CAS-GPS Light Vehicle System

VP for portable installations

Industrial grade Proximity Detection System that provides real-time 360-degree situational awareness to Light Vehicle operators. Suited to portable Light Vehicle installations that are deployed on a daily basis. Also available in a fixed configuration for permanent installations.

The Portable Light Vehicle System comprises the following key components:

Display Operator interface with colour graphics touchscreen, processor unit, audio system, in-built Wi-Fi and optional cellular[1] for CAS-WEB reporting.

Node Includes high performance GPS receiver, Vehicle to Vehicle (V2V) radio transceiver optional high accuracy Time-of-Flight (ToF) RF proximity unit and Personal Area Network. The Node communicates with the Display via a IEEE 802.15.1 wireless link. The node is battery powered and contains a magnetic base for roof mounting on a light vehicle.

Charger For charging the Display and Node after removal from a vehicle.

System Features

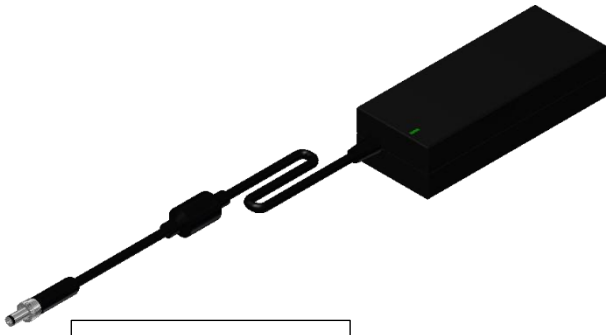
- Industrial Grade Intelligent Display with 4.3” touchscreen & mounting accessories
- Common user interface with 7” version used for Heavy and Medium vehicles
- Supports Wi-Fi and/or cellular communications for CAS-WEB reporting
- Supports voice alerts to programmable proximity alarm logic & geofence rules
- High-performance multi-constellation GNSS receiver, V2V digital radio, optional high accuracy ToF RF & IEEE 802.15.1 link
- Certified Short-Range Device (SRD) V2V radio (ordered for specific region)
- Battery powered Node with magnetic base and Personal network communications to Display
- Node requires charging daily. Battery level monitoring on Display.
- Windscreen-mounted suction cup with adjustable arm for Display mounting
- Display is powered from vehicle 12/24V_{DC} socket
- System can be tested at Charger Station or Test Station (supplied separately)

Specifications	PROD1044 Display	PROD1116-P Type P Node	PROD0653 Charger
System	Internal audio system Internal ambient light sensor Linux O/S 4.3" size Resolution: 480 x 800 Brightness: 400 (typ.) Capacitive touchscreen	GPS, GLONASS, Galileo, QZSS, SBAS compatible Horizontal accuracy up to CEP_{50} 2.5m, 24 hours static, -130 dBm, > 6 SVs 10Hz refresh rate	Universal AC Input Class I Power supply, with dual socket adaptor
Power Supply	Powered from Vehicle 12/24V_{DC} socket	3.6V Lithium-ion battery powered	90-264V_{AC} 1.4A 47-63Hz input 12V_{DC} 5A output
Optional RF Sub Systems	Wi-Fi 802.11 b/g/n	Time of Flight ranging 10mW, +2dBi peak gain antenna 2.4Ghz based IEEE802.15.4a Range limited to 250m line of sight (environment-dependent) Accuracy up to ±2m (depends on mode) Mode 22MHz or 80MHz B/W	N/A
Cellular[1]	GSM/GPRS/EDGE, UMTS/HSPA+		
IEEE 802.15.1	2.4GHz PAN Up to +11dBm EIRP	2.4GHz PAN Up to +14dBm EIRP	N/A
Non-ranging telemetry between systems	N/A	Refer also to Region Variants table Spectrum Opportunity Detection 'listen-before-talk' mode of operation	N/A
Charge Time[2]	N/A	5.5 hours	N/A
Holdup Time	N/A	24 hours[3]	N/A
Operating Temp	-10 to +60°C	-10 to 60°C	-30 to 70°C
Storage Temp	-20 to +60°C	-20 to 60°C	-40 to 85°C
Operating Humidity	5% to 95% RH	5% to 95% RH	20 to 90% RH
Weight	0.5kg (including basic mount)	1.7kg	0.4kg
Size (HxWxD)	141x85x82mm (including basic mount)	150x133x145mm	125x50x32mm (P/S) 60x100x82mm (socket) 1m dc cable
IP Rating		IP66	No rating
Vibration rating		IEC Mechanical Class 5M3	No rating
Shock rating		IEC Mechanical Class 5M2	No rating
Compliance	Certified for use in South Africa, USA, Canada & Australia.System pending certification for use in Europe, Ghana, Brazil, PNG, Mexico, Peru, Chile, Colombia, India, Russia, Indonesia.		

1 Dependent upon availability of end-user-provided cellular network coverage and SIM card, data charges may apply
2 Maximum charge time from 0% to 90% state of charge over 0°C to 35°C external ambient temperature, longer charge times apply outside this temperature range
3 At 0°C to 60°C external ambient temperature, reduces to 18 hours between -10°C and 0°C. Varies with mode of operation (GPS + V2V + Ranging RF + PAN active).

Region Variants	Region 1	Region 2	Region 4	Region 5	Region 7
Countries	South Africa Europe Ghana Mozambique	Brazil, USA Canada, PNG Australia Mexico Peru, Chile Colombia	India	Russia	Indonesia
Digital Radio Centre Freq.	869.525 MHz	920 MHz	866MHz	864.5MHz pending	924 MHz
Transmit Power	100mW	100mW	100mW	25mW	100mW

PROD1044 DISPLAY
(shown with PROD1149 DISPLAY MOUNT and SUCTION CUP MOUNT)



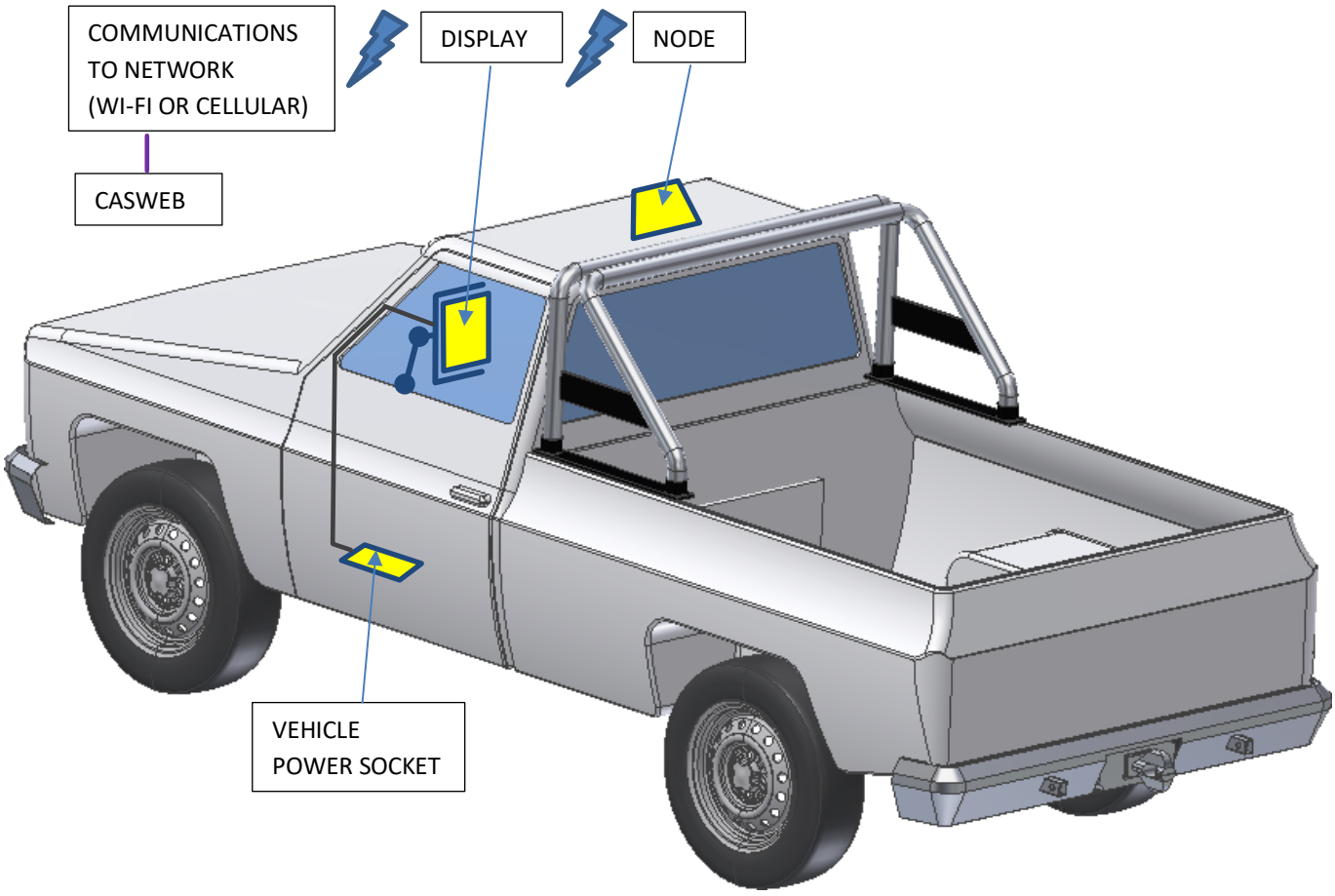
PROD0653 CHARGER

PROD1116-P
CAS-GPS NODE
TYPE P

PROD1155-P
DISPLAY CABLE

PROD0677
CHARGE CABLE

Typical Installation Layout



Refer installation manual for wiring details and precautions

System Part Number Reference

Item #	Description
CG-WRVP-XXKXX	CAS GPS + WIFI REGION R VISITOR PORTABLE WITH INSTALLATION KIT TO SUIT
CG-BRVP-XXKXX	CAS GPS + WIFI + GSM REGION R VISITOR PORTABLE WITH INSTALLATION KIT TO SUIT
CG-WRVP-XXKXX-NT	CAS GPS + WIFI REGION R VISITOR PORTABLE WITH INSTALLATION KIT TO SUIT NO ToF
CG-BRVP-XXKXX-NT	CAS GPS + WIFI + GSM REGION R VISITOR PORTABLE WITH INSTALLATION KIT TO SUIT NO ToF

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