

PROD1177 IVU PLUS

In Vehicle Unit



Rugged, multipurpose telematics computer. Applications include CAS-GPS collision avoidance, vehicle monitoring, fleet management and general remote data logging and management.

Features

- Connectivity: LTE, Wi-Fi, Ethernet, 2x CAN, 1x RS485, 1x RS232, 1x USB, video input, 2x digital out, 4x digital inputs
- High speed display link (proprietary for use with Wabtec display providing touch screen, audio and microphone)
- Internal and SD card flash storage
- Critical functions battery-backed up for standby operation
- Internal MEMS (accelerometers)
- Internal altimeter/pressure sensor
- IP66 ingress protection
- 9-36VDC automotive rated input voltage

Specifications

Main CPU	ARM® Cortex®-A9 Quad core 32bit processor, 800MHz
Standby CPU	ARM 32-bit Cortex™ M3
Memory Card	Micro SD
RAM	1GB DDR3
Flash	16GB NAND
Sensors	3-axis gyroscope, accelerometer Altimeter -500m to 9000m
Main interface	Deutsch DRC series 24-pin connector – refer connection table
Digital Output	2 x Open Drain Solid state relays, 60V Max / 250mA Max
12V DC Output	1 x 12VDC @ 1.2A Max
Digital Inputs	4 x single ended inputs (referenced to common power ground), 60Vdc Tolerant/@30mA max, 3Vdc logic threshold
CAN interface	Dual 1Mbps CAN channels
USB interface	1 x USB2.OTG port
Other	2 x RS232/485 S/W configurable
Video input	1 x differential composite video (PAL or NTSC)
LAN interface	1 x 100BASE-T on M12 (code D)
RF connectors	Multiple TNC connectors

V2V SRD up to 100mW

Radio

GNSS The product is offered in three variants: Standard (S), High (H) and Ultra-High (U) Precision

Product variants	Standard (PROD1177)	High Precision (PROD1177-H)	Ultra-High Precision (PROD1177-U)	
Rx Channels	72	184	448	
GPS	L1	L1, L2	L1, L2	
GLONASS	L1	L1, L2	L1, L2	
Galileo1	E1	E1, E5	E1, E5	
BeiDou1	B1	B1, B2	B1, B2	
QZSS	Not applicable	L1, L2	L1, L2	
SBAS	Not applicable	Not applicable	L1	
Accuracy (CEP₅₀)	Horizontal		Horizontal	
	Standalone	2.5m	Standalone	1.5m
	-	-	-	-
	-	-	RTK	1.0cm
PVT Update rate	10Hz (2 concurrent constellations)	20Hz (2 concurrent constellations)	100Hz/ 50Hz with heading (all constellations)	
Heading (1σ)	-	Better than 1°, 1m separation (requires secondary receiver, using moving-baseline RTK, 8Hz)	0.15°, 1m separation (dual antennas, standalone)	
Enhanced robustness			anti-jamming and monitoring against narrow and wideband interference advanced scintillation mitigation a posteriori multipath estimator for code and phase multipath mitigation superior tracking robustness under heavy mechanical shocks or vibrations	

WAN Multi Band LTE Cat 1 with 2G / 3G Fallback for Seamless Global Connectivity

LTE Bands: 1, 2, 3, 4, 5, 7, 8, 12(17), 18, 19, 20, 28
 3G Bands: 1, 2, 4, 5, 8, 9, 19
 2G Bands: Quad Band

WLAN IEEE 802.11a/b/g/n Wi-Fi 1W

a/n: 5.15GHz ~ 5.85GHz (bands depend on country requirements)
 b/g/n: 2.414GHz ~ 2.4835GHz

Size 290 wide x 72 high x 130mm deep (basic), Mounting Footprint 215x48mm (suits 4 x M8 SHCS)

Weight 2kg

IP Rating IP66

Operating Temp. -15°C to +60°C

Typical battery backup LiFePO₄, 3.2V, 10Wh, UN38.3 Certification
 14hrs standby operation (with V2V active), 3hrs charge time.

Part Number Reference

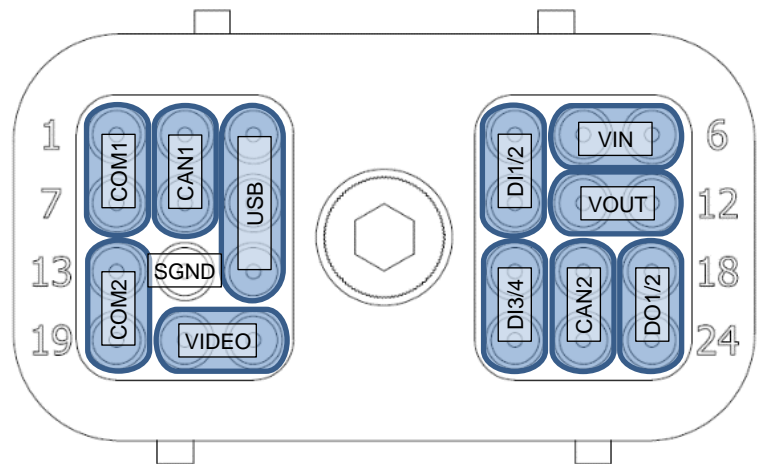
Item #	Description
PROD1177-COUNTRY	Unit can be configured to match individual country requirements

Markets (Pending Regulatory Approval)

Country	Australia	USA	S/Africa	Canada
Regulatory Authority	ACMA	FCC	ICASA	ISED
Country	Chile	Europe	Brazil	Russia
Regulatory Authority	SUBTEL	CE	ANATEL	ROSSVYAZ
Country	PNG	India	Mexico	Indonesia
Regulatory Authority	NICTA	WPC	IFETEL	POSTEL
Country	Peru	Colombia	Ghana	Mozambique
Regulatory Authority	MTC	CRC	NCA	INCM
Country	Mongolia			
Regulatory Authority	CRC			

Connections

Pin	Signal	Function
1	COM1	RS232 Tx / RS485A
7	COM1	RS232 Rx / RS485B
2	CAN1-P	CAN1 High
8	CAN1-N	CAN1 Low
3	USB5V	USB supply out
9	USBD-N	USBD-N
15	USBD-P	USBD-P
4	DIN1	Digital Input 1+
10	DIN2	Digital Input 2+
5	GND Vin	Input Power -ve
6	PWR Vin	Input Power +ve
11	GND Vo	Vout Ground
12	12Vo	Vout +12V
13	COM2	RS232 Tx / RS485A
19	COM2	RS232 Rx / RS485B
14	SGND	Signal Ground
16	DIN3	Digital Input 3+
22	DIN4	Digital Input 4+
17	CAN2-P	CAN2 High
23	CAN2-N	CAN2 Low
18	DOUT1	Digital Output 1+
24	DOUT2	Digital Output 2+
20	VID	Video-
21	VID	Video+



CONNECTIONS TO THE IVU PLUS ARE
 MADE USING DEUTSCH DRC26-24SA

Contact

Web	www.wabteccorp.com
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