

PAVLight 622 Free Space Optical System

PAVLight 622Mbps FSO Communications System

PAVLight 622

PAVLight 622 is a free space optical system designed to enable high speed communication of voice, data and video over distances up to 1000m between link heads which have a clear line of sight between them.

This system can transmit data rates of up to 622Mbps and is available in 500m or 1000m configurations. The 500m system uses one laser transmitter and one receiver while the 1000m system uses three transmitters to provide the extra power for the greater distance.

Benefits

- Simple rapid installation within hours
- No frequency license allocation required
- Modular design - modules easily changed
- High availability
- High bandwidth
- Redeployable – moves with your network
- Interfaces with fibre optic cable
- High security system – inherent in FSO technology
- Full technical support provided
- Warranty extension available
- Compact all weather design for permanent outdoor use
- Optional Indoor Unit to monitor system status
- Rapid payback (ROI)
- No ongoing leasing costs or licensing cost
- No environmental disruption for infrastructure

Features

- Digital electronics
- Indicator LEDs on link head and on optional IDU
- Safety interlocks designed to ensure greater safety for installers
- Clear LED information and Alarm relay outputs
- Integrated retiming (CDR without IDU)



The PAVLight Linkhead (Outdoor Unit)

Applications

- Building to building connectivity
- Last mile connection to fibre optic network
- Substitution for fibre optic cable
- LAN extension
- Broadband internet access
- Integration of voice, data and video on a single link
- Disaster Recovery / Business Continuity

Options

Indoor unit

The provision of an indoor unit, which consists of a 19" rack mounted unit, enables system status monitoring by non-technical staff who can read the link status and see any fault conditions immediately. It also enables upgrades to the link with no need to access the link head. The IDU houses the Personality Interface Module (PIM) which specifies the speed and physical presentation of the interface. It also adds retiming/regeneration functionality on systems with a data rate greater than 100Mbps.



The PAVLight Indoor Unit (IDU)

SNMP Management system

An optional SNMP Management Interface board is available for those customers who require SNMP management of the link.

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Specification for PAVLight 1.5 – 622Mbps

Outdoor unit		1 Tx System	3 Tx System
Product Code		PL 622 1TX	PL 622 3TX
Performance	Effective Data Rate	1.5 – 622 Mbps	1.5 – 622Mbps
	Range (metres)	500	1500
	Bit Error Rate	>10E ⁻¹⁰	>10E ⁻¹⁰
	MTBF (hours)	105,000	105,000
Transmitter	Number of Transmitters	1	3
	Light Source	Laser Diode	Laser Diode
	Laser Class	1M	1M
	Wavelength (nm)	810	810
	Output Power (dBm)	14	18.75
	NOHD/ENOHD@d63 (IEC60825-1) (m)	0/92	0/92
	NHZ/NHZ-Aided@d63 (IEC60825-12) (m)	0/92	0/92
Beam Divergence (mrad)	3	3 x 3	
Receiver	Detector Type	APD	APD
	Field of View	15°	15°
	Sensitivity (dBm)	-45 to -20	-45 to -20
Client Interface	Presentation Connectors Systems	Fibre Optic Dual SC ATM622, STM-4, STS-12, OC-12	
	Cable	1300nm MM or 1300nm SM Fibre	
Interface to IDU (Optional)	Presentation Connectors	Fibre Optic Dual SC	
	Cable	Multi or Single Mode Fibre	
Power Supply	Input Voltage	19.5 - 72 V DC	
	Power Consumption (Watts)	10	15
Environmental Information	Operating Temperature (°C)	-40 to +65	
	Operating Humidity	95% (non condensing)	
	Enclosure	IP66	
Mechanical Design	Link Head Dimensions W x L x H (mm)	350 x 550 x 198	350 x 550 x 390
	Mounting bracket	200 x 200 x 76	200 x 200 x 76
	Height including mounting bracket	274	469
	Weight (kg)	8.5	14.9
Indoor Unit (Optional)			
ODU Interface	Presentation Connectors	Fibre Optic Dual SC	
	Cable	Multimode or Single Mode Fibre	
Client Interface	Presentation Connectors Systems	Fibre Optic Dual SC ATM622, STM-4, STS-12, OC-12	
	Cable	1300nm MM or 1300nm SM Fibre	
Power Supply	Input Voltage (V)	90-240VAC (Autoranging)	
	Power Consumption (Watts)	10	
Environmental Information	Operating Temperature (°C)	0 to +40	
	Operating Humidity	90% (non condensing)	
	Enclosure	IP30	
Mechanical Design	Dimensions W x L x H (mm)	435 x 44 x 253	
	Weight (kg)	2	
Indicator LEDs	ODU Rx Data	(Green)	
	Client Rx Dta	(Green)	
	Retiming Sync	(Orange)	
	ODU Rx Data	(Yellow)	
	Power Input	(Green)	

Alarm LEDs (Red) ODU Power Fail, ODU Rx Fail, ODU Tx Fail

Alarm Relay Output ODU Power Fail, ODU Rx Fail, ODU Tx Fail, Signal Loss, Optical Rx Fail, Optical Tx Fail

PAV Data Systems maintain a continuous process of research and development, and as such, all specifications within this document are subject to change without notice.