

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: LTE¹, 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 operation²
- 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, Operating frequencies 902-928 MHz, 869.525 MHz, 864.5 MHz, 866MHz (depends on regulatory authority)		
Radio			
GNSS	The product is offered in two variants: High (H) and Ultra-High (U) Precision		
Product variants	High Precision PROD1177-H PROD1177-HX PROD1177-WH PROD1177-WHX		Ultra-High Precision PROD1177-U PROD1177-UX PROD1177-WU PROD1177-WUX
Rx Channels	184		448
GPS	L1, L2		L1, L2
GLONASS	L1, L2		L1, L2
Galileo1	E1, E5		E1, E5
BeiDou1	B1, B2		B1, B2
QZSS	L1, L2		L1, L2
SBAS	Not applicable		L1
Accuracy (CEP₅₀)	Standalone	Horizontal 1.5m	Standalone 1.0m
	-		SBAS 0.5m
	-		DGNSS 0.3m
	RTK	1.0cm	RTK 0.5cm
PVT Update rate	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		
Optional WAN¹	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 -40°C to +70°C for No Battery variant		
Typical battery backup²	LiFePO ₄ , 3.2V, 10Wh, UN38.3 Certification 14hrs standby operation (with V2V active), 3hrs charge time.		

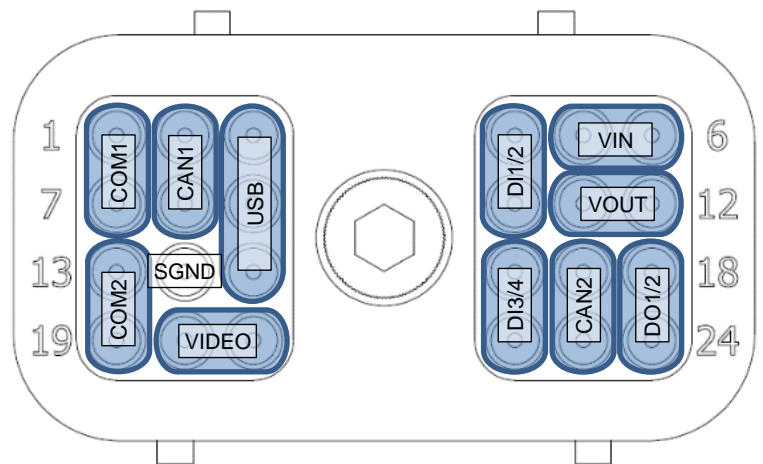
¹Not included with PROD1177-W variants

²Battery not included with PROD1177 No Battery(X) variants

Part Number Reference		
PROD1177-CODE(s)-COUNTRY		Unit can be configured to match individual and country requirements
Config Item	Code Letter	Description
MODEM CODE	(ABSENT)	Standard configuration with LTE modem fitted
	W	WiFi only (no LTE modem fitted)
GNSS CODE	H	High precision GNSS
	U	Ultra-high precision GNSS
BATTERY CODE	(ABSENT)	Standard configuration with battery fitted
	X	No battery fitted
COUNTRY	AUS	Australia
	COL	Colombia
	EUR	Europe
	USA	United States of America
	ZAF	South Africa
	xxx	Consult Wabtec Digital Mining Technology for other 3-digit codes and product availability status

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

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