>Berat : Sesuai produk</p>	<p>Jaya Sukses Mandiri Aroma</p>	
<p>flexible duct</p> <p>Area : General</p> <p>SPECIFICATION : Sesuai produk</p> <p>Type : flexible round duct insulasi</p> <p>Dimensi : 8"</p> <p>Berat : Sesuai produk</p>	<p>Masterflex proflex</p>	
<p>INDOOR AC SPLIT DUCT</p> <p>Area : Lt. atap (Aula)</p> <p>SPECIFICATION:</p> <p>Material : Electro galvanized steel</p> <p>Air flow : 12,000 CFM</p> <p>Dimensi : H 1536 x W 2274 x D 1448</p> <p>Voltase : 380-415/3/50</p> <p>Warna Body : grey</p> <p>tebal plate : 2mm</p> <p>Finishing : Epoxy polyester powder coating</p> <p>Note :</p>	<p>mitsubishi electric</p>	
<p>OUTDOOR AC SPLIT DUCT</p> <p>Area : Lt. atap (Aula)</p> <p>SPECIFICATION:</p> <p>Cooling cap. : 400,000 BTU/H</p> <p>Air flow : 12,000 CFM</p> <p>Dimensi : H 940mm x W 900mm x D 970mm</p> <p>Voltase : 380-415/3/50</p> <p>Warna Body : grey</p> <p>tebal plate : 2mm</p> <p>Finishing : Epoxy polyester powder coating</p> <p>Note :</p>	<p>mitsubishi electric</p>	

MATERIAL REFERENCE

PROJECT : PERENCANAAN PEMBANGUNAN AULA JASA RAHARJA-TAHAP 2

	<p>EXHAUST FAN CEILING Area : Toilet</p> <p>SPECIFICATION: Type : Ceiling mounted Air flow : 240 CMH Dimensi : H 244mm x W 244mm x D 108mm Voltase : 220/1/50</p> <p>Warna Body : White Berat : 1,4 kg Diameter baling-baling : 6"/15 cm Note :</p>	<p>KDK</p>	
	<p>OUTDOOR AC VRV Area : Lt. Dasar (Gedung belakang)</p> <p>SPECIFICATION: Cooling cap. : 95,500 btu/h Air flow : 6,286 CFM Dimensi : H 1345 x W 960 x D 320 Voltase : 220v/1/50</p> <p>Power consumsion : 6,84 KW tebal plate : 2mm Color : Ivory white Note :</p>	<p>MITSUBISHI ELECTRIC</p>	
	<p>INDOOR AC VRV Area : Kantin & R. VVIP (Gedung belakang)</p> <p>SPECIFICATION: Cooling cap. : 19,100 btu/h Air flow : Dimensi : H 290 x W 1050 x D 230 Voltase : 220v/1/50</p> <p>Power consumsion : 60 w Berat : 52 kg Note :</p>	<p>MITSUBISHI ELECTRIC</p>	
	<p>INDOOR AC VRV Area : Lobby</p> <p>SPECIFICATION: Cooling cap. : 24,200 btu/h Air flow : Dimensi : H 290 x W 1050 x D 230 Voltase : 220v/1/50</p> <p>Power consumsion : 60 w Berat : 52 kg Note :</p>	<p>MITSUBISHI ELECTRIC</p>	



JASA RAHARJA

**SPESIFIKASI MATERIAL
AUDIO VISUAL & CONTROL SYSTEM**

**PEMBANGUNAN AULA JASA RAHARJA
GEDUNG AULA TAHAP 2
KANTOR PUSAT PT. JASA RAHARJA**

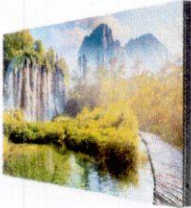










PT. ASRI DESINDO INTIWIDYA



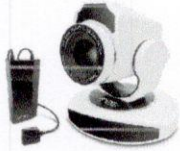


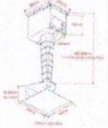
MATERIAL REFERENCE

PROJECT : *Pembangunan Aula Jasa Raharja - Tahap 2*

MATERIAL : **AUDIO VISUAL & CONTROL SYSTEM**

NO	KODE	TECHNICAL SPECIFICATION	BRAND	TYPE	SUPPORTING LETTER	SWATCH
1	VDT	LED Indoor P2.5 Display Requirements : Screen Configuration (WxH) 4 Units x 4 Units, No. of Cabinets 16 Units, Display Wall Dimensions : Dimensions 3.84 X 2.16 m, Diagonal 173, 45 inch Resolution : 1536 X 864, Diagonal (inch, DiagonalxD, per cabinet) 43.3x3.13 inch Pixel Pitch : 2.5mm, Dimensions (mm, LxHxD, per cabinet) 960x540x79.5 mm, IP Rating IP20, EMC Class A, Safety 60950-1	Samsung	IE025A	Surat Dukungan dari Principle	
2	AV-I	AV Over IP Extender Transmitter HDCP 2.2, HDMI and DVI Compatible with HDMI and VGA input, Supports video transmission over IP up to 100m, Supports resolutions up to 4K2K@30Hz (RGB 4:4:4) or 4K2K@60Hz (YUV 4:2:0), Supports pass through of HD Audio formats (LPCM, Dolby® Digital and DTS®), Independent Audio Transmission, Features 2 x USB 1.1 and 2 x USB 2.0 ports, Control via dedicated hardware controller (IP-CS7), OSD, Telnet, WebGui, and RS-232	CYP CRESTRON	IP-7000TX DM-NVX-363	Surat Dukungan dari Principle	
3	AV-O	AV Over IP Extender Receiver HDCP 2.2, HDMI & DVI compatible with HDMI and VGA inputs and outputs, Supports video transmission over IP up to 100m Supports input resolutions up to 4K2K@30Hz (RGB4:4:4) or 4K2K @ 60Hz (YUV 4:2:0), Supports pass through of HD audio formats (LPCM, Dolby® Digital and DTS®), Independent Audio Transmission, Features 2 x USB 1.1 and 2 x USB 2.0 ports, Supports microphone input on receiver unit Control via OSD, Telnet, Web GUI, IR Remote and RS-232	CYP CRESTRON	IP-7000RX DM-NVX-363	Surat Dukungan dari Principle	
4	AV-TX	AV Over IP Extender Wallplate Transmitter HDCP 2.2, HDMI and DVI Compatible with HDMI and VGA input, Supports video transmission over IP up to 100m, Supports resolutions up to 4K2K@30Hz (RGB 4:4:4) or 4K2K@60Hz (YUV 4:2:0), Supports pass through of HD Audio formats (LPCM, Dolby® Digital and DTS®), Independent Audio Transmission 3.5mm Jacks, 2 gang UK and Euro Wall plate design, Features 1 x USB port, Controlled via IP-CS7 hardware controller	CYP CRESTRON	IP-7000TXWP DM-NVX-363	Surat Dukungan dari Principle	
5	AV-AX	Audio over IP Receiver HDCP 2.2, HDMI and DVI Compatible with HDMI and VGA input, Supports video transmission over IP up to 100m, Supports resolutions up to 4K2K@30Hz (RGB 4:4:4) or 4K2K@60Hz (YUV 4:2:0), Supports pass through of HD Audio formats (LPCM, Dolby® Digital and DTS®), Independent Audio Transmission 3.5mm Jacks, 2 gang UK and Euro Wall plate design, Features 1 x USB port, Controlled via IP-CS7 hardware controller	CYP CRESTRON	IP-A750RX DM-NVX-363	Surat Dukungan dari Principle	
6	AV-SC	IP System Controller & Configurator HDCP 2.2 Compliant, Supports all v1.4 HDMI resolutions plus 4k. Supports uncompressed video/audio up to 10.2Gbps, Supports resolutions VGA-WUXGA, 480i-1080p, 4K UHD@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2), 4K UHD@ 60Hz (YUV 4:2:0), 4K/2K@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2) and 4K/2K@ 60Hz (YUV 4:2:0) dependent upon the output display's EDID settings HDMI, HDCP, & DVI compliant Supports HDCP repeating and CEC functions 4K/2K & 4K UHD signals can be transmitted up to 70m via	CYP IP-CS7 CRESTRON	CYP IP-CS7 DM-NVX-DIR-160	Surat Dukungan dari Principle	
7	AV-ETT	HDMI Transmitter HDCP 2.2 Compliant, Supports all v1.4 HDMI resolutions plus 4k. Supports uncompressed video/audio up to 10.2Gbps, Supports resolutions VGA-WUXGA, 480i-1080p, 4K UHD@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2), 4K UHD@ 60Hz (YUV 4:2:0), 4K/2K@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2) and 4K/2K@ 60Hz (YUV 4:2:0) dependent upon the output display's EDID settings HDMI, HDCP, & DVI compliant Supports HDCP repeating and CEC functions 4K/2K & 4K UHD signals can be transmitted up to 70m via CAT5e/6 and 100m via CAT6a/7 1080p signals can be transmitted up to 100m via CAT5e/6/6a/7, Uncompressed video 1080p, 60Hz, 48bits Audio, support up to 7.1CH & Dolby TrueHD, DTS-HD 5-Play™ convergence: HDMI, LAN, PoE & Control (IR & RS232), Supports 3D signals	CYP CRESTRON	CYP PU-507TX DM-TX-401-C	Surat Dukungan dari Principle	
8	AV-ETR	HDMI Receiver HDCP 2.2 Compliant, Supports all v1.4 HDMI resolutions plus 4k. Supports uncompressed video/audio up to 10.2Gbps, Supports resolutions VGA-WUXGA, 480i-1080p, 4K UHD@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2), 4K UHD@ 60Hz (YUV 4:2:0), 4K/2K@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2) and 4K/2K@ 60Hz (YUV 4:2:0) dependent upon the output display's EDID settings HDMI, HDCP, & DVI compliant, Supports HDCP repeating and CEC functions, Supports 1080p distances up to 100 meters through CAT5e/6 cables Uncompressed video 1080p, 60Hz, 48bits Audio support up to 7.1CH & Dolby TrueHD, DTS-HD 5-Play™ convergence: HDMI, LAN, PoC & Control (IR & RS232), Supports 3D signals, Supports 4K/2K & 4K UHD - CAT5e/6 = 70m & CAT6a/7 = 100m	CYP CRESTRON	PU-507RX DM-TX-401-C	Surat Dukungan dari Principle	
9	AV-SPT	HDMI Splitter HDCP 2.2 Compliant, Supports all v1.4 HDMI resolutions plus 4k. Supports uncompressed video/audio up to 10.2Gbps, Supports resolutions VGA-WUXGA, 480i-1080p, 4K UHD@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2), 4K UHD@ 60Hz (YUV 4:2:0), 4K/2K@24/25/30Hz (RGB 4:4:4 & YUV 4:2:2) and 4K/2K@ 60Hz (YUV 4:2:0) dependent upon the output display's EDID settings HDMI, HDCP, & DVI compliant, Supports HDCP repeating and CEC functions, Supports 1080p distances up to 100 meters through CAT5e/6 cables Uncompressed video 1080p, 60Hz, 48bits Audio support up to 7.1CH & Dolby TrueHD, DTS-HD 5-Play™ convergence: HDMI, LAN, PoC & Control (IR & RS232), Supports 3D signals, Supports 4K/2K & 4K UHD - CAT5e/6 = 70m & CAT6a/7 = 100m	CYP QU-125 CRESTRON	CYP QU-125 HD-DA-2	Surat Dukungan dari Principle	

MATERIAL REFERENCE

PROJECT : <i>Pembangunan Aula Jasa Raharja - Tahap 2</i>						
10	MNPC	Mini PC Intel Core i7-1165G7, 256 GB SSD, 16Gb DDR4, NVIDIA GeForce RTX 2060 6GB GDDR6, Windows 11 PRO	INTEL HP	IC 11 PHK17C000 Enthus ZZMiniG9PIDS	None	
11	CBL-1	Premium HDMI Cable 1m Full 4k / UHD resolution support (2160p @ 60Hz 4:4:4), HDR (High Dynamic Range) support, High quality insulated metal connectors with precision termination, High Bandwidth (full 18 Gbps), High Frame Rate (600MHz), BT.2020 Colorimetry (10/12 bit / 4:4:4), ARC (Audio Return Channel) support, CEC (Consumer Electronic Control) support 32 Channel Audio (Dolby Atmos and DTS:X) support, Full High Definition 3D support	Kramer, CYP, Crestron, Lindy	Kramer, CYP, Crestron, Lindy	None	
12	CBL-2	Premium HDMI Cable 7 meter Full 4k / UHD resolution support (2160p @ 60Hz 4:4:4), HDR (High Dynamic Range) support, High quality insulated metal connectors with precision termination, High Bandwidth (full 18 Gbps), High Frame Rate (600MHz), BT.2020 Colorimetry (10/12 bit / 4:4:4), ARC (Audio Return Channel) support, CEC (Consumer Electronic Control) support 32 Channel Audio (Dolby Atmos and DTS:X) support, Full High Definition 3D support	Kramer, CYP, Crestron, Lindy	Kramer, CYP, Crestron, Lindy	None	
13	SSD	Smart Sinaged Display 13 Inch 13" FHD, non-glare display delivering clear content. Compact and slim design enabling efficient use of space. Embedded MagicINFO 5 player to support seamless content playback. Rigid 3-layered Knox security system preventing any unauthorized access. Center IR and built-in Wi-Fi allowing convenient remote device control and management. EMC Class B and IP5x rating to ensure safe and reliable operation.	Samsung LG	Samsung Q813R, LG Digital Sinage	Nonc	
14	CM-TRC	PTZ Optical Camera Auto Tracking Capable of Production Quality Full HD Video Output up to 1080/60p via HDMI, USB and IP transmission, Easy Integration with Various Video Conferencing Software and Hard Codec System, Compact and Affordable Professional PTZ Conferencing Cameras with Superior Auto-Tracking Technology, Plug-and-Play Compatibility: USB connectivity to PC and Laptop, Featuring a 10x Optical Zoom that Delivers Smooth Pan, Tilt, and Zoom-in Performance, Accurate and Smooth Tracking Performance. Superior Continued Smooth Movement even in Situations where a Presenter is Writing on a Whiteboard or Close-up Shots, ITT Technology Enables 2 AREC CI-T21H PTZ Cameras to Track Two Objects Separately Without Any Interfering, Enable to Move and Work between Meeting Rooms Freely, Professional Integration Capabilities including RS-232 and VISCA Protocol. IP Control Available	Arec CI-T21H	Arec CI-T21H	Surat Dukungan dari Principle	
15	CM-FXC	PTZ Optical Camera Wide View Angle with IP Streaming; Featuring a 20x Optical Zoom that Delivers Smooth Pan, Tilt, and Zoom-in Performance, Capable of Production Quality Full HD Video Output up to 1080/60p via HDMI, USB 3.0 and IP Transmission, Plug-and-Play Compatibility: USB connectivity to PC and Laptop, IR Remote Control Included, Built-in Tally Light	Arec CI-22H	Arec CI-22H	Surat Dukungan dari Principle	
16	CM-MDS	MEDIA STATION Up to 3 Full HD Video Sources Capturing, Mixing, Switching, Recording and Live Streaming, HDMI, VGA, RJ-45 and Streaming Inputs, Touch-Friendly On-Screen Graphical User Interface, AREC Online Director: Easily Add Background Images, Overlays and Change Video Layouts in Video Making, Broadcast Your Mixed Video to up to 2 Platforms Simultaneously, Up to 3-inputs Sources Capturing and 4 Recording Video Outputs, Built-In Video Manager: Remote Management, Available APIs for Software Server Integration	AREC LS-300	AREC LS-300	Surat Dukungan dari Principle	
17	CM-MTZ	MOTORIZED BRACKET CAMERA Motorize Bracket Camera, Panjang Bracket Max 3 meter,	CUSTOM	CUSTOM		

MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2


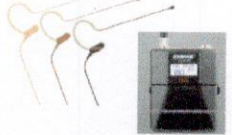




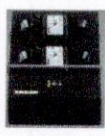


MATERIAL : AUDIO VISUAL & CONTROL SYSTEM

NO	KODE	TECHNICAL SPECIFICATION	BRAND	TYPE	DOCUMENT	SWATCH
1	LA-MH	Ultra-Compact Passive Line Array	NextAudio K-Array	LA26 Dragon KX12	Surat Dukungan dari Distributor	
2	LA-SW	Ultra-Compact Reflex Subwoofer	NextAudio K-Array	LAS15 KMT21	Surat Dukungan dari Distributor	
3	AU-MS	Monitor Speaker	NextAudio K-Array	Maverick MV12 KMT21	Dukungan dari Distr	
4	AU-PWR	4-Channel Power Rack	NextAudio K-Array	N-RAK 20 Amplifier	Dukungan dari Distr	
5	LA-BRK	Line Array Bracket	NextAudio K-Array	LA26FF -Fly 2B, K-Joint2B, Pin Join	Dukungan dari Distr	
6	AU-PC	Power Conditioner	Furman	CN-3600S E	None	
7	AU-DSP	Digital Signal Processor	Blamp	TeslraFORTÉ DAN CI	None	
8	AU-DM	Digital Mixer	Yamaha Midas	TF5 M32 LIVE	None	
9		Dante expansion card	Yamaha	Yamaha NY64-D	None	
10	AU-SB	Stage Box	Yamaha Midas	Yamaha Tio1608-D Console	None	

MATERIAL REFERENCE

PROJECT : *Pembangunan Aula Jasa Raharja - Tahap 2*


MATERIAL : *AUDIO VISUAL & CONTROL SYSTEM*

11	MIC-1	Handheld Wireless Microphone	SHURE Sennheiser	ULXD2 WIRELESS HH W/BETA58 HEAD Sennheiser	Surat Dukungan dari Distributor	
		AES 256-bit encryption for applications for which secure transmission is needed, Proprietary Shure Gain Ranging optimizes the system's dynamic range for any input source, eliminating the need for transmitter gain adjustments, Optional Shure SB900R lithium-ion rechargeable battery pack provides over 12 hours of battery life, precision metering in hours and minutes, and zero memory effect External charging contacts for docked charging (with the SBC200 Dual Docking Charger), Transmitter Mute Mode repurposes the On/Off switch into a mute switch, enabling audio muting while preserving RF channel presence, Backlit LCD with easy to navigate menu and controls, Rugged metal construction				
12	Mic-2	Headmic Wireless Microphone	SHURE	UXD1 BODYPACK TRANSMITTER DAN MX153T/O-TQG	Surat Dukungan dari Distributor	
		AES 256-bit encryption for applications requiring secure data transmission, Proprietary Shure Gain Ranging optimizes the system's dynamic range for any input source, eliminating the need for transmitter gain adjustments, Optional Shure SB900B lithium-ion rechargeable battery provides over 9 hours of battery life, precision metering in hours and minutes, and zero memory effect, External charging contacts for docked charging (with the SBC200 Dual Docking Charger), Backlit LCD with easy to navigate menu and controls, Rugged metal construction Detachable 1/4 wave antenna, Frequency and power lockout Earset headworn omnidirectional microphone delivers exceptional speech clarity and enhanced plosive protection with no proximity effect. It features CommShield technology to stop RF interference, 3 color options, 3 windscreens and a protective pouch				
13	MCR	Mic Wireless Receiver	SHURE Sennheiser	ULXD4 Sennheiser	Surat Dukungan dari Distributor	
		Predictive switching diversity, High Density mode optimizes ULX-D systems to simultaneously operate, significantly more channels in applications up to 30 meters, Intelligent scanning automatically finds and deploys the cleanest frequencies to transmitters over IR sync, Interference detection and alerts provided on both the receiver and Wireless Workbench® 6, Front panel gain adjustment buttons provide up to 60 dB additional gain, AES 256-bit encryption-enabled for applications where secure transmission is needed, Ethernet networking provides streamlined setup across multiple receivers, Wireless Workbench® 6 integration, and AMX/Creston control, Support for frequency coordination with the Axient® Spectrum Manager, Rugged metal chassis, Intuitive front panel LCD menu and controls with lockout feature, Upgraded LCD with adjustable contrast and brightness, Audio and RF LED meters with peak indicator, Remoteable 1/2 wave antennas Furnished rack hardware				
14	PDS	Power Distribution System	SHURE Sennheiser	UA845UWB-E Sennheiser	Surat Dukungan dari Distributor	
		Active Antenna/Power Distribution System, five-way, wideband VHF and UHF, Internal power supply				
15	MAS	Antenna Splitter	SHURE Sennheiser	UA221 Sennheiser	Surat Dukungan dari Distributor	
		Passive antenna splitter splits an incoming signal into 2 outgoing signals or combines 2 incoming signals into 1 signal				
16	ATN	Antenna	SHURE Sennheiser	UA874WB Sennheiser	Surat Dukungan dari Distributor	
		Active directional UHF and VHF antenna delivers improved wireless signal reception with integrated amplification. Features include greater rejection of RF signals outside the coverage area and an integrated amplifier with 4 gain settings				
17	MBC	Battery Charger	SHURE Sennheiser	SBC200-E Sennheiser	Surat Dukungan dari Distributor	
		Dual docking/recharging station charges batteries				
18	AFB	Audio Floorbox Inlet		Custom	None	
		2 Mono Audio Line Input				
16	AWB	Audio Wallbox Inlet Outlet		Custom	None	
		16 Mono Audio Input and 8 Output				

MATERIAL REFERENCE






PROJECT : *Pembangunan Aula Jasa Raharja - Tahap 2*

MATERIAL : **AUDIO VISUAL & CONTROL SYSTEM**

19	PSC	Professional Speaker Cable AWG (audio): 11, Properties: OFC oxygen free copper, Copper strands (audio): 56, Copper strand Ø (audio): 0,30 mm, Copper strand Ø (audio): 0.0118", Conductor insulation Ø: 4,20 mm, Conductor insulation Ø: 0.1654, UV-resistant: yes	Somer 240 Procab	Somer 240 Procab	None	
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MATERIAL REFERENCE

PROJECT : *Pembangunan Aula Jasa Raharja - Tahap 2*
 MATERIAL : *AV CONTROL SYSTEM*

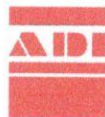
NO	KODE	TECHNICAL SPECIFICATION	BRAND	TYPE	DOCUMENT	SWATCH
1	CSP	4 Series Control System SDRAM2 GB, Flash, 8 GB, Memory Card, Supports SD and SDHC cards up to 32 GB, RELAY OUTPUT 1-8, I/O 1-8, IR - SERIAL OUTPUT 1-8, COM 1,2,3, Support Smart Graphic.	Crestron	CP4	Surat Dukungan dari Distributor	
2		Crestron Mobile include Touchsreen Panel Crestron Mobile include touchscreen panel for android or ios system	Crestron Mobile	Crestron Mobile	Surat Dukungan dari Distributor	
3	KYP	Keypad Control Single-gang U.S. wall box installation with faceplate included, Gangable up to four across using Crestron® Horizon™ device compatible multi-gang faceplates (HZ-FP-G series), Configurable with up to five field-replaceable buttons, Custom backlit laser-etched engravable buttons, Multicolor RGB LED backlighting, Auto-dimming day/night backlight modes, Fully programmable via a Crestron control system, Dual Cresnet® ports for easy daisy-chaining, Two control input ports for external sensors	Crestron	HZ-KPCN	Surat Dukungan dari Distributor	
4	WAP	Wireless Access Point supports peak data rates of up to 1774 Mbps and efficiently manages up to 512 clients connections. Stunning Wi-Fi Performance - Mitigate interference and extend coverage,	Ruckus Asus Cisco Netgear Alliedtelesis	Ruckus Asus Cisco Netgear Alliedtelesis	None	
5	CTR-NS	Ethernet Switch 48-Port Gigabit Ethernet Smart Switch With 2 Dedicated SFP Ports, IGMP and MLD snooping, providing advanced multicast filtering,	Netgear Cisco Allied telesis	GS748T Cisco Allied telesis	None	
ACCESSORIES						
1		Equipment Rack 42U 19 inch Cabinet Rack, Glass Door Close Rack, Dimension (DxWxH) 900 x 600 x 2050 mm, Include 5 fixed shelf c/w power supply, fan modular and patchpanel, Ups	Generic	Generic	None	
2		Standing Microphone wireless/wired mics, Heavy Duty Telescoping Microphone	Generic	Generic	None	
3		Installation Material Installation material, c/o. cables, connectors, conduits, stabilizers, customize wall and	Generic	Generic	None	
4		Programming, Setting, Configuration Audio Setting, Configuration and Automation Programming, As Built Drawing	Generic	Generic	None	



JASA RAHARJA

**SPESIFIKASI MATERIAL
SPECIAL LIGHTING & LIGHTING CONTROL**

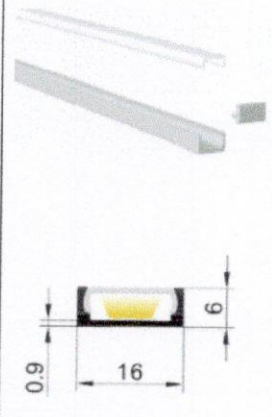
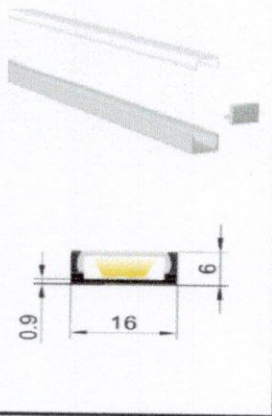
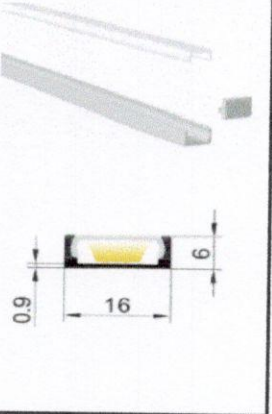
**PEMBANGUNAN AULA JASA RAHARJA
TAHAP 2**



PT. ASRI DESINDO INTIWIDYA

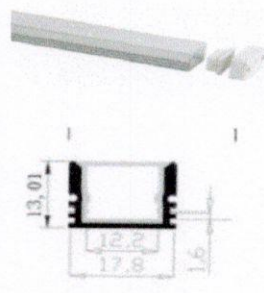
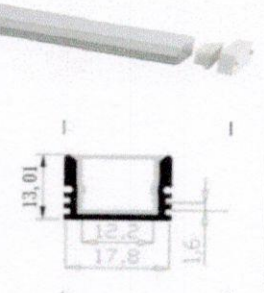



MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2
 MATERIAL : SPECIAL LIGHTING

KODE	TECHNICAL SPECIFICATION	SOURCE	DOCUMENT	SWATCH
CL1A	<p>Continuous Linier Indirect Lighting with Bendable Aluminium Profile</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>MERK : A. Aluminium Profile : Aalight, Reff code LR1606 B. Ledstrip : Moxa C. Driver : Meanwell</p> <p>Dimensi : Lebar 16mm, Tinggi 6mm, Ketebalan 0,9mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	1. Lightnco	Surat Dukungan dari Distributor	
CL2	<p>Continuous Linier Indirect Lighting with Bendable Aluminium Profile</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>MERK : A. Aluminium Profile : Aalight, Reff code LR1606 B. Ledstrip : Signcomplex, C. Driver : Meanwell</p> <p>Dimensi : Lebar 16mm, Tinggi 6mm, Ketebalan 0,9mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	1. Lightnco	Surat Dukungan dari Distributor	
CL2D	<p>Dimmable Continuous Linier Indirect Lighting with Bendable Aluminium Profile</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>MERK : A. Aluminium Profile : Aalight, Reff code LR1606 B. Ledstrip : Signcomplex, C. Driver : Euchips (1-10Vdc Dimming System)</p> <p>Dimensi : Lebar 16mm, Tinggi 6mm, Ketebalan 0,9mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	1. Lightnco	Dukungan dari Distr	

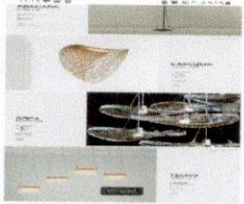



MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2
 MATERIAL : SPECIAL LIGHTING

<p>CL3</p>	<p>Continuous Linier Indirect Lighting with Aluminium Profile</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI</p> <p>MERK : A. Aluminium Profile : Aalight, Reff code LW1812 B. Ledstrip : Signcomplex, C. Driver : Meanwell</p> <p>Dimensi : Lebar 17,8mm, Tinggi 13mm, Ketebalan 1,6mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>CL3D</p>	<p>Dimmable Continuous Linier Indirect Lighting with Aluminium Profile</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI</p> <p>MERK : A. Aluminium Profile : Aalight, Reff code LW1812 B. Ledstrip : Signcomplex, C. Driver : Euchips (1-10Vdc Dimming System)</p> <p>Dimensi : Lebar 17,8mm, Tinggi 13mm, Ketebalan 1,6mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>DK2</p>	<p>Dimmable Driver for Ledstrip Light</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>MERK : Euchips</p> <p>Dimensi : Panjang 206mm, Lebar 75mm, Tinggi 41mm</p> <p>Material : Aluminium Extrusion</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	 <p>Wiring Diagram</p> 
<p>HL.INT2</p>	<p>Decorative Pendant Lamp</p> <p>Area : Lobby Belakang</p> <p>SPESIFIKASI</p> <p>MERK : Flos 2097 (OEM)</p> <p>Dimensi : Diameter 780mm, Tinggi 700mm</p> <p>Material : Besi</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample / katalog untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	



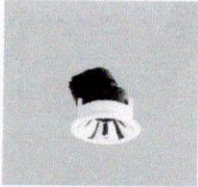

MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2
 MATERIAL : SPECIAL LIGHTING

<p>HL.INT3</p>	<p>Decorative Pendant Lamp</p> <p>Area : Lobby Aula (Prefunction)</p> <p>SPESIFIKASI</p> <p>MERK : Roca (OEM) Dimensi : 31 x 200 44 x 100 x 60 Material : Iron + glass</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample / katalog untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL7.2A</p>	<p>Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code IRS 103-10 Dimensi : Diameter 95mm, Tinggi 110mm Material : Aluminium Die-cast Lamp : 10W Cree Cob 3000K 24 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL7.2B</p>	<p>Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code IRS 103-10 Dimensi : Diameter 95mm, Tinggi 110mm Material : Aluminium Die-cast Lamp : 10W Cree Cob 3000K 38 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL7.3B</p>	<p>Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code IRS 103-15 Dimensi : Diameter 95mm, Tinggi 110mm Material : Aluminium Die-cast Lamp : 15W Cree Cob 3000K 40 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	

MATERIAL REFERENCE



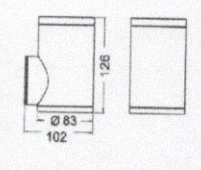

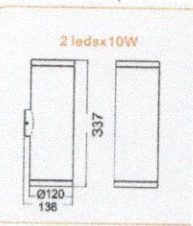

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2
 MATERIAL : SPECIAL LIGHTING




<p>RDL23</p>	<p>Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code IRG 103-15 Dimensi : Diameter 137mm, Tinggi 87mm Material : Aluminium Die-cast Lamp : 15W Cree Cob 3000K 60 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL24A</p>	<p>Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Panasonic, Philips Dimensi : Diameter 125mm, Tinggi 35mm Material : Aluminium</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Panasonic 2. Philips</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL32D</p>	<p>Dimmable Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Titan, Reff Code DW382A Dimensi : Diameter 80mm, Tinggi 67mm Material : Aluminium Die-cast Lamp : 9W Sharp Cob 3000K 15 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	
<p>RDL35D</p>	<p>Dimmable Recessed Led Downlight</p> <p>Area : Sesuai yang tertera dalam gambar kerja</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code IRS 101-20 Dimensi : Diameter 110mm, Tinggi 135mm Material : Aluminium Die-cast Lamp : 20W Cree Cob 3000K 24 Degree</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari Distributor</p>	

MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2

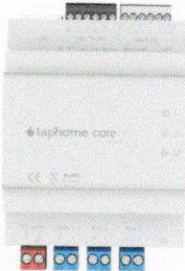

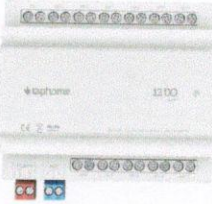

MATERIAL : SPECIAL LIGHTING

<p>STG1</p>	<p>Moving Head Led Stage Lighting</p> <p>Area : Ballroom</p> <p>SPESIFIKASI :</p> <p>Merk : Redsun, Reff Code LM-M230</p> <p>Power : 100W Led 13 Colours 16 Channel Mode</p> <p>Material : Aluminium Die-cast</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample / katalog untuk disetujui</p>	<p>1. EST617</p>	<p>Surat Dukungan dari Distributor</p>	
<p>MX1</p>	<p>Mixer Controller Lighting DMX 512 Channel</p> <p>Area : Ballroom</p> <p>SPESIFIKASI :</p> <p>Merk : Redsun, Reff Code Disco240-16CHX24</p> <p>Dimensi : Panjang 48cm, Lebar 22cm, Tinggi 6cm</p> <p>Berat : 5,5 Kg</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample / katalog untuk disetujui</p>	<p>1. EST617</p>	<p>Surat Dukungan dari Distributor</p>	
<p>WL8</p>	<p>OUTDOOR WALL LIGHT 1 ARAH</p> <p>Area : DINDING PARKIR/DINDING PERIMETER</p> <p>SPESIFIKASI :</p> <p>Merk : Rise, Reff Code SYW9023</p> <p>Dimensi : Liat Gambar</p> <p>Material : Aluminium Die Cast</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p> 	<p>Surat Dukungan dari Distributor</p>	
<p>WL8A</p>	<p>OUTDOOR WALL LIGHT 2 ARAH</p> <p>Area : Area Tunggu Supir</p> <p>SPESIFIKASI :</p> <p>Merk : Rise, Reff Code SYW9020</p> <p>Dimensi : Liat Gambar</p> <p>Material : Aluminium Die Cast</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>		<p>Surat Dukungan dari Distributor</p>	

<p>WW24</p>	<p>Outdoor RGBW Wall Washer</p> <p>Area : Facade</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code OWG X01-RGBW Dimensi : 35mm x 32mm x 1000mm Beam Angle : Asymmetric Optic 10 x 60 degree Material : Aluminium Die Cast</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari [</p>	
<p>MX2</p>	<p>Mixer Controller Lighting DMX 512 Channel</p> <p>Area : Ballroom</p> <p>SPESIFIKASI :</p> <p>Merk : Lightnco, Reff code SY 408 Dimensi : 220mm x 142mm x 45mm Power : Max 5W with SD Card</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample / katalog untuk disetujui</p>	<p>1. Lightnco</p>	<p>Surat Dukungan dari [</p>	
<p>EX1</p>	<p>Exit Lamp</p> <p>Area : Exit Koridor</p> <p>SPECIFICATION:</p> <p>Material : Aluminium Watt : 3 W baterai : HTR-Nicad Cell (3,6 atau 4,8 Volt) Voltase : 110-220V</p> <p>DIMENSION:</p> <p>L 380 x W 60 X H273 mm</p> <p>Berat (kg) : 2,8 Warna Body putih Warna Cahaya hijau</p> <p>Note : Pelaksana pekerjaan harus menyampaikan sample warna untuk disetujui</p>	<p>1. Lightnco</p>		


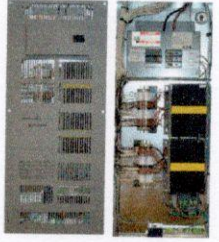
MATERIAL REFERENCE

PROJECT : *Pembangunan Aula Jasa Raharja - Tahap 2*
 MATERIAL : *LIGHTING CONTROL*

KODE	TECHNICAL SPECIFICATION	BRAND	TYPE	DOCUMENT	SWATCH
CTRL-C	<ul style="list-style-type: none"> - Linux computer - 3 universal bus terminals for: TapHome IO modules. One terminal can handle a maximum of 32 bus modules. ModBus RTU / TCP for third party devices, e.g. air ventilation system - 6 universal inputs configurable for: <ul style="list-style-type: none"> NTC temperature inputs with resistance measurement range 100Ohm - 100kOhm +-500Ohm. Measurement deviation on 1km Cat6 cable: -0.3 °C at 25 °C. Push button inputs Reed / status inputs Impulse counter inputs, frequency 100Hz per channel, sample rate 200Hz per channel, pulse on time > 5 milliseconds Analog inputs 0-10V with voltage measurement range 0-12VDC, single-ended type, resolution 8bits, accuracy 0.1% of full scale, input impedance >16kOhm, normal mode rejection 50dB at 55Hz, conversion time 1250 milliseconds For analog input 4-20mA it is necessary to connect a 5000Ohm resistor and set in Service settings of the input minimum voltage to 2V - 6 open collector outputs for switching of LED lights on push button switches, maximum current 600mA, maximum 38VDC for each output. - LAN port - Power supply 24VDC +-10% - Energy consumption 7W - Operating temperature: 0 - 45 °C 	Taphome Crestron	Core CLX-PWS75	Surat Dukungan dari Principle	
CTRL-PS	Power source 24V 100W 4.2A DIN rail, 6 modules	Meanwell Crestron	PS - 24V 100W CLX-PWS75		
CTRL-RY	12x potential-free relay outputs, 16A, inrush current 500A/2ms Relay lifetime: 100 000 cycles under maximum load, 2 000 000 cycles under average load Maximum total load 50A Output configurations: Standalone switched output AC blinds motor with internal blocking of both outputs PWM output Standby energy consumption: 1W Energy consumption for one relay closed: 0.4W Power dissipation for each 1A of load: 0.16W Maximum power dissipation at full load of 70A for all relays closed: $1 \times 0.4 \times 12 + 0.16 \times 70 = 17W$ Power supply 24VDC +-10% Protection: IP20, operating temperature: -20°C to 40°C DIN rail, 6 modules. Width 107 mm, height 59 mm.	Taphome Crestron	12 DO GLXP-HSW12	Surat Dukungan dari Principle	
CTRL-DM	220 - 240 VAC LED light dimming 4 channels Loads: Capacitive loads (LED bulbs): Maximum 100VA per channel, maximum 10 LED bulbs per channel Resistive loads: Maximum 250W per channel Short circuit protection, temperature protection per each channel Total load for the whole module max 4A Every dimmed light or group of lights needs to have its own N connected Leading edge / trailing edge - can be configured via the app Tested with Philips Warmglow and Ikea dimmable LED bulbs Energy consumption 1W / Power loss at maximum load 4W Operating temperature: -20 - 55 °C DIN rail, 6 modules. Width 107 mm, height 59 mm.	Taphome Crestron	4 Dim CLX-1DIMU4	Surat Dukungan dari Principle	

MATERIAL REFERENCE

PROJECT : Pembangunan Aula Jasa Raharja - Tahap 2
 MATERIAL : LIGHTING CONTROL

CTRL-DL	<p>12 LED / OC outputs configurable for: Switch - open collector digital outputs LED Dimmer - works with constant voltage LED lights, typically LED strips Pulse-width modulation - PWM output frequency is configurable from 100Hz to 25kHz Output properties: Maximum current 4A DC per channel Maximum total load 25A Maximum voltage 48VDC per channel Recommended cable lengths between the light and the module are: 30 meters for 1.5mm² cable 45 meters for 2.5mm² cable Protection IP20, operating temperature: -20°C to +55 °C Maximum power dissipation 3W Power supply 24VDC ±10% DIN rail, 6 modules. Width 107mm, height 59mm.</p>	Taphome Crestron	12 LED / OC CLX-2DIMFLV8	Surat Dukungan dari Principle	
CTRL-PL	<p>Lighting Panel include MCB Main Lug Only enclosure Houses 200 - 240 V dimming and switching modules Provides 42 circuits per enclosure with integrated breaker panel Provides up to 3 module spaces Hinged doors in cover for breaker and lighting module access Surface mountable</p>	Custom	Custom	Custom	

VENDOR CONTACT PERSON

NO	MEREK	PRODUK	CONTACT PERSON	NO. HP
1	JSM	LINIER DIFFUSER & RETURN GRILL AC	BP IVAN	0878 8383 6653
2	POLAR	FLEXIBLE DUCT ISOLASI & AKSESORIES	HANI	0857 2261 1888
3	KARANG PILANG	KUSEN PINTU & JENDELA UPVC	IBU EKA K	0812 8882 0184
4	KNAUF	GYPNUM BOARD DENSESHIELD & STANDARD	IBU AYU SINURAT	0821 7535 5412
5	AQUAPANEL	PAPAN SEMEN OUTDOOR	BP IRON	
6	JOF METAL	PLAFOND METAL	BP RUSBIANTO	0816 869 230, 081319569293
7	SHANGHAI MITSUBISHI	LIFT	BP. ROFIK	0855 7000 134
8	MITSUBISHI ELECTRIC	AC	BP ARYANTO	0811 920 109
9	PT. UTAMA VISUAL TEKNOLOGI	AUDIO, VIDEO, & CONTROL SYSTEM	BP SYAH REZA	0815 8350 461
10	PT. SMART INTEGRATER SOLUTION	AUDIO, VIDEO, & CONTROL SYSTEM	IBU MIDA	0813 1566 5915
11	PT. ASTRAGRAPHIA XPRINS INDONESIA	AUDIO, VIDEO, & CONTROL SYSTEM	BP DWI ERIANTO	0899 888 1950
12	PT. CASA MITRA INTERNUSA	LIGHTING & CONTROL LIGHTING	BP SYAMSUL FACHRUROJI	087879508229
13	MILLIKEN	CARPET TILE	IBU MARISNA	0811 1004 577
14	SERBA ANTIK	CURTAIN HITAM - AULA	BP. RAJESH	0855 1196 600
15	DECORA	CARPET RUG - WALL TO WALL	IBU DEBBY	0838 9567 8919
16	INDOVICKERS	PANGGUNG LIPAT PORTABLE, MEJA BULAT LIPAT, KURSI	IBU NESTY	0897 9146 416
17	WILSONART / ARBORITE / CARTA	HPL	BP HANIF	0811 1079 982
18	GRASMERINO	HPL	IBU YULI	0812 981 1155
19	GOODRICH	WALLPAPER	TYAS	0878 8489 5877
20	MURASPEC	WALLPAPER	IBU KIKI	0813 8802 6464
21	GEZE	DOOR & WINDOW SYSTEM	BP ENGGAR	0822 3308 4286
22	KENARI DJAJA	DOOR & WINDOW SYSTEM	BP ALBERT	0812 8821 3780